The demand for labour in a textile local labour market with particular reference to twilight workers and homeworkers

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THE DEMAND FOR LABOUR IN A TEXTILE LOCAL LABOUR MARKET WITH
PARTICULAR REFERENCE TO TWILIGHT WORKERS AND HOMEWORKERS

by

KATHLEEN WRAY BSc (Hons)

A thesis submitted in partial fulfilment of the
requirements for the award of
Doctor of Philosophy
of Loughborough University of Technology
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ABSTRACT

The reasons why employers simultaneously demand different workgroups with varying patterns of activity, conditions of service and earnings is inadequately understood. The demand for twilight workers and homeworkers is a under-researched area, while the appropriateness of the segmented labour market model is open to questioning. Therefore, a detailed comparison, from the viewpoint of demand, is made of the workforce groups discovered within an occupational local labour market. Data collected by employer interviews focus on worker characteristics, their different working conditions, and employer responses to change.

Part A states the objectives and hypotheses, surveys the theoretical and legal contexts and reviews workgroup literature. The empirical programme is described, and brief accounts of preliminary empirical work undertaken in pre-pilot and pilot studies are reported.

In Part B, organisational structures are outlined before an analysis of local labour market and workforce characteristics. An interplay is found between group characteristics and levels of supply, the latter being important to group formation and to employers' ability to exercise preference. Levels of knowledge are examined and options for mobility are assessed. The structure of the occupational local labour market is addressed by examining: firstly, the different forms of mobility; secondly, influences on the wage structure; and thirdly, the net advantages accruing to the various workgroups. Conclusions are drawn regarding the relevance of neo-classical and segmented labour market theories. It is found that segmentation exists, firstly between the male and female employees, and secondly within the female segment. This latter segmentation is brought under closer scrutiny to reveal homeworkers as an extreme example of secondary labour when pay and employment conditions are compared with those of full-time and part-time day workers. Preference is examined from three different standpoints; a costing analysis is undertaken to determine the importance of cost-minimisation to labour demand, and employers' stated and implied preferences judged by their actions on key conditions of service are examined for differential treatment. Employer perceptions are reviewed,
as are the effects of orientations to work on performance levels which further illuminates employer preferences. The power structure emanating from supply, collective bargaining and legislation is assessed.

**Part C**, draws together the conclusions and uses findings to identify factors influencing employer choice. It outlines demand criteria and shows that those for twilight workers and homeworkers are similar, although reasons for using the latter group are more numerous. Many adjustment instruments are shown to be available for adapting labour input to business fluctuations so obviating the need for wage adjustment. An adjustment sequence is calculated to illustrate its implications for workgroup employment and income levels and its universal applicability is considered. A labour market paradigm is suggested in which demands and supplies are conceptualized as having two components; initial intentions and effective outcomes. It illustrates seven conflict areas which can incorporate numerous theories of labour market operation. The appropriateness of much labour market theory is discussed, and it is concluded that twilight workers and homeworkers are utilised as a mechanism for honouring implicit contracts. Policy prescriptions and further research are considered.
PART A - BACKGROUND AND HYPOTHESIS

CHAPTER ONE - RESEARCH DESIGN

1.1 THE SUBJECT AREA
1.2 A MULTIDISCIPLINARY APPROACH
1.3 THE PROPOSED RESEARCH FRAMEWORK
  1.3.1 The Criteria for Employment
  1.3.2 The Conditions of Employment
1.4 CHOICE OF WORKGROUPS FOR INVESTIGATION
1.5 DATA GENERATION
1.6 CONCENTRATION ON THE DEMAND FOR LABOUR
1.7 THE SELECTED LOCAL LABOUR MARKET
1.8 SELECTED INDUSTRIES
1.9 WORKGROUP HYPOTHESES
  1.9.1 Hypotheses of Workgroup Demand
  1.9.2 Hypothesis of Workgroup Supply:
      The Life-cycle Hypothesis
1.10 ASSUMPTIONS REGARDING THE FACTORS THAT COULD INFLUENCE THE
    SUPPLY OF, AND THE DEMAND FOR, WORKFORCE GROUPS
  1.10.1 Assumed Influences on the Supply of Labour
  1.10.2 Implications of Supply Influences for
      Workgroup Formation
  1.10.3 Assumed Influences on the Demand for Labour

CHAPTER TWO - LITERATURE REVIEW

2.1 THE THEORETICAL CONTEXT OF THE LABOUR MARKET
2.2 THE LEGAL CONTEXT OF THE LABOUR MARKET
2.3 LITERATURE RELATING TO WORKGROUPS
2.4 LITERATURE RELATING TO THE SELECTED LABOUR MARKET
2.5 LITERATURE RELATING TO SELECTED INDUSTRIES
2.6 CONCLUSIONS TO BE DRAWN FROM THE LITERATURE:
    HYPOTHESES REVISIONS

CHAPTER THREE - DESIGN OF THE EMPIRICAL PROGRAMME

3.1 SUMMARY OF EMPIRICAL DESIGN DECISIONS
3.2 PRELIMINARY SOURCES OF INFORMATION
3.3 THE PRE-PILOT STUDY
3.4 BACKGROUND TO THE PILOT STUDY
3.5 INTERVIEWING TECHNIQUE
3.6 EMPIRICAL FINDINGS OF THE PILOT STUDY OF FOOTWEAR MANUFACTURERS
3.7 CONCLUSIONS TO BE DRAWN FROM THE PILOT STUDY
CONTENTS

PART B - INVESTIGATION AND ANALYSIS

CHAPTER FOUR - INTRODUCTION TO THE EMPIRICAL WORK 4-1

4.1 THE SAMPLES 4-1
  4.1.1 The Respondent Sample 4-1
  4.1.2 Profile of the Establishment Sample 4-2
  4.1.3 Profile of the Worker Sample 4-3

4.2 ORGANIZATIONAL PATTERNS 4-4
  4.2.1 Manufacturing Processes 4-4
    4.2.1(a) Hosiery Processes 4-4
    4.2.1(b) Knitwear Processes 4-5
    4.2.1(c) Organization of Processes 4-7
    4.2.1(d) Patterns of Reorganization 4-8
    4.2.1(e) Varying Productivity Levels 4-9
  4.2.2 The Organization of Labour 4-10
    4.2.2(a) Divisions of Labour 4-10
    4.2.2(b) Management Structures 4-11
    4.2.2(c) Methods of Payment 4-11
    4.2.2(d) Work Patterns 4-12

4.3 VARIATIONS IN WORKFORCE COMPOSITION BY SIZE OF ESTABLISHMENT 4-14

CHAPTER FIVE - THE SUPPLY OF LABOUR 5-1

5.1 DISTANCE BETWEEN FACTORY AND RESIDENCE 5-1

5.2 LEVELS OF GROUP SUPPLY 5-3
  5.2.1 Stated Levels of Group Supply 5-3
    5.2.1(a) 40-hours-per-Week Males (Sm+Fm) 5-3
    5.2.1(b) Full-time Females 5-5
    5.2.1(c) Part-time Females 5-5
    5.2.1(d) Twilight Workers 5-6
    5.2.1(e) Homeworkers 5-6
  5.2.2 Average Number of Applicants per Advertised Vacancy 5-6
  5.2.3 Number of Unsolicited Applications per Week 5-7
  5.2.4 Job Competition for Suitable Applicants 5-8

5.3 PROVISION OF TRANSPORT FACILITIES 5-8
  5.3.1 Variety and Coverage of Transport Assistance 5-8
    5.3.1(a) Free Private Bus Schemes 5-8
    5.3.1(b) Subsidized Transport 5-9
  5.3.2 Effects of Transport Assistance 5-9
    5.3.2(a) Ability to Attract Full-time Females 5-9
    5.3.2(b) Ability to Expand External Market Boundaries 5-10

5.4 USE OF RECRUITMENT TECHNIQUES TO TAP THE OUTER DISTANCE BANDS 5-10

5.5 RELAXATION OF THE 40-HOURS-PER-WEEK FACTORY SERVICE STIPULATION 5-11

5.6 INFERENCES TO BE DRAWN REGARDING INFLUENCES ON WORKGROUP SUPPLY 5-12

CHAPTER SIX - CHARACTERISTICS OF THE FEMALE WORKFORCE GROUPS 6-1

6.1 AGE DISTRIBUTION 6-2
6.2 FAMILY COMMITMENTS 6-3
6.3 ETHNIC ORIGIN 6-4
6.4 RESIDENCE CHARACTERISTICS 6-5
  6.4.1 Types of Residence 6-5
  6.4.2 Location of Residence 6-6
6.5 MOONLIGHTING 6-6
6.6 CONCLUSIONS ON WORKGROUP CHARACTERISTICS 6-7
  6.6.1 The Life-cycle Hypothesis of Female Labour Supply 6-7
CONTENTS

CHAPTER SEVEN - KNOWLEDGE, RECRUITMENT AND THE INTERNAL MARKET 7-1

7.1 CHANNELS OF RECRUITMENT 7-1
7.1.1 Employers' Uses and Perceptions of Formal Recruitment Methods 7-2
7.1.2 Employers' Uses and Perceptions of Informal Recruitment Methods 7-3

7.2 OBSTACLES TO RELIABLE KNOWLEDGE ON THE DEMAND SIDE OF THE LABOUR MARKET 7-5

7.3 OBSTACLES TO RELIABLE KNOWLEDGE ON THE SUPPLY SIDE OF THE LABOUR MARKET 7-6

7.4 CONCLUSIONS ON THE MERITS AND RELATIVE USES OF CHANNELS FOR GROUP RECRUITMENT 7-7

7.5 IMPLICATIONS OF THE LEVEL OF KNOWLEDGE FOR MARKET STRUCTURE 7-9

CHAPTER EIGHT - MARKET STRUCTURE 8-1

8.1 THE SIGNIFICANCE OF MOBILITY AND STRATIFICATION FOR MARKET STRUCTURE 8-1

8.2 MOBILITIES 8-2
8.2.1 Job Mobility 8-2
8.2.1(a) Job Segregation on the basis of Gender 8-2
8.2.1(b) Job Segregation on the basis of Race and Age 8-3
8.2.1(c) Job Segregation on the Basis of Workgroup 8-3
8.2.1(d) Conclusions on Job Segregation 8-4
8.2.1(e) Employers' Choice Possibilities 8-4
8.2.1(f) Job Discrimination 8-5

8.2.2 Intra-Establishment Mobility: The Internal Labour Market 8-6
8.2.2(a) Mobility Within the Same Workgroup 8-6
(i) Skill Mobility 8-6
(ii) Promotion, Demotion and Up-grading 8-8
(iii) Payment Method Mobility 8-9
8.2.2(b) Inter-group Mobility 8-9

8.2.3 Inter-Establishment Mobility 8-10
8.2.4 Mobility Into and Out of the Labour Market 8-10
8.2.5 Summary of Conclusions on Mobility 8-11

8.3 THE EARNINGS STRUCTURE 8-11
8.3.1 Earnings Levels 8-11
8.3.1(a) Male/Female Earnings Levels 8-12
8.3.1(b) Workgroup Earnings Levels 8-12
8.3.2 The Human Capital Effect on the Earnings Structure 8-12
8.3.3 Discriminatory Wage Levels 8-13
8.3.4 The Customary Wage Structure 8-15
8.3.4(a) The Intra-Establishment Wage Structure 8-15
8.3.4(b) The Inter-establishment Wage Structure 8-16
8.3.5 The Institutional Impact on the Wage Structure 8-17
8.3.6 Summary of Conclusions on the Earnings Structure 8-18

8.4 THE STRUCTURE OF NET ADVANTAGES 8-18
8.4.1 Holiday Arrangements 8-18
8.4.2 Special Sickness Benefit 8-19
8.4.3 Special Maternity Arrangements 8-19
8.4.4 Private Pension Schemes 8-20
8.4.5 Bonus Payments 8-20
8.4.6 Concessionary Goods Schemes 8-20
8.4.7 Miscellaneous Benefits 8-20
8.4.8 The Provision of Facilities 8-21
8.4.9 The Stratification of Net Advantages 8-21

8.5 CONCLUSIONS RELATING TO LABOUR MARKET STRUCTURE 8-22
CHAPTER NINE - EMPLOYER PREFERENCE

9.1 PREFERENCE, AND ITS EXECUTION

9.2 THE COST OF LABOUR
  9.2.1 Cost Calculation for the Mode of Production Decision
  9.2.2 Calculation of the Cost of the Average Member of Each Workgroup
    9.2.2(a) The Effective Wage (W)
    9.2.2(b) Fringe Benefits (L + B)
    9.2.2(c) 'Sunk' Costs (S)
    9.2.2(d) Capital Non-utilization Costs (K)
    9.2.2(e) Time Constraint Costs (T)
    9.2.2(f) Place Constraint Costs (P)

9.2.3 Conclusions Regarding the Costs of Group Employment

9.2.4 Conclusions Regarding Cost-minimization

9.3 STATED EMPLOYER PREFERENCE
  9.3.1 Employer Preference Relating to Worker Characteristics
    9.3.1(a) Selection Criteria
    9.3.1(b) Order of Importance of Selection Criteria
  9.3.2 Employer Preferences
    9.3.2(a) Stated Workgroup Preference
    9.3.2(b) Stated Preference for Work Allocation
  9.3.3 Conclusions on Stated Preference

9.4 GROUP PREFERENCE IMPLIED BY EMPLOYER'S ACTIONS
  9.4.1 Training
    9.4.1(a) Methods and Levels of Training
    9.4.1(b) Training Investment per Workgroup
  9.4.2 Redundancy Levels and Procedures
    9.4.2(a) Redundancy Levels
    9.4.2(b) Procedure to Determine Specific Redundancies
    9.4.2(c) Redundancy Pay
  9.4.3 Variability of Work
    9.4.3(a) Intermittency of Work
    9.4.3(b) Variability in the Amounts of Work Supplied
  9.4.4 Dismissal Procedures
  9.4.5 Transport Provision
  9.4.6 Numbers Employed
  9.4.7 Conclusions Regarding Preference Implied by Actions

9.5 CONSISTENCY OF THE STATED AND IMPLIED GROUP PREFERENCES WITH THE COSTING ANALYSIS

9.6 GROUP PERFORMANCE
  9.6.1 Productivity
  9.6.2 Competence
  9.6.3 Quality of Workmanship
  9.6.4 Absenteeism
    9.6.4(a) Absenteeism Rates
    9.6.4(b) Relative Absenteeism
    9.6.4(c) Personal Illness
  9.6.5 Reliability
  9.6.6 Voluntary Turnover
    9.6.6(a) Voluntary Turnover Rates
    9.6.6(b) Relative Voluntary Turnover
  9.6.7 Disputes
    9.6.7(a) Number of Disputes
    9.6.7(b) Relative Quiescence
    9.6.7(c) Homeworkers' Measures to Influence Their Work Situation
CONTENTS

9.6.8 Hours Worked 9-42
  9.6.8(a) The Basic Week 9-42
  9.6.8(b) Overtime 9-44
  9.6.9 Conclusions Regarding Performance 9-45
9.7 CONCLUSIONS ON PREFERENCE 9-46

CHAPTER TEN - EMPLOYER ORIENTATIONS, OBJECTIVES AND PERCEPTIONS 10-1

10.1 EMPLOYER ORIENTATIONS 10-1
10.2 EMPLOYERS' PRODUCT MARKET OBJECTIVES 10-2
10.3 EMPLOYERS' LABOUR MARKET OBJECTIVES 10-2
  10.3.1 Cost-minimization 10-3
  10.3.2 Retention of Preferred Core Personnel 10-3
  10.3.3 Harmonious Inter-personal Relations 10-5
10.4 EMPLOYERS' PERCEPTIONS OF THE WORKFORCE GROUPS 10-6
  10.4.1 Perceived Male/Female Differences 10-6
  10.4.2 Perceived Differences Between the Female Groups 10-7
10.5 EMPLOYERS' PERCEPTIONS OF EMPLOYEE ORIENTATIONS TO WORK 10-9
  10.5.1 The Relationship Between Age and Financial Commitments 10-10
  10.5.2 The Effect of Financial Commitments on Orientations
      to Work 10-10
  10.5.3 Implications of Work Orientations 10-11
  10.5.4 Implications of Productivity for Employer Preference 10-12

CHAPTER ELEVEN - THE POWER STRUCTURE 11-1

11.1 DEFINITIONS AND SOURCES OF POWER 11-1
11.2 RELATIVE POWER EMANATING FROM COLLECTIVE BARGAINING 11-1
  11.2.1 Trade Union Activity at National Level 11-2
    11.2.1(a) The National Agreement and its Impacts 11-2
    11.2.1(b) Unsuccessful Negotiations 11-4
    11.2.1(c) Perspectives at the National Level of the Union 11-5
    11.2.1(d) Employer Awareness of National Activity and
            Agreements 11-6
    11.2.1(e) Spill-over of National Agreements to Non-unionized Companies 11-6
  11.2.2 Trade Union Activity at Local Level 11-7
    11.2.2(a) Institutional Representation 11-7
    11.2.2(b) Trade Union Membership 11-8
    11.2.2(c) Trade Union Activity At Factory Level 11-8
    11.2.2(d) Areas of Trade Union Inactivity at Factory Level 11-10
    11.2.2(e) The Power Structure Suggested by Workplace Bargaining 11-11
11.3 RELATIVE POWER DERIVING FROM THE AVAILABILITY OF CHOICE 11-12
  11.3.1 Employee Choice 11-12
  11.3.2 Employer Choice 11-13
11.4 POWER DERIVING FROM LEGISLATION 11-13
  11.4.1 Scope of the Employment Protection (Consolidation) Act 11-13
  11.4.2 The Differential Impact of the Legislation 11-15
11.5 THE OVERALL POWER STRUCTURE 11-15
PART C - CONCLUSIONS AND SYNTHESIS

CHAPTER TWELVE - IMPLICATIONS OF THE EMPIRICAL WORK

12.1 SEGMENTATION
12.1.1 Male/Female Segmentation
12.1.2 Segmentation Among Female Workgroups
12.2 THE RATIONALE BEHIND WORKGROUP DEMAND
12.3 CONDITIONS UNDER WHICH WORKGROUP DEMANDS ARISE
12.4 STRATIFICATION IN THE HOSIERY AND KNITWEAR LABOUR MARKET
12.5 CHOICE PROCESSES
12.5.1 Factors Influencing Workgroup Choice
12.5.1(a) The Limitation of Core Worker Numbers
12.5.1(b) Choice of Work Pattern
12.5.1(c) Choice of Males and Females
12.5.1(d) Choice of Full- and Part-time Females
12.5.2 Factors Influencing the Choice of Secondary Groups
12.5.2(a) The Nature of Production Bottlenecks
12.5.2(b) Choice of Twilight Workers
12.5.2(c) Choice of the Homeworker Group
12.6 THE ECONOMIC SIGNIFICANCE OF SECONDARY LABOUR
12.6.1 Conclusions on the Cheap Labour Hypothesis of Demand
12.7 PARTICULAR PERSPECTIVES ON SECONDARY LABOUR
12.7.1 Conclusions on the Life-cycle Hypothesis of Supply
12.7.2 Why Are Virtually All Twilight Workers and Homeworkers Women?
12.7.3 How Marginal are Twilight Workers and Homeworkers?
12.7.4 Would the Acquisition of Employee Status Put An End To Homeworking?
12.7.5 Do Twilight Workers and Homeworkers Undercut Daytime Workers?

CHAPTER THIRTEEN - A LABOUR INPUT ADJUSTMENT MECHANISMS

13.1 THE NEED FOR A LABOUR INPUT ADJUSTMENT MECHANISM
13.2 THE RANGE AND VALUE OF POSSIBLE ADJUSTMENT INSTRUMENTS
13.2.1 An Evaluation of Strategies to Limit the Degree of Variation in Business Activity
13.2.2 An Evaluation of Strategies to Vary the Input from a Fixed Number of Established Workers
13.2.3 Evaluation of Instruments that Vary Preferred Worker Numbers Without Changing Hiring Standards
13.2.4 Evaluations of Instruments that Vary Hiring Standards to Obtain Additional Labour
13.2.5 Evaluation of Strategies that Vary Workers' Earning Potential
13.3 SUGGESTED SEQUENCE OF INSTRUMENT USAGE IN SEASONALLY FLUCTUATING INDUSTRIES
13.4 APPLICABILITY OF THE ADJUSTMENT MECHANISM TO OTHER INDUSTRIES
13.5 IMPLICATIONS FOR UNEMPLOYMENT, UNDER-EMPLOYMENT AND INTERMITTENT EMPLOYMENT
13.5.1 The Implication of Preference for Local Unemployment
13.5.2 The Implications of Adjustment Mechanisms for Under-employment and Intermittent Employment
CONTENTS

CHAPTER FOURTEEN - EMPLOYMENT AND INCOME STABILITIES

14.1 ASSUMPTIONS UNDERLYING A WORKED EXAMPLE OF ADJUSTMENT DECISIONS 14-1
14.2 A WORKED EXAMPLE OF AN ADJUSTMENT SEQUENCE 14-3
14.3 COMMENTARY ON THE ADJUSTMENT DECISIONS 14-15
14.4 OVER-SIMPLIFICATION IN THE WORKED EXAMPLE 14-16
14.5 CONCLUSIONS REGARDING THE WORKED EXAMPLE 14-17

CHAPTER FIFTEEN - A MODEL OF THE LOCAL LABOUR MARKET 15-1

15.1 A MODEL OF THE SUPPLY OF, AND DEMAND FOR, LABOUR IN THE EXTERNAL LOCAL LABOUR MARKET 15-1

CHAPTER SIXTEEN - IMPLICATIONS FOR THEORY, POLICY AND RESEARCH 16-1

16.1 THEORETICAL IMPLICATIONS 16-1
16.2 POLICY PRESCRIPTIONS 16-11
16.3 FURTHER RESEARCH 16-15

APPENDICES

APPENDIX I  RESEARCH INSTRUMENT
APPENDIX II GLOSSARY OF TERMS
APPENDIX III ABBREVIATIONS
APPENDIX IV TABLES
APPENDIX V ILLUSTRATIONS
APPENDIX VI REFERENCES/BIBLIOGRAPHY
APPENDIX VII ALPHABETICAL LIST OF AUTHORS
# LIST OF TABLES
(See Appendix IV)

<table>
<thead>
<tr>
<th>Table No</th>
<th>Caption</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Local Industries Believed to be Employing Twilight Workers and Homeworkers</td>
<td>IV-1</td>
</tr>
<tr>
<td>2.1</td>
<td>Demand Characteristics</td>
<td>IV-2</td>
</tr>
<tr>
<td>2.2</td>
<td>Supply Characteristics</td>
<td>IV-3</td>
</tr>
<tr>
<td>2.3</td>
<td>Limits of Normal Factory Hours for Women and Young Persons</td>
<td>IV-4</td>
</tr>
<tr>
<td>2.4</td>
<td>Limits of Overtime Employment for Women and Young Persons</td>
<td>IV-5</td>
</tr>
<tr>
<td>2.5</td>
<td>Women as a Percentage of Total Unemployed</td>
<td>IV-6</td>
</tr>
<tr>
<td>2.6</td>
<td>Employed UK Population in 1981 by Economic Activity in 1980</td>
<td>IV-6</td>
</tr>
<tr>
<td>2.7</td>
<td>Women's Employment in the European Economic Community</td>
<td>IV-7</td>
</tr>
<tr>
<td>2.8</td>
<td>Women's Earnings</td>
<td>IV-8</td>
</tr>
<tr>
<td>2.9</td>
<td>Average Number of Hours Worked by Women - Breakdown by Economic Sector - 1977</td>
<td>IV-9</td>
</tr>
<tr>
<td>2.10</td>
<td>Part-time Employees in the Service Sector</td>
<td>IV-10</td>
</tr>
<tr>
<td>2.11</td>
<td>The Incidence and Reasons for Loss of Pay, All Manual Categories</td>
<td>IV-10</td>
</tr>
<tr>
<td>2.12</td>
<td>Average Hours Lost, all Manual Categories</td>
<td>IV-10</td>
</tr>
<tr>
<td>2.13</td>
<td>Changes in Shift Working Since 1945: All Manufacturing Industries</td>
<td>IV-11</td>
</tr>
<tr>
<td>2.14</td>
<td>Numbers of Twilight Workers in Particular Industries</td>
<td>IV-11</td>
</tr>
<tr>
<td>2.15</td>
<td>Use of Twilight Working with Other Shift Systems</td>
<td>IV-12</td>
</tr>
<tr>
<td>2.16</td>
<td>Acreages and Electors in the Principal Settlements of the Local Labour Market</td>
<td>IV-12</td>
</tr>
<tr>
<td>Table No</td>
<td>Caption</td>
<td>Page No</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>2.17</td>
<td>Industrial Production and Employees in Employment, Hosiery and Knitwear</td>
<td>IV-13</td>
</tr>
<tr>
<td>2.18</td>
<td>Sales and Trade of UK Hosiery and Knitwear Industry</td>
<td>IV-13</td>
</tr>
<tr>
<td>2.19</td>
<td>Establishment Size in the GB Textile Industry</td>
<td>IV-13</td>
</tr>
<tr>
<td>3.1</td>
<td>Data Collection Programme</td>
<td>IV-14</td>
</tr>
<tr>
<td>3.2</td>
<td>Workforce Composition in Sample Footwear Companies</td>
<td>IV-14</td>
</tr>
<tr>
<td>3.3</td>
<td>Skill Levels of Footwear Workers</td>
<td>IV-15</td>
</tr>
<tr>
<td>4.1</td>
<td>The Respondents' Positions and Experience</td>
<td>IV-16</td>
</tr>
<tr>
<td>4.2</td>
<td>Workforce Composition (by Size of Establishment)</td>
<td>IV-17</td>
</tr>
<tr>
<td>4.3</td>
<td>Methods of Accommodating the Segments</td>
<td>IV-16</td>
</tr>
<tr>
<td>4.4</td>
<td>Payment Methods by Workforce Group</td>
<td>IV-16</td>
</tr>
<tr>
<td>5.1</td>
<td>Number of Workers Residing Within Specified Distance Bands from the Factory</td>
<td>IV-20</td>
</tr>
<tr>
<td>5.2</td>
<td>Average Number of Applicants per Advertised Vacancy</td>
<td>IV-20</td>
</tr>
<tr>
<td>5.3</td>
<td>Average Weekly Number of Unsolicited Applications</td>
<td>IV-20</td>
</tr>
<tr>
<td>5.4</td>
<td>Total Transport Assistance (4 Companies)</td>
<td>IV-21</td>
</tr>
<tr>
<td>5.5</td>
<td>Proportion of Full-time Females (Fw) in the Female Daytime Workforce (Dw) in Relation to Free Transport Provision</td>
<td>IV-21</td>
</tr>
<tr>
<td>5.6</td>
<td>Numbers of Full-time Females Travelling Specified Distances to Factories in Relation to Transport Provision</td>
<td>IV-21</td>
</tr>
<tr>
<td>6.1</td>
<td>Age Distribution</td>
<td>IV-22</td>
</tr>
<tr>
<td>6.2</td>
<td>Family Commitments</td>
<td>IV-22</td>
</tr>
<tr>
<td>6.3</td>
<td>Ethnic Origin</td>
<td>IV-23</td>
</tr>
<tr>
<td>Table No</td>
<td>Caption</td>
<td>Page No</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>6.4</td>
<td>Type of Residence</td>
<td>IV-23</td>
</tr>
<tr>
<td>6.5</td>
<td>Average Ages</td>
<td>IV-24</td>
</tr>
<tr>
<td>7.1</td>
<td>Methods of Recruitment</td>
<td>IV-25</td>
</tr>
<tr>
<td>8.1</td>
<td>Job Mobility (by Gender)</td>
<td>IV-26</td>
</tr>
<tr>
<td>8.2</td>
<td>Male Occupations (by Workgroup)</td>
<td>IV-27</td>
</tr>
<tr>
<td>8.3</td>
<td>Exclusive Jobs (by Female Workgroup)</td>
<td>IV-27</td>
</tr>
<tr>
<td>8.4</td>
<td>The Skill Composition of the Workgroups</td>
<td>IV-28</td>
</tr>
<tr>
<td>8.5</td>
<td>Female Opportunities for Promotion to Supervisory Capacity</td>
<td>IV-28</td>
</tr>
<tr>
<td>8.6</td>
<td>Direct Female Inter-Group Mobility</td>
<td>IV-29</td>
</tr>
<tr>
<td>8.7</td>
<td>Average Weekly Earnings</td>
<td>IV-29</td>
</tr>
<tr>
<td>8.8</td>
<td>The Intra-Establishment Comparability of Homeworkers' Piecerates</td>
<td>IV-30</td>
</tr>
<tr>
<td>8.9</td>
<td>Homeworkers' Average Weekly Earnings</td>
<td>IV-30</td>
</tr>
<tr>
<td>8.10</td>
<td>Inter-Establishment Female Wage Structure</td>
<td>IV-30</td>
</tr>
<tr>
<td>8.11</td>
<td>The Incidence of Benefit-Schemes and Facilities</td>
<td>IV-31</td>
</tr>
<tr>
<td>9.1</td>
<td>Summary of the Average Weekly Cost per Workgroup Number</td>
<td>IV-32</td>
</tr>
<tr>
<td>9.2</td>
<td>Weekly Company Costs for Delivery of Work to Homeworkers</td>
<td>IV-33</td>
</tr>
<tr>
<td>9.3</td>
<td>Characteristics Sought During the Selection Process</td>
<td>IV-34</td>
</tr>
<tr>
<td>9.4</td>
<td>Order of Importance of Selection Criteria</td>
<td>IV-34</td>
</tr>
<tr>
<td>9.5</td>
<td>Stated Workgroup Preferences</td>
<td>IV-35</td>
</tr>
<tr>
<td>9.6</td>
<td>Stated Employment Patterns of Twilight Workers and Homeworkers</td>
<td>IV-36</td>
</tr>
<tr>
<td>9.7</td>
<td>Stated Preference for the Allocation of Work</td>
<td>IV-36</td>
</tr>
<tr>
<td>Table No</td>
<td>Caption</td>
<td>Page No</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>9.8</td>
<td>Methods and Levels of Male Training by Present Employer</td>
<td>IV-37</td>
</tr>
<tr>
<td>9.9</td>
<td>Methods and Levels of Female Training by Present Employer</td>
<td>IV-38</td>
</tr>
<tr>
<td>9.10</td>
<td>Total Investment in Training by Present Employer</td>
<td>IV-39</td>
</tr>
<tr>
<td>9.11</td>
<td>Stated Annual Female Group Redundancy Levels</td>
<td>IV-39</td>
</tr>
<tr>
<td>9.12</td>
<td>'Implied' Redundancies of Twilight Workers and Homeworkers Over a 5 Year Period</td>
<td>IV-40</td>
</tr>
<tr>
<td>9.13</td>
<td>Rank Order of Female Redundancies</td>
<td>IV-41</td>
</tr>
<tr>
<td>9.14</td>
<td>Procedure to Determine Specific Redundancies</td>
<td>IV-42</td>
</tr>
<tr>
<td>9.15</td>
<td>Level of Redundancy Payment Received</td>
<td>IV-41</td>
</tr>
<tr>
<td>9.16</td>
<td>Duration of Twilight Shift Working</td>
<td>IV-43</td>
</tr>
<tr>
<td>9.17</td>
<td>Variability in the Amounts of Work Supplied</td>
<td>IV-44</td>
</tr>
<tr>
<td>9.18</td>
<td>Dismissal Procedures (by Establishment Response)</td>
<td>IV-45</td>
</tr>
<tr>
<td>9.19</td>
<td>Rank Order of Implied Preference Based on Numbers Employed</td>
<td>IV-46</td>
</tr>
<tr>
<td>9.20</td>
<td>Rank Order of Group Preference Implied by Employer Actions</td>
<td>IV-46</td>
</tr>
<tr>
<td>9.21</td>
<td>Relative Productivity</td>
<td>IV-47</td>
</tr>
<tr>
<td>9.22</td>
<td>Relative Competence</td>
<td>IV-47</td>
</tr>
<tr>
<td>9.23</td>
<td>Relative Quality of Workmanship</td>
<td>IV-47</td>
</tr>
<tr>
<td>9.24</td>
<td>Absenteeism Rate of Full and Part Time Females</td>
<td>IV-48</td>
</tr>
<tr>
<td>9.25</td>
<td>Homeworkers' Refusal of Work</td>
<td>IV-48</td>
</tr>
<tr>
<td>9.26</td>
<td>Relative Absenteeism</td>
<td>IV-48</td>
</tr>
<tr>
<td>9.27</td>
<td>Relative Reliability</td>
<td>IV-49</td>
</tr>
<tr>
<td>9.28</td>
<td>Voluntary Turnover Rates</td>
<td>IV-49</td>
</tr>
<tr>
<td>9.29</td>
<td>Relative Voluntary Turnover</td>
<td>IV-49</td>
</tr>
<tr>
<td>9.30</td>
<td>The Incidence of Disputes over a 12-month Period</td>
<td>IV-50</td>
</tr>
</tbody>
</table>
Table No | Caption | Page No
--- | --- | ---
9.31 | Relative Quiescence | IV-50
9.32 | Homeworkers' Measures to Influence their Work Situation | IV-50
9.33 | Mean Hours per Basic Week | IV-51
9.34 | Incidence of Overtime | IV-52
9.35 | Overall Performance Ranks | IV-53
9.36 | The Order of Preference | IV-53
10.1 | Observations of Young Workers' Inferior Performances | IV-54
11.1 | Unionised and Non-unionised Establishments | IV-55
11.2 | Establishment Affiliation to an Employers' Association | IV-55
11.3 | The Impact of the National Pay Agreement on the Non-Unionised Sector | IV-56
11.4 | Comparability of Homeworkers' Rates with Factory Rates in Unionised and Non-unionised Establishments | IV-56
11.5 | Group Employment in Unionised and Non-unionised Establishments | IV-57
11.6 | Employers' Affiliation Versus Trade Union Recognition | IV-58
11.7 | Levels of Trade Union Membership | IV-58
11.8 | The Impact of Workplace Collective Bargaining | IV-59
11.9 | Employer Perceptions of Local Trade Union Redundancy Strategy | IV-59
11.10 | Exclusions Clauses for Entitlement to the Provisions of the Employment Protection (Consolidated) Act, 1978 | IV-60
11.11 | The Overall Power Structure | IV-61
14.1 | Male and Female Full-time and Less-than-full-time Outputs and Pay Rates | IV-62
14.2 | Shift Worker Pay Rates and Outputs When Operating Varying Numbers of Machines | IV-63
<table>
<thead>
<tr>
<th>Figure No</th>
<th>Caption</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Location of the Surveyed Local Labour Market</td>
<td>V-1</td>
</tr>
<tr>
<td>2.1</td>
<td>Possible Relationships Between Skill Level and Established/Unestablished Status</td>
<td>V-2</td>
</tr>
<tr>
<td>2.2</td>
<td>An Example of Adjustment to Shortage</td>
<td>V-2</td>
</tr>
<tr>
<td>2.3</td>
<td>The Elimination of Shortage</td>
<td>V-2</td>
</tr>
<tr>
<td>2.4</td>
<td>Employees in Employment: GB</td>
<td>V-3</td>
</tr>
<tr>
<td>2.5</td>
<td>Unemployment - Great Britain</td>
<td>V-4</td>
</tr>
<tr>
<td>2.6</td>
<td>Employees in Employment - Great Britain</td>
<td>V-4</td>
</tr>
<tr>
<td>2.7</td>
<td>Women as a Percentage of Industrial Labour Force, Great Britain 1975 and 1981</td>
<td>V-5</td>
</tr>
<tr>
<td>2.8</td>
<td>Lower Paid Groups where Women Predominate</td>
<td>V-6</td>
</tr>
<tr>
<td>2.9</td>
<td>Location of the Hosiery and Knitwear Industry</td>
<td>V-7</td>
</tr>
<tr>
<td>3.1</td>
<td>Location of the British Footwear Manufacturing Industry</td>
<td>V-8</td>
</tr>
<tr>
<td>4.1</td>
<td>Profile of the Establishment Sample</td>
<td>V-9</td>
</tr>
<tr>
<td>4.2</td>
<td>Schematic Representation of the Complete Direct Production Workforce in the Interviewed Establishments</td>
<td>V-10</td>
</tr>
<tr>
<td>4.3</td>
<td>Open Box Chart, as Used During Interviews, Displaying the Composition of the Aggregate DP Workforce</td>
<td>V-11</td>
</tr>
<tr>
<td>4.4</td>
<td>Work Patterns (Horizontally) and Relative Size (Vertically) of Groups</td>
<td>V-12</td>
</tr>
<tr>
<td>5.1</td>
<td>Cumulative Percentage Distribution of Workers Residing Within Specified Distances from Factory</td>
<td>V-13</td>
</tr>
<tr>
<td>5.2</td>
<td>The Stated Supply of Potential Workers</td>
<td>V-14</td>
</tr>
<tr>
<td>5.3</td>
<td>Cumulative Percentage Distribution of Full-time Females (Fw) Travelling Specified Distances in Relation to Transport Provision</td>
<td>V-15</td>
</tr>
<tr>
<td>5.4</td>
<td>The Effects of Relaxations of Hiring Standards on Female Labour Supply, Within Catchment Areas</td>
<td>V-16</td>
</tr>
<tr>
<td>Figure No</td>
<td>Caption</td>
<td>Page No</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>6.1</td>
<td>Age Compositions of the Female Workforce Groups</td>
<td>V-17</td>
</tr>
<tr>
<td>7.1</td>
<td>The Relative Importance of Formal and Informal Channels of Workgroup Recruitment</td>
<td>V-18</td>
</tr>
<tr>
<td>11.1</td>
<td>Percentage of Each Workgroup Employed by Unionised and Non-Unionised Companies</td>
<td>V-19</td>
</tr>
<tr>
<td>11.2</td>
<td>Diagrammatic Representation of the Power Structure Emanating from Workplace Bargaining</td>
<td>V-20</td>
</tr>
<tr>
<td>12.1</td>
<td>Circularity in the Process of Male/Female Segmentation in the Hosiery and Knitwear Labour Market</td>
<td>V-21</td>
</tr>
<tr>
<td>12.2</td>
<td>A Model of Access to Female Skilled Jobs Showing the Influence of Over-supply, Supervision and Shortage of Specific Skills</td>
<td>V-22</td>
</tr>
<tr>
<td>12.3</td>
<td>Stratification of the Hosiery and Knitwear Labour Market</td>
<td>V-23</td>
</tr>
<tr>
<td>12.4</td>
<td>Choice of Work Pattern for Capital Equipment</td>
<td>V-24</td>
</tr>
<tr>
<td>12.5</td>
<td>Output Flexibilities Assuming Differently Productive Operations and Heterogeneous Labour Inputs</td>
<td>V-25</td>
</tr>
<tr>
<td>13.1</td>
<td>The Range of Possible Adjustment Instruments</td>
<td>V-26</td>
</tr>
<tr>
<td>13.2</td>
<td>Impacts of Different Payment Schemes on (a) Weekly Earnings and (b) Unit Price</td>
<td>V-27</td>
</tr>
<tr>
<td>13.3</td>
<td>A Sequence of Adjustments for a Widely Varying Business Cycle</td>
<td>V-28</td>
</tr>
<tr>
<td>13.4</td>
<td>The Use of Marginal Labour by Firms with Different Product Market Trends</td>
<td>V-29</td>
</tr>
<tr>
<td>13.5</td>
<td>Labour Demand of Service Industries</td>
<td>V-30</td>
</tr>
<tr>
<td>14.1</td>
<td>Employment Schedules</td>
<td>V-31</td>
</tr>
<tr>
<td>14.2</td>
<td>Income Schedules</td>
<td>V-32</td>
</tr>
<tr>
<td>15.1</td>
<td>A Labour Market Paradigm</td>
<td>V-33</td>
</tr>
<tr>
<td>16.1</td>
<td>Implicit Contracts of the Hosiery and Knitwear Industries</td>
<td>V-34</td>
</tr>
<tr>
<td>Figure No</td>
<td>Caption</td>
<td>Page No</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>II:1</td>
<td>Schematic Representation of the Terminology</td>
<td>V-35</td>
</tr>
<tr>
<td>II:2</td>
<td>Composition of the Aggregate Direct Production Workforce Within 25 Establishments</td>
<td>V-36</td>
</tr>
<tr>
<td>III:1</td>
<td>Schematic Representation of the Segments, Components, and Groups</td>
<td>V-37</td>
</tr>
</tbody>
</table>
PART A

BACKGROUND AND HYPOTHESIS
CHAPTER ONE - RESEARCH DESIGN

1.1 THE SUBJECT AREA

In 1973 Bosanquet and Piore suggested that women might be the secondary workers in Britain. At the outset, the extent and nature of duality in the Labour Market (LM) had not been clearly documented and the study of women was a neglected area in both economics and sociology. Consequently, a research proposal that focused on the employment of women as possible examples of secondary workers was formulated, the subject area being broadly defined as "An Investigation of the Dual Labour Market with Particular Reference to Case Studies". Attention was to be concentrated on secondary workers to determine how their characteristics and terms and conditions of employment differed from those of primary workers in the same, or similar, industries. It was intended to assess how revealed differences moulded overall labour demand.

1.2 A MULTIDISCIPLINARY APPROACH

Several branches of social science (e.g. economics, sociology, law, social psychology, politics, history, organisational and management studies, and industrial relations) claim work and employment as their provinces, although until recently, most of these disciplines have treated labour as 'unisex'. Whereas, economists have traditionally taken financial rewards as the basic frame of reference, especially in price/auction theories, sociologists have involved themselves with the relationships of production. Fragmentation of social science is a serious problem since it leads to a narrowness of outlook as studies lose concerns with non-work issues and wide general patterns. Allen sees specialization within and between social science disciplines as an obstacle to understanding women and work. Attempts to combine approaches have been made in recent years because it is now recognised that a multidisciplinary approach is superior for giving a comprehensive unblinded overview of any research topic. Consequently to avoid narrowness of outlook, the research was planned as a multidisciplinary project which would combine economic and sociological perspectives and would examine certain legal issues since these were importantly relevant to the status of secondary workers. Issues stemming from the division of labour in the home and its impacts on the workplace are also considered.

1 - 1
1.3 THE PROPOSED RESEARCH FRAMEWORK

The detailed objectives outlined in the author's application for a research studentship were:

(a) an examination of the reasons for the existence of dual labour markets;
(b) an analysis and comparison of the supply and demand determinants of primary and secondary labour;
(c) a determination and comparison of the employment and income sensitivities of primary and secondary workers to business fluctuations;
(d) an evaluation of the possible advantages to employers of maintaining a secondary labour segment; and
(e) an assessment of the desirability of eliminating the secondary labour segment with respect to the economic and sociological consequences and a survey of possible methods for achieving this.

(NB: Early in the research the term "Dual Labour Market" (DLM) was judged to be less appropriate than the term "Segmented Labour Market" (SLM); consequently the latter term has been used throughout.)

Such a comparative study of primary and secondary labour posed numerous questions. For example, did segmentation exist between and/or within industries, and if so, to what extent? What were the reasons for the existence of segmentation? How did worker groups relate to each other, and why and how were individuals allocated to them? How permanent was this allocation, and what were the levels of distinction between the workgroups? The proposed research sought to address all these questions. Hence, the empirical study would need sufficient primary data to examine a variety of topics, such as: the conditions under which workgroups were demanded and employed; the characteristics of each workgroup, and mobility among them; and variation in employees' terms and conditions of service, including their ability to influence their contracts of employment. It was intended to spotlight any discriminatory practices that applied to particular workgroups. These topics could be conveniently classified into two broad issues each of which could be investigated from either the demand or the supply side of the LM. These were:

(1) the **criteria** for the employment of each workgroup; and
(2) the **conditions** under which each workgroup was employed.
1.3.1 The Criteria for Employment

To establish the criteria of demand it was considered necessary to determine when and why particular individuals were sought and then allocated to specific tasks. It was envisaged that this would involve an examination of recruitment, selection and redundancy procedure data for each group of workers, such information being obtained from the demand side of the LM. The criteria of supply would involve a consideration of the workers' needs and motives in seeking and accepting the particular jobs they did. This data could only be obtained by a supply side study.

1.3.2 The Conditions of Employment

Employment conditions can be regarded under two broad headings:
(a) market conditions, in the context of which each worker group is demanded; and
(b) terms and conditions of employment as embodied in the contract of employment.

Market conditions, that could either favour or inhibit the employment of particular workgroups, were thought to be largely outside the control of the parties, but nevertheless they should be identified because they could strongly influence employment and income sensitivities. On the demand side of the LM, the establishment of market conditions would require an examination of price competitiveness, number of competitors, and characteristics of the product, because labour's demand is derived from product demand. On the supply side, an assessment of the conditions for employment would involve an examination of the levels of job competition, job segregation and discrimination; these topics could be investigated from either the supply or demand sides of the LM.

Terms and Conditions of Employment relating to the treatment that employees received from their employers were embodied in law and contracts of employment. These issues could be investigated from either the demand or supply sides of the market, and topics would include pay, holidays, fringe benefits, training, job allocation, redundancy, dismissal, and the capacity to take collective action. It was considered that the treatment received by each workgroup would be placed into context by an investigation of relative performances; this would be more easily conducted on the demand side. Thus, studies on both the demand and supply sides of the market were initially envisaged, and it was apparent that such a wide ranging investigation would ensue that it was later decided to concentrate on demand, see 1.6.

As outlined below, the empirical research was designed to examine
minutely from economic, sociological and legal perspectives the structure of a Local Labour Market (LLM) and the variety of labour demands within a specific industry. These objectives are explored in Parts A and B of this thesis. To date, little theoretical attention has been directed to the complex inter-relationships of simultaneous demands by the same employer for workers with work and employment patterns as diverse as shiftworkers and homeworkers. It is therefore to such an uncharted area of LM theory that Part C is addressed.

1.4 CHOICE OF WORKGROUPS FOR INVESTIGATION

Subsequent to the preliminary investigation and literature survey it was concluded that a general and wide-ranging investigation of SLMs was too all-embracing and that a more useful piece of work would ensue from researching specific primary and secondary workers who could be justifiably compared. At the outset of the research only limited work had been undertaken to establish degrees of segmentation and hence it was decided to compare the work performed and pay received by men and women full-time day workers (see Appendix II for workgroup definitions) to reveal any workforce segregation and earnings discrepancies by gender. Having set women full-timers within the context of their market position relative to men, the aim was then to compare the pay and conditions, jobs undertaken and performances achieved of secondary workers with those of female full-timers in order to establish whether further segmentation existed. Twilight workers and homeworkers were thought to be typical examples of such secondary workers and so these two groups were selected for detailed investigation.

It was considered essential to select workers from the same or similar industries, companies and occupations in order to provide 'fair' comparisons. To contrast workers in very different industries and/or companies might yield inappropriate comparisons due to diversity of task and environment, even though the differences exposed could be relevant to an SLM paradigm in another context.

1.5 DATA GENERATION

No official statistics were available for either twilighters or homeworkers and so primary data generation was essential. Literature suggested that secrecy surrounded homeworking arrangements and note 4 of Hope et al suggested that employers would be unwilling to co-operate in investigations. It was concluded that postal, self-administered
questionnaires would be ineffective for data generation and that it would be more successful to extract data by face-to-face interviews where confidence could be engendered and confidentiality assured. It was decided to generate data by in-depth employer interviews (see 1.6) and these would concentrate primarily on female workgroups; male data would be largely confined to earnings and job allocation since these were necessary to determine market structure and male/female job-segregation. The advantage of a local survey (see 1.7) undertaken by personal interview was that it presented an opportunity to collect data of a breadth and depth that would have been impossible by larger survey techniques.

A combination of quantitative and qualitative analysis was intended since this was perceived as an integral feature of a good socio-economic approach. Although national representativeness was foregone this was more than compensated for by achieving a realistic appraisal of generated statistics and obtaining a thorough understanding of complex relationships.

1.6 CONCENTRATION ON THE DEMAND FOR LABOUR

The objectives outlined in Section 1.3 would involve the generation of an immense volume of wide-ranging data on both the demand and supply sides of the LM. To establish degrees of possible segmentation would require the generation of the same data for each workgroup, but this would be a formidable task if the assumed constraining influences on supply and demand (see 1.10) were to be investigated. Subsequent attempts to draft and test an interview schedule revealed this task to be too ambitious for one Ph.D researcher within the context of resource constraint.

Several homeworker studies e.g.:88-92,123,124,127 had explored supply issues and there was a dearth of knowledge regarding the demand for homeworkers when this research commenced; indeed researchers saw employer co-operation as difficult to obtain 124. Although the scope of the investigation had to be curtailed, it was considered important that the imbalance between supply and demand knowledge should be redressed. Consequently it was decided to concentrate on demand issues and confine data collection to employer interviews.

However, generation of some supply data was deemed necessary because it was anticipated that for the secondary workgroups studied household commitments might be so influential as to determine the workgroup to join when entering the labour market. It was realized however, that much supply information could be obtained from the employer, e.g: worker characteristics; levels of supply (which would reveal relative levels of
job competition); job segregation; and pay and conditions of service. Consequently, the decision to confine data collection to employer interviews merely sacrificed the workers' own accounts of their criteria and objectives in seeking employment, but these topics were already well discussed in the literature, see 2.3.

1.7 THE SELECTED LOCAL LABOUR MARKET

Having decided to concentrate on the demand side of the labour market it was thought that the study would be more manageable if restricted to a small geographic region which could be extended should a small sample result. Insufficient funding was available to produce numerous questionnaires, or to finance long-distance interviews, thereby limiting the geographic area of data collection, but this was additionally advisable from a time input perspective. Consequently, it was decided to confine data collection preferably to one LLM or a series of overlapping LLMs. This had the added merit of holding reasonably constant the levels of job-competition and the choices of alternative employment. It also held constant the capital/labour intensiveness of the labour market as well as the levels of employment and unemployment. The prime difficulty was envisaged as pinpointing a locality in which a sufficiently large sample of establishments in the same industry each employed male and female full-time workers as well as twiglighters and homeworkers.

Literature references124,133,135 had shown homeworkers to be used by the 'rag trade' and fortuitously, Loughborough University was situated in the region that had seen the birth of the hosiery, knitwear and lace industries following William Lee's invention in Calverton, Nottingham, of the stocking frame in 1589159. Following preliminary research (see 3.2) which revealed that hosiery and knitwear companies employed the chosen workgroups, it was decided to confine the empirical study to that part of Charnwood Borough that incorporated Loughborough town and its surrounding smaller settlements of Shepshed, Barrow-upon-Soar, Sileby, Quorn and Mountsorrel, see Figure 1:1. The region was well-chosen because, if employers proved unsympathetic and refused to co-operate, the boundary could be extended conveniently to include the cities of Leicester, Derby and Nottingham that possessed similar industries.

The chosen region was a good example of a clearly defined LLM, because it was surrounded by much open countryside containing residential villages offering little employment opportunity. The existence of mobility into the region was to be assessed from the location of employees' residences
relative to their workplaces, but it was anticipated that little cross-boundary mobility would occur due to the configuration of employment opportunity, except perhaps between Sileby and Leicester in the south. However, it was probable that mobility would exist between the settlements of the study thereby increasing employment choice possibilities.

Each settlement had a long industrial tradition, but the smaller settlements retained rural aspects. Since most homeworker researches had been conducted in inner-cities\textsuperscript{123,124,133,135}, this research would provide original information about homeworker employment in a semi-rural context.

1.8 SELECTED INDUSTRIES

Determination of the extent of segmentation required comparisons of pay and conditions of service, but these would be meaningless unless workers were performing similar tasks. Thus, twilight and homeworkers were to be compared with full-time males and females performing similar jobs for the same employer. The comparability requirement precluded the possibility of incorporating into the study non-factory producers (see 9.2.1) and homeworker agents or intermediaries. This was unfortunate because it was suspected that homeworkers employed by intermediaries would experience the worst pay and conditions of employment, but these homeworkers had no factory counterparts. An intra-industry study was therefore implied and this in turn would hold constant the product market and production characteristics (e.g., continuous, small-batch etc.), and it was also advisable because there was a greater likelihood that exogenous factors affecting variables such as product demand and profits would be more similar than in inter-industry research. An inter-industry study had been initially preferred to reveal the influential product market variables that affected workgroup demand, but desire for genuine comparability might have reduced the number of industries from which a choice could be made because some may not have used all the groups simultaneously.

Preliminary investigations were undertaken, see 3.2. Data summarized in Table 1.1 reveals the number of companies employing twilight and/or homeworkers inside the chosen LLM and its adjacent city areas. It showed the obvious industry choice as textiles. Hosiery and knitwear (H&K) manufacture was the local textile specialism and evidence suggested that at least 4 H&K companies used all the selected workgroups. Textiles additionally seemed a good choice from the viewpoint of segmentation because it was widely regarded as a low-paying industry subjected to seasonal variations. The toy, boot and shoe, and leather goods industries
were expected to employ workers in substantial numbers on similar stitching-type operations, and it was anticipated that these industries would have similar product market dynamics to the textile industry because they also were largely fashion and seasonally oriented. Hence, it was decided to conduct the main investigation in textiles, but should employers proved uncooperative, workers from the second group of industries could be included as a fallback position to increase sample sizes. The existence of regional and industrial fallback positions was considered important given the supposedly secretive nature of the homeworking scene\textsuperscript{91,275}.

Subsequently, cooperation obtained from pre-pilot companies (see 3.3) encouraged the use of the footwear industry for the pilot study (see 3.6) since several fall-back positions appeared unnecessary.

Engineering, box-making, pharmaceutical, publishing and wallpaper industries were excluded along with all industries in the tertiary sector of the economy because such workers were perceived as performing different types of work to textile workers. Within the selected textile industry, empirical data collection was to be limited to \textit{direct production} workers because preliminary research had shown many secondary workers to be so employed. To include clericals and evening cleaners, even though working in the textile industries, would defeat the objective of comparability.

1.9 WORKGROUP HYPOTHESES
1.9.1 Hypotheses of Workgroup Demand

Immediately prior to the commencement of the research there had been widespread public concern generated by television\textsuperscript{76} and the press\textsuperscript{77} about the poor pay and conditions obtained by homeworkers. The media had depicted them as 'cheap labour' which was deliberately exploited by employers because homeworkers' market position was weak. Homeworker pressure groups were formed and their literature\textsuperscript{88-90} revealed an additional claim; namely, that homeworkers were used as 'a buffer against business fluctuations'. These two demand criteria apparently conflicted because, if homeworkers were cheaper to employ, cost-minimizing employers would not choose in-factory workers at greater expense, nor cushion their employment. It was hoped to resolve this dilemma by the research.

There was little public concern, and few readily available publications, about the employment of twilight workers although ongoing research by Bosworth & Dawkins\textsuperscript{78,79} suggested that in contrast to other shift workers, twilight workers, who were mainly women, apparently received no shift premia. Consequently, preconceptions about twilight workers had
little firm foundation, but merely consisted of speculations that they 'filled the gap between the end of the normal day and the arrival of the permanent night shift'; they were thus expected to be found in the same numbers as the full-time day workers, since as part-time shift workers they were thought to take over the full-timers' jobs. If the absence of a shift premium was confirmed, this would make twilight workers a slightly cheaper form of labour than full-timers paid overtime rates. Their employment additionally saved the social costs of introducing a conventional continuous multiple shift system which would disrupt the full-timers' work pattern. Twilight workers were therefore thought to be a convenient means of manning operations for 24 hours a day while paying a shift premium only to the permanent night workers. It was expected that they would be less costly to sever than shift workers if product demand dropped, since as low-hour part-timers they might not qualify for statutory redundancy payments. Therefore, it was possible that twilight workers were used by seasonal or fashion industries during peak production times to produce 'top of the peak' demand. If so, income and employment sensitivities would be closely linked to product market dynamics.

It was anticipated that full-time day male and female workers would be demanded to produce the 'bulk of output' regardless of the level of product demand, although this expectation conflicted with the 'cheap labour of homeworkers' hypothesis discussed above. It was thus suspected that some employers might reduce full-time day worker numbers to substantially fewer than those needed to produce their requirements so as to use the homeworker group, but it was realized that this presented problems because the level at which this tactic ceased to be applied would have to be determined. However, in the course of this research this 'under-cutting tactic' was to be investigated and the full circumstances of the decision exposed.

1.9.2 Hypothesis of Workgroup Supply - The Life-cycle Hypothesis

As implied in 1.10, the following chronological progression through the female workgroups was anticipated. The young female would join the full-time group from school and she would remain in it until her first pregnancy, whereupon she would withdraw from LM activity for a period of confinement or longer. If she wished to maintain LM activity but had no daytime child minding facilities, she would enter either the twilight or homeworker group while her family was at the infant stage, but with the passage of time and with her family demanding less attention she would participate more 'formally' by joining the part-time group and eventually
re-enter the full-time group. Near to, or on, retirement she would rejoin either the part-time or homeworker group, or leave the LM altogether. Clearly this anticipated workgroup progression was closely linked to the female life-cycle and was therefore termed the life-cycle hypothesis of female labour supply. It was intended to verify whether or not such a chronological progression indeed occurred.

1.10 ASSUMPTIONS REGARDING THE FACTORS THAT COULD INFLUENCE THE SUPPLY OF, AND THE DEMAND FOR, WORKGROUPS

Notwithstanding the above hypotheses, individual demand characteristics and workgroup interactions were so imperfectly understood at the outset of the research that it was impossible to construct a simple, statistically testable hypothesis that would put overall labour demand into perspective. It was envisaged that there would be numerous factors each having its peculiar impact, and that these influences would arise on both supply and demand sides of the LM and would interact.

In choosing to focus on twilight workers and homeworkers as possible examples of secondary labour, the empirical research was directed towards a comparative study of workgroups within the workforce, and implicitly a consideration of the 'the number of hours of work', 'the time of day of work' and 'the place of work' since it was in these ways that twilighters and homeworkers differed from full-timers. These effects have been called the 'hours constraint', the 'time constraint' and the 'place constraint' respectively as is discussed below.

1.10.1 Assumed Influences on the Supply of Labour

It was suspected that many factors would influence labour supply; some encouraging LM participation others discouraging it. It was anticipated that the geographical area tapped would determine the effective supply of potential workers, and that numbers attracted would depend upon the size of the LLM and the concentration of residences within it. If the tappable area was influenced by the time and costs of travel relative to earnings, then worker groups with higher earnings, or those with free transport, would travel further than lower paid groups. Employer strategies for overcoming shortages of preferred workers would probably include subsidizing transport, adopting wide ranging recruitment techniques and highering wages.

Some important constraints on supply could be demand imposed, such as restrictive recruitment specifications which related either to skill
requirements or to the personal attributes of applicants. The more restrictive the specification, the smaller would be the pool of potential workers and this could be advantageous in over-supply situations in order to reduce screening costs.

At an individual level, household circumstances might be so restrictive on availability for paid employment as to limit the number of hours, the timing, and the place of employment. Individuals were conceptualized as facing either an **hours constraint**, a **time constraint** or a **place constraint**, or combinations of these. It was appreciated that the apparent severity of these constraints might vary relative to pay, but, given the need for true comparability, investigation of this possibility fell outside the scope of the project. Although in theory the **domestic role** (for role definitions see Appendix II) could impose equal constraints on the labour supplies of men and women, in practice it was expected to impinge more on women, it still being the norm for women rather than men to adopt the roles of homemaker and family-carer. Hence, the 'number of hours', and 'times of day' constraints were expected to affect the labour supplies of women to a greater extent than men's. Since the homemaker and family-carer roles could be undertaken either separately or jointly, by an individual or in partnership, it was likely that these would impose varying degrees of constraint. Indeed, the family-carer role might be sufficiently restrictive to prevent attendance at factory premises and this would impose the 'place of work' constraint. Consequently, it was anticipated that female labour supply would be characteristically different from male supply, and that this would have important supply side implications for female workgroup formation. The large increase in female part-time employment during the 1970s was seen as evidence of the importance of these constraints. However, it was suspected that as children matured, lower time input requirements to care for them could permit modifications in the levels of LM activity; a progression from one workgroup to another was envisaged as constraints on paid-work-available time changed, see 1.9.2.

An **efficiency** constraint would arise if workers were indolent or incompetent causing employers to require more personnel, or hours per employee, to complete a given amount of work. To overcome an efficiency constraint employers might introduce payment by results schemes to encourage higher productivity, and training to improve competence. **Legal constraints**, such as planning laws that required homeworkers to obtain permission for 'change of use of premises', and social security and
taxation laws that set thresholds for contributions, were thought to cause potential workers to opt out of LM activity, or to reduce their market involvement. Employee tastes and preferences were expected to influence labour supply in both upward and downward directions; preference for a particular workgroup constrained the supply to other groups when the preference could be exercised, and aversion from a group also constrained the supply to it. Aversion from 'unsocial hours of work' was thought to be a major limiting factor on the supply of shift workers. A taste for companionship would lead to a preference for factory employment, while a desire to escape from factory discipline would increase supply to the homeworker group. Financial need might be the most compelling influence that encouraged LM participation of mothers with young families, but where the 'time', 'hours' and 'place' constraints prevented factory participation, this would also increase supply to the homeworker group. A taste for more leisure and/or fatigue with advancing age could yield a preference for fewer than full-time hours in both males and females.

1.10.2 Implications of Supply Influences for Workgroup Formation

The major constraints on male labour supply were perceived as the level of wages and the size of the LLM. By not adopting the domestic role, men would have fewer constraints on their paid-work available time. Men were generally expected to offer full-time hours, and thus there would be few part-time, twilight or homeworking males. The full range of ages from school leaving to retirement age would be present in each male workgroup.

In contrast, the domestic role would cause female shift and full-time day groups to be comprised mainly of women without family responsibilities, whereas the less-than-full-time groups would comprise women with household ties. The twilight and homeworker groups were expected to comprise women facing particularly strong constraints on their time and thus many would be mothers with young children. Formation of the less-than-full-time groups was perceived as a response to the 'hours', 'time' and 'place' constraints imposed by the domestic role. Responses were visualized on both the supply and demand sides of the LM.

1.10.3 Assumed Influences on the Demand for Labour

It was considered that business enterprises, existing to make profits, would find it advantageous to have cost-minimizing policies that reduced payroll expenditure, especially if they had labour-intensive production processes or operated in price-competitive markets. It was assumed that
employers would pay no more than was necessary to gain the services of any worker, and would prefer the cheapest form of labour that satisfied the necessary recruitment specifications. They would offer no benefits or premia except those required by law, or to maintain an effective working force. Because **product or service demand** varies by industry and sector of the economy, it was thought that preferences for particular workgroups would also vary. Companies that faced constant product demand would prefer full-timers, whereas those with wide daily fluctuations would use few-hour workers to provide extra cover for busy periods rather than over-recruit full-time personnel and have them under-employed for parts of each day. Thus, the less-than-full-time groups would be associated with variable product demand. The **production process** might also influence preference for particular workgroups. Companies with continuous manufacturing processes that necessitated 24-hour operation to prevent damage to equipment would prefer the shift working groups, but companies with small batch production might choose to operate on a daywork basis.

It was thought that the **cost of equipment** would strongly influence workgroup preference. High-cost machinery and buildings would not be viable if they were unused for long periods because generated profits would be too small to cover depreciation costs or interest payments on purchase price loans. **Equipment life spans** also affected time periods over which amortization could be spread, and a **high speed of technical change** which caused outmoded equipment to be discarded before it had deteriorated, because retention meant loss of competitiveness, would necessitate intensive use of equipment to cover the depreciation charges within allotted time spans. Shift workers would therefore be the natural choice in these circumstances because the capital non-utilisation costs would make such equipment unviable if operated by few-hour workers. It was therefore thought possible that, where capital non-utilisation costs were high, males would be preferred to females due to the greater-hour characteristic of their LM involvement, and that in LMs characterized by capital-intensive industries there would be low female participation rates because women in those markets would have fewer opportunities for low-hour employment. Conversely, LLMs characterized by labour-intensiveness would have high female activity rates with shortages of women able to work full-time hours.

**Shortage of business accommodation** could also be an important determinant of group demands. Expanding companies situated in locations precluding extension of premises, especially those with labour-intensive operations requiring large worker numbers, might find the homeworker group...
a particularly useful expedient. It was thought that special circumstances would appertain regarding the demand for homeworkers. This group permitted manufacture without substantial investment in factory, warehouse or office accommodation and indeed some employers could opt for totally non-factory modes of production. A national LM was also thought to exist for homeworkers since both factory and non-factory producers could send work over long distances by post, rail or road. However, special constraints placed limits on production in domestic premises because certain operations could not be undertaken by homeworkers when equipment was too large to fit into the home, or where it required special services, such as high-voltage electricity or compressors, not normally installed. Products involving the use of unpleasant materials and poisonous, strong smelling or radio-active substances should inhibit homeworker use, but researchers had discovered homeworkers using hazardous materials. A further perceived constraint on homeworking was the costs of delivery; where these were high, cost-minimizing employers would avoid the group, or transfer these to the homeworker. 

Employment protection and equal opportunity legislation regulated many conditions of employment and thus could influence labour demand. The exclusion of homeworkers from protection, and the necessary working periods required to qualify for certain benefits (see 2.2) were expected to affect workgroup recruitment such that employees weak under law might be selected as expedients by cost-minimizing employers. Employees working fewer than 16 weekly hours needed 5 years continuous service with the same employer to receive many benefits; it was anticipated that employers might limit twilight workers' weekly hours to prevent claims. The employment in factories of women and young persons was forbidden during certain evening and night-time hours which prevented them from working shifts unless exemption orders were obtained. This formality could deter the introduction of female rotating or twilight shifts, and prohibition might be used to justify the non-use of women on shiftwork jobs. 

Bargaining strengths were expected to have complex influences on demand strategies. Groups with high disposable incomes were expected to have high union membership, and those with low earnings to have low membership particularly when dues were flat rate payments that took high proportionate deductions from low pay. It was expected that groups with high membership would receive more effective representation since unions would be handicapped in representing low membership groups when their interests vied with those of high membership groups. In this respect, it
was probably true to say that "he who pays the piper, calls the tune". If this pattern of representation prevailed it would improve conditions for high membership relative to the low membership groups and widen discrepancies between them. Employers could then more easily resist attempts to improve conditions for the weakly unionized. Thus, virtuous and vicious circles were expected to arise with respect to trade union membership. To counterbalance these effects however, cost-minimizing motives would favour the use of weak groups due to fear of high wage claims and disruptions. These conflicting demand objectives could therefore produce more-or-less equally sized groups over time causing difficulties in data interpretation.

* * *

The factors discussed above were perceived as the more important influences that allocated individuals to workgroups and dictated preferences for these. Many issues deriving from such influences have been examined in Part B.
CHAPTER TWO - LITERATURE REVIEW

The preliminary task of the research was to undertake a thorough and wide-ranging literature survey. It has been confined to relevant publications dealing with the central features of the study. The earlier part of this chapter deals with contextual material, whereas the later part is largely empirically oriented. Section 2.1 reviews theoretical aspects of market structure. An exposition of the legal context of the LM follows in section 2.2 to provide a background for Chapter 11 which assesses the impact of third party intervention on the workgroups studied. Section 2.3 initially surveys the LM position of women relative to men, and then proceeds to examine publications regarding specific workgroups paying particular attention to twilight worker and homeworker references. Sections 2.4 and 2.5 present overviews of the settlements and industries in which the empirical research was conducted. Whilst multi-disciplinary research facilitates a more comprehensive understanding of a topic, it suffers from disadvantages in that literature reviews are laborious and time-consuming, and reference lists become extensive.

2.1 THE THEORETICAL CONTEXT OF THE LABOUR MARKET

This section of the literature review maps out the theoretical context of the structure and functioning of the LM. At the time of research design there was little established theory regarding LM disequilibrium and the findings of the empirical work revealed the need for a more thorough understanding of LM dynamics. Only after data had been collected and processed did the author (in Chapters 12 to 16) begin to address this topic, as did several other writers concurrently. Nonetheless, relevant recently raised issues in theoretical debate are reviewed here to put comments made throughout the thesis text into context.

Whereas economists have taken wage levels as the central feature of LM assessments, sociologists' analyses of LM relationships do not rest on an established range of theories, but are composed of constantly reappraised discussions about various aspects of LM activity. Nevertheless, the debates about structure, and the terminology used to describe it, are common to both disciplines.

In 1983 Thurow drew attention to the conflicts and inconsistencies in economic theories and described the LM area of economic theory as "...the Sargasso Sea of economic shipwrecks". Indeed, debate about the
nature and functioning of labour markets has continued since the beginning of the discipline itself and several major schools of economic thought can be identified: e.g. Classical, Neo-Classical, Keynesian, Institutionalist, Structuralist, Radical, and Monetarist. Broadly, the Classical, Neo-Classical and Monetarist theorists maintain that, after making certain allowances, markets will eventually reach equilibrium automatically, and wage differences for similar work will be competed away by the entries or exits of workers. These theorists adopt a 'price/auction model' which fundamentally links the level of wages to the level of employment. Studies have examined whether persons in similar circumstances receive the same earnings, but the results have been disappointing. Phelps Brown suggests an 'ability to work' index which generates a skewed distribution of earnings. Becker, Mincer, Schultz, Griliches, Bowles, Bowles & Nelson and other neo-classical economists attribute wage differentials to differences in training, schooling, I.Q., experience, ability to raise finance, and other issues.

In contrast, many institutionalists attribute persistent wage differentials to trade union activities. Keynesian economists claim that levels of economic activity can become rigid at less than full employment, so that high levels of unemployment can remain without the economy itself reaching equilibrium at full capacity. Structuralists see the obstacles raised by LM institutions (employers, trade unions, law) as impairing the proper functioning of equilibrating forces. Debates regarding which is the most appropriate paradigm for the British labour market still persist and can become highly complex.

In discussions about the labour market it is important to ascertain levels of aggregation. The Department of Employment (DE) annually publish much aggregated data and many economic publications report econometric tests using these data and draw conclusions regarding market structure. Gordon holds that, "only a little can be deduced from aggregate data", and this contention was given qualified support by the present author who therefore undertook a micro level study. National, regional, and local labour markets are conceptualized, these being defined by the extent of their geographic boundaries. The problem however is to define boundaries, for both people and commodities move across them and there are no water-tight compartments within which a market can truly be said to function. Goodman visualized a series of overlapping areas surrounding zones of employment, possibly of irregular shape due to elongations along communication routes. Local labour market (LLM) concepts were developed.
following the non-competing groups theory of Cairnes, these being seen as operative only within specified geographic areas where pricing, allocation, training and recruitment decisions were made according to economic variables. Much empirical research has been conducted within LLMs (e.g. Reynolds, Lester, Robinson, MacKay and Blackburn & Mann) and the findings often show stratified structurings of wages and employment conditions.

More recent strands of theory define internal, external and extended internal labour markets (i.e. ILM, ELM, EILM respectively): 'internal' being a market which functions inside a business organisation; 'external' being the market that functions outside that business organisation, but which is connected to it at various entry ports through which external candidates are able to enter the firm; and 'extended internal' functioning by tapping the pool of applicants that can be reached via the social networks of internal workers. These conceptualizations of labour markets can also accommodate the possibility of segmentation. Some theorists consider that the operation of the ILMs found in monopoly capitalist organisations is responsible for segmentation.

The extent to which firms internally restrict the procuring, allocating and rewarding of labour by not entering the open market for workers nor paying them in relation to current market forces is topical debate. Promotion and internal transfer become important issues in this context. The importance of institutional factors was recognized by Kerr who argued that organisations developed administrative and customary ways of securing workers through procedures established by employers' associations, trade unions and internal personnel policies. ILMs can be 'open' with most jobs having ports of entry, or relatively 'closed' with few entry ports. Ford et al argue that ILM jobs can be allocated in non-competitive, or less competitive, ways. Workers inside firms compete with each other in a limited way, but are 'sheltered' from direct competition with persons outside. Mann sees the relationship as one of mutual dependence with both employer and worker avoiding exposure to market uncertainty. Internal recruitment can be either sponsored (i.e. managerial selection of individuals for promotion) or sheltered/competitive (i.e. the posting of vacancies on internal notice boards inviting only internal competitive applicants). Institutional rules concerning skill, seniority and personal characteristics govern recruitment, while similar rules control rewards. Jobs are hierarchically linked to form job clusters some of which have ports of entry at various levels in the hierarchy while
others have entry only at the bottom. Doeringer and Piore suggest that internal structurings are ranged between long and short job clusters which can be horizontally or vertically formed. They see technological need and economic concentration promoting ILMs, and emphasize the importance of firm-specific skills, suggesting that such skills are retained by promotion so encouraging long-term career attachments and discouraging inter-firm mobility. Long-term attachments are advantageous to both worker and firm: the worker has access to jobs denied to those outside; the firm has fewer 'sunk' costs deriving from recruitment and selection, and it can spread its fixed costs associated with specific training over a protracted period of time. Alexander sees entry to the ILM from the ELM as governed by specific skill/educational requirements. Reder suggests that these might vary during economic fluctuations as employers adjust quality requirements, whereas Thurow proposes a 'queue' theory. However, ILM theory presupposes that establishment size is sufficiently large to incorporate job clusters with chains of advancement, but many small establishments have few employees and this precludes long job clusters. ILM structures are therefore most appropriate to large scale establishments.

Radical Economists emphasizing returns to investment and training suggest that ILM development demonstrates the exercise of managerial control. They see the internal differentiation of workers into job structures with promotion as a reward for stability as a managerial control strategy to divide workers, weaken collective bargaining and discourage concerted action.

Blackburn & Mann argue that the ILM as "fundamentally an apprenticeship in co-operation"; They consider skill differences between jobs to be minimal, but that ILM operation is strongly related to the need for stable 'habituatated' workers who know the firm's customs and practices.

Ford et al point out that boundaries between ILMs and ELMs have been clearly conceptualized but this is problematical since it tends to ignore interconnections. Informal links between the ILM and ELM and the use of employees as recruiters have been noted by several writers. Manwaring coined the phrase the Extended Internal Labour Market to describe the use of existing workers as channels of recruitment through which friends and kin are introduced to the firm. MacKay noted the use of internal recruitment and linked this with the level of economic activity; internal processes were more important in tight than in slack LM conditions. When viewing the market from the viewpoint of job search, researchers have remarked on the importance to job seekers of maintaining
networks with employees inside firms\textsuperscript{204}. EILM recruitment, similar to that of the ILM, can be either sponsored or sheltered/competitive; the 'shelter' offered by the ILM to internal workers being weakly reproduced for the network-linked potential workers. These 'linked' potential employees are 'cushioned' from the full competition of the ELM, but not from that of workers already in the firm. Such restriction of recruitment to ILMs or EILMs represent strategies of 'closure' which can be operated by managements or workers. Ford et al\textsuperscript{201} consider that despite growing literature the EILM concept has remained relatively underdeveloped and broadly defined and the term is currently used in a variety of ways. Internal recruitment processes can take a variety of forms, but these are poorly documented while distinct internal processes become overlooked or merged. Studies cite the advantages for employers of EILM use as: (a) the control exercised by existing workers over those they sponsor which enhances discipline\textsuperscript{203}; (b) reduction of the likelihood of dissatisfied workers\textsuperscript{205}; (c) reduction of managerial effort in recruitment and screening, and enhanced chances of recruiting motivated, compliant and socially appropriate workers\textsuperscript{206}; (d) good industrial relations and the reduction of overt control; and (e) convenient arrangements for restructuring workforces in poor economic states\textsuperscript{201}. Employees' advantages are seen as: (a) control over workgroup composition and (b) enhancement of status\textsuperscript{201}. Whereas conventionally, employers and employees are portrayed as operating opposing strategies, the advantages of recruitment through the EILM focus on the areas of consensus. It is now recognised that established workers stand at the intersection of their firm's supply of and demand for labour. Ford et al\textsuperscript{201} argue that the EILM is an area that merits further investigation; chapter 7 is addressed to this area of analysis.

Dual labour market (DLM) theory, being an extension of ILM/ELM theories, was developed in the USA with particular reference to the urban black population. Women have been characterised as Britain's secondary workers. This body of literature argues that the operation of ILMs dichotomizes workers into primary and secondary sectors. Many would-be employees in the ELM are denied access to the superior jobs of the ILM, while the absence of job clusters linked to certain low level ports of entry create secondary sectors within firms. Doeringer & Piore\textsuperscript{11}, Bosanquet & Piore\textsuperscript{1} and Barron & Norris\textsuperscript{61} describe the characteristics of LM duality. Barron & Norris\textsuperscript{61} suggest that five attributes make a social group a likely source of secondary workers: (1) dispensability via voluntary turnover, and easy involuntary turnover; (2) clear social difference; (3) a
low interest in training; (4) low economism (where economism meant the placing of a high value on monetary rewards); and (5) lack of solidarity. However, boundaries between primary and secondary sectors are blurred, but there is insufficient mobility between primary and secondary sectors to compete away differences. There are no precise criteria by which to assess primary and secondary jobs or workers, the characteristics shown in Tables 2.1 and 2.2 are amalgams compiled from early DLM writings. Primary worker characteristics make for a stable, reliable workforce with high productivity to which employers react by providing good conditions, training and wages. Thus, the primary sector has high wage employment within ILMs with long job clusters which permit advancement; the secondary sector has low wage employments that are unstable, 'dead-end' and manned by employees who exhibit 'poor' work habits which might have resulted from the nature of their jobs, or originally have caused assignment to the secondary sector. While secondary worker characteristics may be a rational response to the opportunities available, they inevitably perpetuate an unstable workforce characterized by high turnover, unpunctuality, and absenteeism. The employer compensates by providing low wages, poor conditions and inferior capital equipment, thereby perpetuating low rates of productivity.

In addition to duality occurring among both workers and jobs, Averitt\textsuperscript{62} sees primary and secondary sectors of the national economy within the realm of industrial enterprises; the 'core' of the economy comprising large organisations having stable demand and the 'periphery' composed of smaller companies having less stable demand because core organisations subcontract their unstable elements to the peripheral companies. It was suspected that many secondary-type jobs would be found in industries and companies that conformed to Averitt's\textsuperscript{62} peripheral image and it was intended to select such industries for the sample of firms to be investigated.

Segmented Labour Market (SLM) theorists Edwards et al\textsuperscript{63} extend dual theory by indicating additional segments within primary and secondary sectors. Reich et al\textsuperscript{64} suggest further subdivisions, and Blau\textsuperscript{65} reported in Somers\textsuperscript{66} argues that the term Dual Labour Market is "out of date"; thus Segmented Labour Market has become more widely used. The primary sector is seen by Reich et al as sub-divided into an 'independent' segment in which personnel have a degree of autonomy, and a 'subordinate' segment in which jobs are routinized and where personnel are stable and dependable but without autonomy. Some factory and many office jobs fall into the
subordinate primary segment. Further segmentation within the primary sector has been considered as arising from racial and sexual discrimination, so that minority workers, although present in all segments, face lower wage sub-markets. The radical economists attribute the lower segments of secondary employment to deliberate 'divide and conquer' tactics. Nichols & Armstrong\(^67\) claim that workers are divided because that is how managements prefer them to be.

An Informal Sector (IS) is seen as contributing substantially to the national outputs of developing countries\(^68\), but employment in the informal sector is also relevant to developed economies. The IS is characterized by 'petty trading' which furnishes subsistence levels of income. Women predominate, and activities include small scale selling of domestically produced goods such as food, farm produce and artefacts, hawking, market haggling, and shoe cleaning. Individuals in the IS often cannot obtain employment in the formal sector of the economy either because waged work is monopolized by worker categories from which they are excluded, or due to chronic unemployment and underemployment\(^68\). While homeworking in developing countries could be conceptualized as falling into ISs, homeworking in developed countries is inextricably linked to formal economies.\(^69\)

Bluestone\(^70\) identifies an 'irregular' sector in which income is derived from illegal sources or from transfer payments. Workers are unemployable and no longer formally enter the workforce. Andersen\(^71\), Sinfield\(^72\), and Goodwin\(^73\) have considered strategies for placing this group of would-be workers.

In outline therefore, the structure of the LM can be classified into four broad sectors which embrace all forms of economic activity:

1. Primary Sector
   - (i) Independent Segment
   - (ii) Subordinate segment
2. Secondary Sector
3. Informal Sector
4. Irregular sector

Despite some lack of precision regarding segment boundaries many writers from the economic and sociological disciplines now concur with a segmented form of LM structuring and research is revealing further subdivisions and segments within the broad classification of primary and secondary sectors. Freedman's\(^74\) concept of shelters is a useful contribution because it offers explanations of the process of segment formation and persistence. She claims that individuals seek to avoid job-competition by various means, and when successful, these strategies provide
'shelters' within which employment can be protected and conditions of service improved. Shelters are created by trade unions that negotiate entry and redundancy criteria (e.g. qualifications and seniority) and professional associations that register practitioners, formulate rules of conduct and monitor performance. Closed LM segments exhibiting stratified earnings and conditions of service are thereby formed. Mobility between shelters is limited by restrictive entry requirements. Ashton 75, whose research findings conformed closely to the market shelters explanation of segmentation, found that segment boundaries overlapped but they nevertheless remained closed entities.

It has been shown that inequalities in income have remained largely unchanged over time37, and this would appear to be consistent with 'Dual' and 'Segmented' structures. An integral part of SLM theory is that sections of the workforce receive lower pay and poorer work conditions than other groups in the market, and hence low pay becomes an important focus of interest in the determination of LM structure. Concepts of low pay and poverty are relative and change over time, see Fyfe & Pettman 38 and Feigehen et al39 respectively. The problems and causes of low pay are persistent themes in the literature, with homeworkers, racial and gender groupings having been taken as illustrations.

The causes of wage differentials and low pay have stimulated much economic debate. Literature relating to wage differences and discrimination, particularly by race and gender is vast (see selected references 47 to 61). Structuralist writers attribute them to various forms of employer discrimination. There is evidence to suggest that racial discrimination is substantial in the UK, but McIntosh & Smith47, found that although still considerable, it was declining. Custom has also been designated as accounting for many observed wage differentials58, but custom is merely a perpetuation of discrimination from the past. Hausman et al59 discuss various methods of calculating discrimination, such as Becker's coefficient60. However, Marx231 wrote about work within wide general theories. He examined patterns of labour demand over time and considered the development of production techniques, the concentration of capital, divisions of labour, cultural patterns, and then linked these to the overall pattern of employment. This broadly based, long term view of employment was lost by both economists and sociologists until 1974 when Braverman232 reintroduced it. Since then sociologists have used the term, The Labour Process, to describe the transformation of work and employment over time. For a comprehensive analysis and evaluation of the themes
discussed below, see Thompson\textsuperscript{233} on which this review of the labour process is based.

The sociological study of work has traditionally concentrated on issues such as; workplace behaviour, the organisation of work, working environments, the class structure, stratification of jobs, hierarchy and control structures, but these themes have not been linked together into an interrelated overview of employment. Plant and factory studies emerged in the 1930s and were within the context of helping managements to understand variations in, and restriction of, output. A strand of research still places emphasis on workplace behaviour, but currently focuses on relations between technology and the social organisation of work\textsuperscript{234}. Others examine the 'rules' underlying the functioning of business organisations, particularly patterns of control, industrial relations and the framework of bargaining and conflict. Another approach has been to stress features of class and class imagery and their relations to the world of work\textsuperscript{9,235,240}.

Important criticisms of plant and organisational studies centred around their insularity from wider non-work factors. A major alternative was provided by attempts to look at \textit{orientations to work} which integrated concerns with the changing natures of class and industrial society and the existence of \textit{instrumental} attitudes that depended on aspirations and wider conceptions current in society. These studies examined people's (usually men's; woman's influence was ignored or treated as a problem) perceptions as shaped by society-wide experiences and ideology. This sparked a trend from the sphere of work towards the wider question of class imagery. However in these studies work experience was assumed to be understood rather than examined to determine whether it was connected to the work process itself or to external factors. Thus it became important to study the actual process of work, the informal workgroups and the acts of resistance and conflict but there was a broad acceptance of an expanding economy free from structural conflict and work deprivation: there was a view that automation had reversed the trend towards an ever-increasing division of labour and had blurred the clear-cut distinction between manual and non-manual labour as part of the move to a post-industrial society. With the re-emergence of social and industrial conflict in the late 1960s a new emphasis began to arise on the overall aspects of the labour process.

Reawakened interest in a long-run labour process has produced contributions through theories of work, business organisations, industrial relations, and de-skilling. Braverman's concept\textsuperscript{232} of the labour process had three strands: firstly, he saw the need for capital to control labour
CHAPTER 2  LITERATURE REVIEW

power, and that this created the basis for alienation; secondly, the origins of management lay in the struggle to devise a successful means of imposing the employer's will within the social relations of production; thirdly, the division of labour based on a subdivision of work enabled the separation of jobs into their constituent elements and reflected the need for capital to divide crafts in order to cheapen the parts and provide a basis for de-skilling. Science and technology were held to be instrumental along with 'Taylorism' (the careful measurement and planning of operations) and 'Fordism' (assembly-line type production) in assisting capital to achieve the degradation of work.

Braverman's ideas have prompted research and criticism; gender-related classification of skill, the extent, timing and variations in skill have been widely questioned. De-skilling and the degradation of labour have emerged as two major areas of labour process debate. The degree to which skills have been eroded or transformed by capitalist development has been contested, and a long-run tendency has been questioned, but a central feature is that 'general' skills are reduced to 'job-specific' ones, while de-skilling is seen to be a long uneven process.

The general conclusion to emerge is that de-skilling and the mechanisation of production processes does not lead to a complete domination of labour by capital. The consequences of de-skilling for work experience has received scant attention although a few studies show that workers have an increasing 'pride' in their work and that some workers have positive identifications with their dexterities. It is argued that such factors can permit the degradation of work without continuing crises.

Further important strands have concerned the forms of capital's control, and whether capitalism or patriarchy (the subordination of women by men) is responsible for women's subordination. Of interest are the specific origins of control for, during the transition from total domestic production to factory systems, loose forms of control became systematic management. Marglin sees the need for greater control over the productive process as being the motivating force behind the widespread replacement of domestic production by workshops and later factories during increasing activity in the industrial revolution. A common theme is the rejection of the view that the capitalist labour process is accompanied by a growth in the authority of management, and many writers agree that when labour is purchased the employer is acquiring only 'potential', which Marx recognized and called 'variable' capital. Indeed, the search for a particular 'type' of worker has been emphasized; this, Blau & Schoenherr
suggest, operates as an important control device in itself.

A system described as 'simple control' is based on small size enterprises with lack of sophistication in the productive process which allows the entrepreneur to directly supervise the work, foremen and pay arrangements himself. Edwards'\textsuperscript{21} claims that when workforce size grows too large for personal ties, a basis for worker resistance is established; simple control is further undermined by the growing concentration of economic resources, and thus a transition from 'control' exercised by the entrepreneur to 'management' occurs.

Organisational theorists, have pointed to the growth of formal (often written) procedures as well as hierarchical chains of authority for exerting of control. These developments have been termed bureaucratisation and formalisation\textsuperscript{20}. Edwards'\textsuperscript{21} charts the replacement of 'simple hierarchy' by more subtle mechanisms, such as fragmentation of production processes and vertical differentiation between hierarchical levels to ensure the continuance of managerial control. In practice, the degree of 'direct authority' varies from one industry to another and differing forms of 'control' and organisation of work make it futile to talk of a single, simple labour process. Discussions centre on the variety of responses and a formalism/casualism model has been used to describe the range of organisational strategies. For instance, in contrast to the bureaucratic formalism of manufacturing industry which is usually taken as the frame of reference, certain industries have been characterized as being 'casual', such as the construction industry\textsuperscript{23-27}, and the docks where the move to formalism was state instigated\textsuperscript{28}. In particular, homeworkers have been characterized as casual labour, but Allen\textsuperscript{29} points to a common confusion between the conditions of work and characteristics of workers. Some literature portrays homeworkers as 'casual workers', but rather it is 'casualized work' when judged by its conditions, since many continue working reliably for numerous years, often for the same employer, see 2.3.

Terms such as casualism and marginalism are therefore seen as imprecise and open to many different interpretations\textsuperscript{30,29}. As an alternative to the formalism/casualism framework, Williamson\textsuperscript{31} and Ouchi\textsuperscript{32} suggest a markets/hierarchies interpretation of organisational behaviour. Control can be exerted by means of the market mechanism via subcontracting arrangements which are seen as appropriate when price fixing costs are low, and where there are no ambiguities with respect to the quality of performance. Bresnen, Wray et al\textsuperscript{30} consider this interpretation to be more appropriate than the formalism/casualism framework for analysing labour.
demands when direct and subcontracted labour is used simultaneously. Market relationships are seen as control mechanisms. Labour subcontracting is not a new phenomenon and it was practiced in the metal trades\textsuperscript{33} and the coal industry\textsuperscript{34} during the nineteenth century. Subcontractors were often responsible for recruiting, employing, training, supervising and disciplining their underhands\textsuperscript{35} in a similar manner to present day homeworker agents. Bresnen \& Wray et al\textsuperscript{30} show how market and hierarchical control mechanisms can overlap to the point where employers adopt market-type contracts with their direct employees by means of piece-rates and job prices.

The task for labour process theorists then becomes that of understanding the combinations of control structures, important offspins being the use of an ideology of femininity as a means of securing compliance from women workers, and male dominance of trade unions, see Dex\textsuperscript{281}. In the social relations of the shop floor, even something as simple as gender-related banter could become the language of discipline.

The ability of capital to organize consent depends on the context of productive activity, and forms of control have been shown to alter in relation to economic changes which place differing degrees of pressure on firms\textsuperscript{238}. Although an important contribution has been made by linking consent to material conditions, 'external' factors must also be considered in order to fully understand the generation of consent. For instance do women workers exhibit greater pacifity and compliance with work conditions, and if so, why? Could it be that female loyalty is enhanced by the position women occupy in the hierarchy of mental and manual labour\textsuperscript{239} and by their social preparation for the world of work during schooling?

It was at this stage of theoretical debate that the author was required to design and implement the research programme, and it was within the context of the issues discussed above that the empirical work was set. In due course, empirical findings pointed to the need to establish a theoretical base relating to LM disequilibrium and processes of adjustment. Very recently economists have turned their attention to problems of disequilibrium, indeed, two articles reviewed below are awaiting publication. Part C is the author's contribution to the debate that is now confronting this topic. Such writings are reviewed below in order that the issues raised can inform subsequent analysis and discussion of data.

In recent years attention has been increasingly focused on the nature of contractual relationships within firms; Littler\textsuperscript{36} considers that both
industrial and organisational sociology have largely ignored systems of internal contract. There has been an increasing awareness of the pervasiveness of long employment relations, even in literature relating to homeworkers. Oi\textsuperscript{185} was the first person to recognize the importance of long-term labour relations by noting the hoarding of skilled as opposed to unskilled workers on a cyclical basis. This he attributed to what he called the 'fixed costs of labour' (i.e. recruitment, selection and training investment) which were lost to the employer when the worker left the company.

Implicit Contract (IC) theory picks up these issues; Sloan & Wooden's\textsuperscript{199} survey of the literature relating to long-term employment relations forms the basis of the following discussion. IC theories developed from attempts to understand the twin empirical irregularities of wage stickiness and involuntary unemployment. ILM literature bears directly on IC theory as do the insurance, transaction cost and incomplete information areas of analysis. General and firm-specific training have important implications, as have fixed costs of labour incurred by hiring and training\textsuperscript{185}. It is held that due to these factors, firms have the incentive to develop stable relations with their employees. Transacting (i.e. employment contracting) on the basis of worker identity offers economies if repeated transactions are expected, especially in an uncertain or ill-informed world, or when contracts are difficult to enforce and where employees can control performance, usually a costly and difficult thing to monitor. Thus, employment relationships, instead of being seen as a series of 'spot' exchanges as depicted by traditional price/auction models, are viewed as complex long-term attachments.

IC literature can be divided into two main streams: writings that attempt to rescue price/auction models\textsuperscript{208,209,210}; and those that challenge it, such as Williamson et al\textsuperscript{225} who consider that exchange in the LM is highly idiosyncratic, and Okun\textsuperscript{211,222} who asserts that it is unlikely to rely on the impersonal price/auction system. The latter type Sloan & Wooden\textsuperscript{199} have termed 'Invisible Handshake' contracts in order to distinguish them from the former which they continue to call 'Implicit Contracts', but these terms are confusing since both are contracts of employment implicitly constituted. Consequently, that convention has not been followed; the former type have been called 'Risk-averse' and the latter 'Cost-minimizing' contracts due to their distinguishing features. There is much overlap between these two streams of thought and debates address five basic issues. These are: (1) worker risk aversion; (2) the
value of unemployment; (3) transaction costs; (4) contract enforcement; and (5) asymmetric or imperfect information. Contracts themselves can be of two types: the most usual being (a) implicit wage contacts (i.e. fixed wage/variable employment), but some writers prefer, (b) implicit employment contracts (i.e. fixed employment/variable wage).

With respect to risk aversion, the basic premise is that, relative to employers, workers are risk-averse. Firms offer workers employment plus an element of insurance, the argument being that workers pay a premium for lower variance in wages. As part of the exchange for wage certainty, workers accept the risks of employment fluctuations by implicitly agreeing to lay-offs in trough conditions. Azariadis sees differential risk averseness as not necessarily based on underlying psychological differences, but that workers are dependent on a wealth portfolio (i.e. their human capital) which they cannot diversify; firms have various types of capital which they can diversify at will. Firms are therefore better placed to bear risks. In general, the more risk averse, the more reliable will the workers be, and the greater the likelihood of fixed wage/variable employment contracts. Thus, implicit contracts are seen to give rise to involuntary unemployment in the form of temporary lay-offs. That the unemployment is involuntary arises because, although implicit wage contracts have been entered, it cannot be assumed that laid-off employees would not prefer to retain their jobs. Akerlof & Miyazaki disagree with this assumption and claim that wage 'stickiness' should not affect unemployment because fixing employment and varying wages leads to the same wage bill. They argue that employees will negotiate fixed employment contracts, accepting lower wages in return because a zero wage yields no utility. Thurow also questions implicit wage contracts and argues for implicit employment contracts as follows:

"There is no empirical evidence for the existence of this set of preferences, but it also makes no intuitive sense. A sensible risk-averse worker, given the choice between the small risks of occupational wage reductions and the large risks of many weeks of unemployment, would always choose the small risks and flexible wages."

With respect to the value of unemployment, Sloan and Wooden claim that lay-offs will occur if employees value leisure and dole payments more than working for a wage less than the going rate. They see the advantage of lay-offs as being the retrenchment of the least efficient or specifically trained workers. This they consider to be preferable to reliance on wage reductions which might induce the most highly efficient to quit first.
is sometimes assumed that the probability of lay-off is spread evenly across workers\textsuperscript{212}, but Oi\textsuperscript{185} found labour turnover lower among skilled workers, Azarladis\textsuperscript{213} found more pro-cyclical employment variation among low skilled workers, particularly for those with low seniority, and Grossman\textsuperscript{214,215} also found reliable and unreliable workers to be differentiated by seniority, with the less reliable subject to more frequent spells of unemployment. Thus, the more firmly established that workers are within their firms, the less likely they are to face lay-offs, a point explored by Beardsworth et al\textsuperscript{200}.

Transaction costs arise from search and hiring processes. Where transaction costs are high for the employer, implicit fixed wage contracts will be preferred. Hence, senior workers with high human capital investment are more likely to have fixed-wage contracts\textsuperscript{199}.

A major difficulty is making the contract stick (i.e. contract enforcement) because there is little to stop employees from entering the 'spot' (i.e. price/auction) market in favourable environments and breaking the contract. Risk-averse models resolve this problem by extending the IC concept to a two-period model in which firms structure contracts to minimize quit behaviour. In the first period, wages are lower than expected; in the second, they rise with seniority differentials which give incentive to remain. However, Bul\textsuperscript{216} argues that workers choose not to quit because they wish to develop reputations as 'reliable' workers so as to have access to jobs open only to the reliable. Furthermore, when a firm hires workers it purchases a bundle of services including, skill, effort, initiative, and honesty. The worker receives a package including pay, conditions of service, safety and fringe benefits. Subsequently, either the firm or the worker may choose to trade work time for effort; these latter risks of IC defaulting are referred to as moral hazard (i.e. Marx's\textsuperscript{231} variable capital).

Most IC models adopt the assumption that information is asymmetric; only employers know the state of order books, but whether unemployment is higher or lower as a result is an unresolved issue\textsuperscript{217-221}. As Sloan and Wooden\textsuperscript{199} point out, these models do not explain why under- or over-employed persons are not hired by other firms, it being assumed that they stay with the company. Neither do IC models incorporate aggregate demand, but they can depict work-sharing and under-employment, a relevant issue in dynamic environments.

Cost-minimizing IC theories have many similarities, but they differ in three basic respects: (1) the reasons for entering the contracts; (2) the
ways of 'enforcement'; and (3) in assumptions about worker productivity. The distinguishing feature of cost-minimising contracts refers to the reasons for entering them. Whereas risk-averse IC theorists rely on a postulation of worker risk-aversion, cost-minimizing ICs theorists place emphasis on minimizing long-term costs, and/or portraying the firm as a 'reliable' employer. Transactions costs are seen to be reduced when the employer deals repeatedly with the same people, but length of service depends on experienced degrees of contentment. It is necessary for contracts to be seen as 'fair'. Okun\textsuperscript{222} suggests that fairness is judged relative to other employers, the firm's product price and other consumer prices; Blandy and Richardson\textsuperscript{223} add the wages of other workers in the firm. In cost-minimizing IC theory it is assumed that productivity is variable and difficult to monitor, hence explicit long-term contracts are rare. To overcome moral hazard (i.e. labour controls productivity and quality, both of which can be varied) on spot markets, employers enter long-term contracts which provide 'fair' wages without substantial fluctuations even in variable environments. Career labour markets develop which, by prior agreement, constrain what employers can do to wages and employment conditions. If employers violate these implicit contracts quit behaviour results and the firm's reputation is damaged; and this is viewed as costly in the long-run. Akerlof\textsuperscript{224} sees 'fair' wages as a social custom, which when broken reduces reputation; the gains achieved by wage reductions versus the costs of lost reputation are assessed. Such ICs offer explanations of involuntary unemployment. As in risk-averse ICs, the cost of relative stability of wages is the risk of lay-off and this is similarly held to generate involuntary unemployment.

Thus, although IC theories address the related issues of wage rigidity and involuntary unemployment they also confront employer/employee relationships and add to understandings of LM dynamics. In particular they offer reasons for the permanency of employment.

In contrast to long-term employment relations, the need for flexibility in recruitment has been recognized by several writers,\textsuperscript{25-27,30,200,203,229,230} especially for industries facing unpredictable demand. The retention of flexibility and the reduction of uncertainty have been offered as reasons for the widespread and apparently growing use of subcontracted labour in the construction industry\textsuperscript{30}. Temporary solution strategies have also been noted\textsuperscript{241}. As Doeringer & Piore\textsuperscript{11} state:

"Employers often seem to favour temporary solutions to tight job markets, solutions that do not provide the newly hired with the full
career benefits of primary employment. Thus one finds companies in the primary sector relying on subcontracting and the use of temporary workers to avoid the costs and the risks associated with giving primary market status to workers from the secondary sector.

Loveridge & Mok consider that much of the preference for temporary solutions could have resulted from experiences of stop-go growth.

A recent contribution to the permanent/temporary area of analysis has been that of Beardsworth et al. who consider that with some justification social scientists have focused their analyses on situations where the employer/employee relationship has relatively stable and enduring ties. They argue that in certain circumstances employers may deliberately wish to distance themselves from workers as an economic and organisational strategy. To distinguish employees who have direct and permanent ties from those whose link is distanced and attenuated they use the terms 'Established' and 'Unestablished' workers respectively. There are many ways of being economically active without being an employee in the conventional sense. Loosely-coupled relationships encompass partial and irregular employment and subcontracting arrangements. For instance, casual workers, seasonal workers, homeworkers, part-time workers, fixed term contract workers and certain types of sub-contractor represent examples where the employer/employee bonds are relatively weak and unstable. Unestablished workers at the lower end of the earnings spectrum comprise the bulk of those in the 'secondary worker' role, but unestablished workers may not have low skill and status. They may be members of elite groups (e.g. artists, actors, entertainers, barristers, musicians, models, journalists, broadcasters, and photographers operating as freelances and consultants) who rapidly move between highly lucrative engagements.

Examples where distance working has become more widespread in recent years are temporary secretarial work, skilled computer 'teleworking', and the 'networking' of highly skilled senior personnel working on a freelance basis via computer in their own homes. To achieve distancing, managements employ a number of devices which limit the scope of their responsibilities to the workforce and reduce the need for close control, careful management and organizing motivation. Beardsworth et al. formulate their conceptualization of established/unestablished workers in terms of a continuum, with the established worker role at one end and the unestablished at the other. The continuum is seen as a shorthand term to refer to a range of variations in the form of employer/employee relationships. The two ends of the continuum are seen as 'ideal types'.
Suggested features of the relationship existing between employers and established worker are: (a) the period of employment is usually open ended; (b) the employer seeks to provide a degree of continuity of employment, if not continuity of work and stability of earnings; (c) the employer seeks to generate commitment and motivation; (d) the employer will bear certain explicit legal responsibilities towards established (e.g. permanent full-time) workers in respect of statutory insurance contributions, health and safety regulations, redundancy payments and dismissal; (e) the employer will be more likely to use complex 'bureaucratic' forms of control; and (f) a stable workforce will be relatively more conducive to the development of trade unions, and the institutionalization and routinization of employer/employee conflict.

For the unestablished worker, features are: (a) employment may be for a fixed period (e.g. fixed term contract), or labour power may be bought in small parcels (by week, day or hour). Individuals may be employed on a part-time basis in order to take them below the threshold at which certain legal obligations apply (national insurance contributions). The employer may opt out of problems inherent in buying labour power and in effect buy labour already embodied in a product. This may be achieved by variations on the theme of subcontracting and putting-out; (b) given the above, there will be little attempt to ensure continuity of employment, but the inputs of unestablished workers will be varied at will; (c) there will be little attempt to generate commitment or improve motivation; (d) legal obligations will be minimized; (e) complex bureaucratic control mechanisms will be inappropriate or unworkable, and the most important methods of control may be those stemming from hiring and firing or withholding payment for substandard or late work; and (f) a less stable and more transient workforce will result having individualistic orientations which will be less conducive to trade union development.

Figure 2:1 characterizes the possible relationships between skill level and established/unestablished status. Towards the perimeter of quadrant A are workers with high occupational status, earnings and job security. Towards the perimeter of quadrant B are workers with high earnings (in high demand periods), high status but low levels of job security. In quadrant C workers enjoy good levels of job security, but command relatively low earnings. Workers in quadrant D have low earnings and job security and are the archetypal secondary workers of the dual and segmented labour markets. Although there are apparent parallels with primary and secondary workers, caution is necessary due to the presence of
highly skilled elites among the unestablished group; the notion of unestablished workers cuts across boundaries of labour market segments. Beardsworth et al. argue that the location in the LM of unestablished workers of different types remains an open question. Employers are seen as exercising strategic choices between established and unestablished workers, although constraints can arise from technological and organisational factors, LM conditions or institutions and government policy. Control over the established/unestablished mix is exercised, this being a view closely linked to Atkinson's concept of a flexible firm.

Atkinson sees firms attempting to enhance their functional, financial, and manning level flexibility by differentiating between: (a) a core of stable, secure, functionally flexible employees; (b) a 'first peripheral' group of routine workers with high turnover; (c) a 'second peripheral' group of part-timers, short-term contract workers etc; and (d) subcontractors and agencies that provide still more flexible inputs; these different sections of the workforce being controlled and managed in significantly different ways. This organisational form allows the firm to react rapidly to market fluctuations. Employers may choose to trade control against flexibility and reduced labour costs; control may switch to output regulation, dismissal threats, or contract or order non-renewal.

Beardsworth's first draft suggests that workforce mix oscillates with environmental conditions, the important issue being how conditions affect choice. Two propositions were offered:

(i) in low demand and high unemployment unestablished workers will be a relatively attractive option (even though normally short supply skills are readily available) because they will be an effective device for reducing wage costs by bidding against each other, and will provide flexibility by being easily shed.

(ii) in high demand and low unemployment unestablished workers will be unattractive; their costs will rise as employers bid against each other, and being more mobile they will be less reliable at a time when employers particularly require reliable workers.

In case (i), disestablishment of workers will involve modification towards more part-time, temporary or subcontracted labour, perhaps with the use of petty entrepreneurs to handle the latter. Labour, embodied in finished goods, may be purchased rather than manufacturing by the firm's direct labour, thereby using the satellite firm's workforce as its own unestablished workers. Such 'outsourcing' can be used to take advantage of
price competition among satellite firms while avoiding the costs of direct employment. In case (ii), the process of incorporating workers into the firm (i.e. the process of establishment) can be achieved by making previously marginal categories into established workers, or by providing permanent full-time posts as opposed to temporary or part-time ones.

In oscillating between these strategies employers alter their workforce mixes; the weakening of bonds between employers and employees, seen as costly and constraining on flexibility, being practised as deliberate policies. Thus, Beardsworth et al.²⁰⁰ emphasize the role of variations in the workforce mix for providing adjustment to LM dynamics, a topic pertinent to Part C, but where findings suggest exactly opposite reactions.

By examining methods of adjustment, Thomas & Deaton¹⁹⁶ found diversity and "a confusing jumble of actions" and judged firms to be more likely to change adjustment strategies in response to shortages rather than surpluses of labour, partly because shortage was more visible. They questioned the validity of emphasizing the price mechanism as in neo-classical economics for in none of the three occupational LMs they studied were pay adjustments exclusive, or even dominant; indeed they argued that wage adjustments acted as de-stabilizers. Choice of adjustment was based on limited search for cost minimising options because, they argued, search procedures were themselves costly. Limited search for the cheapest adjustment was therefore perceived as a cost-minimising strategy in its own right. They developed simple models of adjustment. In Figure 2:2, $E_i$ is the actual labour stock, $E_i^*$ is the desired labour stock and during time period $t_0$ to $t_1$ there is a labour stock balance. During $t_1$ to $t_2$ a shortage of labour arises, but no action is taken due to time lags between instrument introduction and effectiveness. At $t_2$ the instruments become effective and reduce the shortage by the time $t_3$, after which equilibrium is restored. This model therefore suggests intermittent periods of disequilibrium in a general state of labour stock balance. Figure 2:3 illustrates how a labour stock shortage might be eliminated in order to return to equilibrium. Line $S$ depicts existing labour stocks, and line $D$ the desired stock; the diagonally hatched area represents labour shortage with its consequent loss of production. Line $R$ at $t_1$ shows the amount by which desired numbers can be temporarily reduced by subcontracting work, while line $E$ shows the effect of a temporary adjustment to outward flow by raising the retirement age for existing workers, thereby hierarchying the employment level to that indicated by the lower dotted area. At $t_2$, the retirement age reverts to its previous level and successful recruitment is introduced until $t_3$ is
reached when a labour stock balance is achieved by a fall in the desired stock which also brings the subcontracting strategy to an end.

A wide range of instruments were found to be available and these were grouped into four operands according to their modes of impact: (1) the reduction of desired man-hours; (2) increasing the average hours worked per employee; (3) reducing the outflows of labour; and (4) increasing the inflows of labour. Operand (1) operated by affecting product demand; operand (2) operated by influencing the stock of labour; and operands (3) and (4) influenced labour flows. Most instruments carried constraints on extensive use, and a preference for temporary and familiar rather than permanent adjustments was noticed, temporary adjustments being introduced in order to "learn by doing".

Blandy & Richardson\(^{197}\) found that wage rates did adjust, but that certain non-wage adjustments were also important in many occupations. These non-wage adjustments were: (1) promotion rate changes; (2) recruitment rate changes; (3) quality changes; and (4) hour changes. They considered that the more long-term the relation between workers and firms, the more equivalent workers became to the firm's fixed capital and this placed them on a more equitable footing relative to the owners of capital. Adjustments were concentrated on those workers who had not established long-term relationships with their employers, but this was seen as inequitable for workers who were unable to obtain such long-term relationships due to high levels of unemployment. They saw the conditions of service offered to employees as "least-cost packages" over the long-term, and considered that profit maximizing behaviour was not simply a matter of minimizing the short-run wage bill; focusing on short-term 'spot' markets was therefore misleading in an assessment of LM efficiency. They considered Okun's\(^{222}\) concept of "fair play" to be an essential element in the pursuit of efficiency.

Jonsson\(^{243}\) perceived labour as a risk-taking (via damage to health) as well as a risk-bearing (e.g. lay-off) factor of production. His focus of interest was the determination of company policy by workers and he saw that whereas labour was not usually compensated by profit sharing for the risks it took, capital received its share of profits in the form of dividends. He argued that as an alternative to the usual democratic or distribution persuasions for co-determination of company policy, labour could justify it on a contractual basis.

Thus, adjustment to disequilibrium is now being addressed and the idea of labour as a risk-bearer is also pertinent to issues discussed in Part C.
2.2 THE LEGAL CONTEXT OF THE LABOUR MARKET

The legal context of the LM needs examination because different acts and conventions applied to the workgroups and affected their LM statuses.

Employment law derives both from statute and common law, and the definition of employment status (i.e. employed or self-employed) is that which the courts and tribunals apply to individual cases, see Leighton. There is no legal definition to distinguish between full-timers and part-timers, but there is a special definition for the provisions of the Employment Protection (Consolidation) Act (EPCA), see below. The DE defines part-timers as working fewer than 30 hours per week.

The Employment Protection (Consolidation) Act, 1978 (EPCA) consolidated the major enactments governing relations between employer and employee during the 1970s. Legal provisions regulating trade union activities, particularly picketing have been amended by the Employment Acts of 1980 and 1982, but at the time of the empirical survey the 1978 Act was in force; consequently that body of law has been examined in detail to facilitate an assessment of its impact in Chapter 11.

The 1978 provisions for employees covered the following topics:

(1) a written statement of the main terms and conditions of employment;
(2) an itemized pay statement;
(3) rights to trade union membership and activities;
(4) time off with pay for public duties;
(5) recovery of debts on the employer's insolvency;
(6) guaranteed payments;
(7) redundancy:
   (a) consultation rights of a trade union;
   (b) redundancy payments;
   (c) time off for job search or to arrange training;
   (d) unfair dismissal on the grounds of redundancy;
(8) dismissals:
   (a) unfair dismissals;
   (b) the right to a written statement of the reasons for dismissal;
   (c) rights to notice on termination of employment;
(9) maternity rights:
   (a) protection from dismissal for pregnancy;
   (b) the right to return to work; and
   (c) maternity pay.

As defined by the 1978 Act an employee was a person who was or had been engaged under a contract of employment, which could be oral or written,
expressed or implied, of indefinite duration or for a fixed term, whether for training, apprenticeship or other purposes. In law an employee had a contract of employment as soon as he/she commenced work, even if a written statement of its terms and conditions as required by the Act had not been given. Written statements did not constitute the contract, but were evidence as to its contents. Contracts of apprenticeship had to be in writing. Both employer and employee were bound by the terms and conditions offered and agreed whether or not they were in writing. Within 13 weeks of the employee's appointment, the employer had to furnish a written statement of the main terms of employment with an additional note on disciplinary and grievance procedures. The statement could be used as important evidence of an unwritten contract during proceedings. A written contract had to include all the terms and conditions of employment. The Act listed topics that had to be included in the statement. Special rules governed the calculation of a week's pay for time-, piece-, shift and rota workers, and for employees with variable hours or commission payments. In general, a week's pay meant a week's normal earnings or average earnings. Fixed term contracts required clearly defined starting and finishing dates with no provision for earlier termination or future extension.

An employee working 16 hours or more had an automatic right to an itemized pay statement which include the gross salary, details of fixed and variable deductions, net salary and the method and amount of payment. The rights to trade union membership and activities forbade the employer to take action which prevented or deterred employees from joining or belonging to an independent trade union and he could not penalize them for taking part in its activities. An 'independent' union was one which was not under employer domination or control, certificates of independence being issued by the Certification Officer. Dismissal in relation to the above was automatically 'unfair'. Actions short of dismissal, such as the docking of pay or benefits, refusal of promotion, training or job transfer, or threats of dismissal or redundancy infringed an employees rights and were also held to be 'unfair'.

Employees holding public positions, such as members of local councils, health or water authorities, statutory tribunals, governors of educational establishments, or J.P.s were permitted reasonable time off to perform their duties. The recovery of debts provision enabled employees to obtain payments of certain debts when payment could not otherwise be made because assets were frozen. Employees not provided with work throughout a day in which they would normally work due to a reduction in business were entitled
to guaranteed payments in respect of each complete working day lost, but not for days in which some work was provided. The right to introduce short-time or temporary lay-offs was determined by an individual's contract, either expressly, implied or by custom. Collective agreements which were superior to the Act's provisions could be exempted by the Secretary of State. The guaranteed payment was calculated by multiplying the employee's normal working hours by the guaranteed hourly rate as specified by law.

There were four redundancy provisions. Trade union consultation rights required the employer to consult the appropriate recognized trade union whenever he proposed to make an employee redundant and to notify the Secretary of State when planning to undertake 10 or more redundancies within specified periods. Trade union representatives could be shop stewards, district, regional or national officials. Consultation was required before the statutory notice of dismissal period commenced. Redundancy payments were compensatory lump sums to any employees who fulfilled the prescribed conditions. If the dismissal was wholly or mainly due to some cause other than redundancy, such as inefficiency, unsuitability or health reasons, there was no entitlement to redundancy payment, but the onus of proof was on the employer to establish that the employee was not redundant. Redundancy payments were laid down by law; in March 1980 the maximum reckonable service was 20 years, and the weekly payment was limited to £110. It was calculated as follows:

* for each year of reckonable service from age 41 to 65 (man) or age 41 to 60 (woman): 1 1/2 weeks' pay
* for each year of reckonable service from age 22 to age 40: 1 week's pay
* for each year of reckonable service from age 18 to age 21: 1/2 week's pay

Continuous reckonable service is defined in 11.4.1. Service below the age of 18 and above the ages of 60 (woman) or 65 (man) do not count as reckonable service. Payment is reduced by 1/12th for each complete month over the ages of 59 (woman) and 64 (man) so that entitlement ceases completely at ages 60 and 65 respectively. The maximum payment in March 1980 was £3,300 (i.e., 30 weeks at £110, the entitlement of a man with 20 years reckonable service between the ages of 41 and 64 with a week's pay of £110). Employees subjected to redundancy had the right to...
time off with pay for job search or to arrange training for future employment up to a maximum of 2/5ths of any weekly wage. The unfair dismissal on the grounds of redundancy provision specified the rules for permitted redundancy.

There were 3 dismissal provisions. Dismissal was defined as 'the termination of employment' and employees had the right not to be 'unfairly' dismissed. Remedy was through an industrial tribunal, but the dismissee had to establish that he/she was an employee, and had been unfairly dismissed. The rules for 'fair' dismissal were defined. If the employer failed to give a fair reason, then the dismissal was deemed unfair. Inadmissible reasons for fair dismissal were those associated with trade union membership of activities, unfair selection for redundancy, 'spent' conviction under the Rehabilitation of Offenders Act, 1974, and cases where the employer disregarded customary arrangements or agreed procedures relating to selection for redundancy. Employees had the right to written statements of the reasons for their dismissals on either oral or written request; these had to be provided within 14 days and could be used as evidence in proceedings. Both employers and employees had rights to notice on termination of employment, notice being more generous for employees.

Maternity provisions gave 3 important rights: protection from dismissal; return to work rights; and maternity payment. For protection from dismissal the employee had to satisfy the prescribed conditions after which dismissal became automatically unfair, unless pregnancy made it impossible to perform the job adequately, or it was against the law to continue. She had the right to return to work within 29 weeks after confinement; a period governed by special rules. Maternity pay was payable regardless of the intention to return. Taxes and national insurance were deductible from the payment which could be paid by lump sum or by weekly/monthly instalments. The employer could recover the full amount from the maternity fund which was financed from social security contributions, provided that this was claimed within 6 months of the last date of payment.

The impacts of the 1978 provisions on various workgroups are considered in the light of the empirical findings in Chapter 11

Two enactments, the Equal Pay Act, 1970 (EPA) and the Sex Discrimination Act, 1975 (SDA) were designed to equalize the positions of women and men. The Equal Opportunities Commission (EOC) was established to
oversee this body of law. Much equality legislation is obscure and the EOC's function is to clarify the law's meaning; it also performs consultative, advisory and guidance activities at formal and informal levels.

The EPA established 'equal pay for like work', whereas the Treaty of Rome, Article 119, established the principle that equal pay should be for 'work of equal value'. Under UK law it has been possible for workforce segregation to circumvent the Act by frustrating a clear definition of 'like work' and has allowed discriminatory pay structures to continue because remedy under the EPA was by 'individual' application to an industrial tribunal. Thus, its operation has been shown to be ineffectual. The European Commission has ruled that the UK EPA does not comply with the European Commission directive since it did not enable a woman to claim equal pay for work of 'equal value', and consequently, it had to be amended.

The British Government published a Draft Order on the EPA which the Trades Union Congress (TUC) considered sought to "tinker with it", and condemned as 'a slap in the face of women workers' as well as for parliament and the EEC. The TUC made demands for comprehensive and cohesive changes to the EPA and SDA to make the equality legislation more effective by tackling the problem of indirect discrimination and extending its scope to the use of positive action programmes to cover collective bargaining and employment, education and training.

The EPA was amended in January 1984; the amendment extended the use of job evaluation in equal pay claims at industrial tribunals. A woman can now claim equal pay with a man if she is in the same employment and is engaged in work of the same or broadly similar nature, or on work of equal value. Discrimination in access to promotion opportunities, transfer, training or dismissal is unlawful. The Act makes no provisions for external intervention to remove discriminatory clauses from collective agreements, or for other procedures dealing with conditions of employment other than pay. It is restricted to settling complaints that arise in practice. Consequently, policies with prima facie discriminatory clauses can remain legally unchallenged until their implementation results in discrimination which contravenes the EPA. Although women have access to industrial tribunals and the EOC, there is no mandatory requirement to bring claims. Thus equal pay legislation in Britain now allows claims on the basis of 'equal pay for work of equal value' however dissimilar men's and women's jobs, but from establishments where job evaluation schemes have
not been undertaken, or where such schemes discriminate by sex. However, when data for this research project were collected these legal changes had not occurred.

The EPA and SDA make no reference to full-time or part-time employment and until 1981 an employer could resist equal pay between a man and woman on the grounds of working hours making a material difference. However, in 1981/2 the Employment Appeals Tribunal (EAT) in the case of Clarke and Powell v Eley (IM) Kynoch Ltd ruled it unlawful to pay lower rates, or to select for redundancy on the basis only of fewer than normal hours. Recently, interpretations of the EPA and SDA have invoked the concept of indirect discrimination on grounds other than sex and this has extended protection to part-time workers. However, it allowed indirect discrimination if the employer could prove commercial advantage, other than the use of cheap labour (e.g. the removal of a twilight shift). Robinson & Wallace conclude that inferior treatment of part-timers is more than occupational segregation of men and women. Their research showed it was often determined by assigning part-timers to low grade jobs in comparison to full-time women; they doubted whether the law as it stood could improve the conditions of part-time employment.

The SDA made illegal any discrimination on the grounds of gender or marital status, whether direct, indirect or accidentally indirect, but it did not refer to age discrimination. It covered employment, training, education, the supply of facilities, goods, services and housing. Of the 667 cases brought between 1976 and 1978 less than 10% were won. Social legislation incorporates sex discrimination aspects because these were exempted under Section 51 of the SDA. It assumes that women are housewives and are dependent on men who are responsible for earning the family living and paying tax. Official statistics show these assumptions to be wrong for many working women and families; approximately 1 in 3 marriages fail.

* * *

Special statutory regulations apply to twilight workers and these sprang from restrictions on the employment of women and young persons whose normal factory hours were limited as shown in Table 2.3, and whose permitted overtime hours above these maxima were as shown in Table 2.4. The effect of the general restrictions as contained in the Factories Act 1961 was to preclude the working of shifts, although application could be made to the Factory Inspectorate for exemption orders to authorize the employment of women and young persons between 6 a.m. and 10 p.m. on any weekday and between 6 a.m. and 2 p.m. on Saturdays. The Factories (Evening)
Employment Order, 1950 (SI 1950, No.1837) which was introduced by the Secretary of State to extend permitted working times was made under the Defence (General) Regulations Act 1939 and provided that the employment of women between 5p.m. and 10p.m. need not be treated as overtime employment. Thus 'special exemptions' allowed women to be employed part-time during the evenings as twilight workers on weekdays other than Saturdays. If obtained, women aged 18 and over could be employed between 5 p.m. and 10 p.m., but continuous spells of work could not exceed 4.1/2 hours unless they included an interval of 10 minutes or more. Notice had to be clearly posted (Form F 1684) specifying the periods of employment, and if spells exceeded 4.1/2 hours, of intervals of rest for each day of the week. On any day in which a woman worked an 'evening shift' she could not also be employed outside the period of employment shown on form 1684. These restrictions applied to factories (as defined in Section 175 of the Factories Act 1961) engaged in the making of wearing apparel and to other specified types of business.

* * *

Ewing observed that the legal machinery for protection of homeworkers can be traced back to the 1890 House of Lords Select Committee Report on the Sweating System. This identified three central problems: (1) inadequate wages, "barely sufficient to sustain existence"; (2) many hours of labour, making "the lives of workers periods of almost ceaseless toil"; (3) unsanitary working conditions, which were "not only injurious to the health of the persons employed, but also dangerous to the public". The Government responded by enacting the Factory and Workshops Act of 1891 which imposed the duty on employers to keep lists of homeworkers, but not until 1895 were these lists to be sent to the Factory Inspectors with the general purpose of protecting the consumer not the homeworker. Under the Factory and Workshops Act 1901 homeworker employers had to register with the Local Authority rather than with the Factory Inspectorate which was given access to registers. Authority was given to the Secretary of State to create special orders to specify trades to be covered by the legislation; merely 5 such Orders have been produced. Emphasis was placed on protecting the consumer by preventing the spread of disease rather than looking after homeworker interests. There were no requirements to register premises, and LA lists were not open to public inspection which made it difficult to assess the extent of non-compliance.

The 1908 Select Committee of the House of Commons considered it essential that earnest efforts should be made to deal with the homeworkers'
'ever-present burden of grinding poverty'. Consequently, the Trade boards Act 1909 created Boards in a few industries where sweating was especially bad (tailoring, box, chain, and lace manufacture) and provided for further Boards in other industries on the initiative of the President of the Board of Trade. The aim of the Boards was to abolish the poverty wages associated with 'sweated trades'. The Boards were renamed Wages Councils in 1945 and the House of Commons Paper 182, Appendix 9 listed industries covered by Wages Councils in which homeworkers were employed.

Wages Council legislation established two principles: firstly, the setting of legal minimum wages; and secondly, the establishment of an inspectorate to enforce them. The Inspectorate adopted a special formula to convert piece to time rates and then made a judgement as to whether the person in question was an 'average' worker, but the Wages Councils were unable to raise the general level of homeworker wages because a substantial majority of homeworkers were excluded from protection.

'Bad' employers possibly did not comply with registration procedures which could suggest why Wages Council Inspectors found only 5 cases of underpayment of Statutory Minimum Remuneration (SMR) in 1972, and why Hakim & Dennis concluded that underpayment was not a widespread practice. In the early 1960s Guilbaud claimed that, the Wages Council system had achieved the general principle for which it was established, but most writers would disagree. Field & Winyard argue that, "...the majority of Wages Councils have failed to prevent the widespread occurrence of low pay in their industries", but Bayliss considered that breaches of minutiae, rather than refusal to pay the basic rates, was the major offence. Penalties for non-compliance were very low at £100 for each offence.

ACAS has recently drawn attention to Section 17 of the Wages Council Act of 1979 which effectively required an employer to pay for any overheads that workers incurred in the production process; Hakim found that homeworkers outside Wages Councils received no such payments, but that Wages Councils had negotiated holiday and holiday pay agreements. This illustrated that the Councils had been able to exert a beneficial influence over homeworkers in their specific industries and indeed they provided the only protection available to homeworkers. However, NBPI and Beaumont concluded that because the Councils had tended to keep wages low in their industries, they should be abolished. It was announced in the 1985 Budget Statement that Wages Councils were soon to be abolished.

Thus, these measures have generally been inadequate to deal with the
problems inherent in homeworking\textsuperscript{120}, and as Ewing\textsuperscript{244} notes, the most conspicuous failure has been the registration procedure.

Health and Safety laws which regulate the guarding of machines and the safety of factory processes (i.e., imposing rules with respect to dangerous substances) and premises (i.e., by stipulating heating, lighting, cleanliness and hygiene) have changed significantly for the benefit of factory workers without any alteration to measures relating to homeworkers. Health and Safety has been a persistent concern. The House of Commons Paper \textsuperscript{128} referred to problems and dangers that could arise in the home: e.g., work being undertaken without supervision of Factory Inspectors; no national insurance contributions leave the homeworker unprotected; and the likelihood of injuries, especially to young children; "a small home cluttered with items of work is not conducive to the development of the family and the full use of a home". Dangerous practices, tools and substances are occasionally used; Bolton\textsuperscript{127} claimed that sewing machines were supplied without proper guards. As recently as February 1985 the Health and Safety Executive announced that they were to undertake a crackdown on the sweatshops in Leicester, but they also alluded to tracing difficulties due to many being small businesses which were sometimes illegal and housed several to one building\textsuperscript{207}.

Self-employed status excludes homeworkers from the EPCA provisions unless they can prove themselves to be employees, which few can, but the Inland Revenue treats them as employees and taxes them when they earn above the threshold. Thus, much of the recent employment protection legislation is thought not to apply to homeworkers either because they are not engaged under a contract of employment, or because they are unable to satisfy the requirements of continuous service. With respect to the first of these obstacles, employers, the DE and the Inland Revenue view homeworkers as self-employed but the major problem in determining status is caused by the flexible and irregular work patterns of homeworkers. In Airfix Footwear Ltd v Cope, the Employment Appeals Tribunal\textsuperscript{250} held that there may be circumstances when homeworkers can be regarded as employees for the purposes of employment protection legislation, but this case was of limited value as a precedent because it said nothing about the general position of outworkers or the facts and principles to be applied in other cases.

Establishing employment status is a complex matter. 'Contract of service' is defined in common law which has continually adapted to provide operational tests, but establishing a test against which to evaluate employment relationships is difficult. The contemporary legal approach in
Differentiating between direct and self employment is now very complicated, see Leighton\textsuperscript{249} for a discussion of its development (e.g. the control, multiple and entrepreneurial tests). Since 1969 the \textit{entrepreneurial} test, which posed the issue of whether persons 'were in business on their own account',\textsuperscript{253} has been broadly followed. The courts have been more assertive by occasionally disregarding the intentions of the parties and the 'labels' in documentary evidence and witnesses' statements. To determine whether persons are in business on their own account involves an extensive check list of items to be considered and balanced, each of which has its complexities. The dividing line between direct and self-employed status is often very fine. For instance, when using the \textit{entrepreneurial} test, Leighton\textsuperscript{249} found that out of 25 firms covered by her case studies, 6 had mislabelled at least some of their workforce.

To avoid these complexities and ensure protection, attempts were made to introduce legislation by means of a private members bill. The Homeworkers (Protection) Bill, 1978, defined a homeworker as:

"An individual who contracts with a person, not being a professional client of his, for the purposes of that person's business, for the execution of any work (other than the production or creation of any literary, dramatic, artistic or musical work) to be done in domestic premises not under the control or management of the person with whom he contracts, and who does not normally make use of the services of more than two individuals in the carrying out of that work, and in this Act work contracted to be executed by a homeworker is referred to as 'homework'."

This definition has been used for the purposes of this research. It would have amended the following statutes: 1887 c.46; 1960 c.37; 1970 c.41; 1973 c.39; 1974 c.37; 1975 c.52; 1975 c.71; 1975 c.65; 1976 c.74; and 1978 c.44. Provision was to be made for statutory instruments to regulate the maintenance of documentary records and for the inspection of these by trade union officials. The Bill, which was intended to come into force on 1 January, 1980 was aimed at giving homeworkers the same status and protection as other employees, but it was frustrated in its passage through the House and fell with the Callaghan government in 1979; the DE Homeworking Unit (see section 2.3) has not since met.
2.3 LITERATURE RELATING TO WORKGROUPS

This section firstly examines male/female differences at national, industrial and occupational levels and then considers specific information relating to the workgroups studied.

The world recession of the 1980s brought about several changes in the British labour market, notably that the level of unemployment dramatically increased. Figure 2:4 shows that the main fall in employment occurred in manufacturing industries, the service sector remaining fairly constant in its employment trends. Official unemployment statistics are contested as fair reflections of reality because they are indeterminate underestimates in that they exclude those married women (and men, see below) who may be actively seeking work but who cannot claim benefit for various reasons. There may be much hidden unemployment among women who traditionally have not registered as unemployed since they are discouraged by lack of local opportunity, even without a recession, and because they are not entitled to unemployment benefit through not paying national insurance contributions. Available statistics show that in January 1984 the number of people continuously unemployed for one year was 1.1 million, a 19% increase in long-term unemployment since January 1983.

The gap between male and female unemployment rates was narrowing until 1980, the male rate reaching over 15% before the end of 1982 compared to a rate of 7.5% for females, see Figure 2:5. The narrowing since 1983 is partly due to changes in unemployment benefit regulations introduced in the 1983 budget which required older men not to register, but Table 2.5 shows that EEC women were generally less affected by unemployment between 1980 and 1981 than were men.

Flows into employment (Table 2.6) indicate that nearly 10% of women in employment in 1981 had been economically inactive (neither working nor seeking work) the previous year compared to only 3% of men. Clearly the trend for married women to re-enter the LM had continued during the recession.

In 1951 women comprised 34% of all employees, but this had risen to 44% by 1983. The number of females in employment has fallen since 1980 with the recession in contrast to a persistent fall in male numbers in employment since 1970 (Figure 2:6), which it is claimed stems from the decline of traditionally male dominated industries.

Consistent patterns are apparent: Table 2.7 shows 1977 statistics of
womens' participation in economic sectors of each EEC country. The broadly similar patterns imply that strong and pervasive influences act on the allocation of female labour. Fewest women are in agriculture (average 6.6%), only 26.7% work in industry on average, whereas two thirds of working women (66.7%) have jobs in service sectors. Furthermore, women earn less than men in all economic sectors in each EEC country, see Table 2.8. It is sometimes argued that women have higher absenteeism and voluntary turnover, fewer working hours, and intermittent and shorter working lives and that these features cause such patterns. These issues thus become discussion topics.

Segmentation may exist between industries: primary industries are progressive, pay high wages and introduce modern technology; the secondary are 'customary', retain old fashioned techniques, are labour intensive and pay low wages. Figure 2:7 illustrates that women in Britain have not entered industries in direct relationship to their proportion in the LM. They are predominantly found in the clothing and footwear, food drink and tobacco industries; light engineering; and public administration, some of which exhibit secondary characteristics. Hence there was some evidence of the 'overcrowding' effect which can depress female wages.

Women comprise over 50% of the workforces in clothing and footwear, the distributive trades, insurance, banking, finance, business, professional, scientific and miscellaneous services. Relatively few women are employed in mining, quarrying, shipbuilding or construction. Some imbalance can be explained by falling jobs numbers in production and manufacturing industries while service industries were expanding. Male/female segregation appears to be concentrating women in a few industries.

At an occupational level, women comprise a very small proportion of managers, administrators, and high professionals, about 50% of the lower professionals (mainly teachers), and 75% of clerks. Women similarly comprise only about 13% of foremen and inspectors and skilled manual workers, but they comprise over 40% of semi-skilled and unskilled manual workers. In education, most women are primary teachers whereas most men are secondary teachers. In health, most doctors are men and most nurses are women. Even in industries in which women predominate they are normally found in low grade work. Particular occupational groups are associated with low pay, and it is in such occupations that many women are found, see Figure 2:8. However, payment systems operate to give men opportunities to supplement earnings by overtime shift premia and bonuses.
which were less available to women\textsuperscript{257,258}.

Table 2.9 shows the average number of hours worked by European women relative to men in the same sector; in all sectors of all countries women worked fewer hours. Those in manufacturing industry worked more hours than those in agriculture and service sectors. Women in UK industry worked the fewest hours of all EEC women in industry, which reflects the presence of part-time workers in UK industry.

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Dex's\textsuperscript{281} newly published book is designed to illustrate the traditional neglect of women, particularly part-time workers, in economics and sociology and the shortcomings that this has had for established theories. Beechey\textsuperscript{279} says that it is now recognised that an analysis of women's domestic labour is long overdue and is vital to an understanding of women's subordination at home and in employment.

Various dimension of the disadvantages faced by women in the LM are documented by numerous writers\textsuperscript{87,88-96,52,53}. This body of literature suggests that disadvantage can take several forms. Job segregation, under which high-paid work is 'men's work' while much low-paid work is 'women's work', places obstacles before women in selection procedures and circumvents equal pay law. Statistical discrimination\textsuperscript{94} can occur against all women on the basis of the characteristics exhibited by only a few, and employer views about women's roles and their close ties to home and family can also act in discriminatory ways. Women's changing role in society is assessed by many writers\textsuperscript{97-101} who cover such issues as the restructuring of working hours, part-time work, provision of creche facilities, more convenient shopping hours, training facilities within firms and the status of 'women's work'. Others\textsuperscript{51-53,97,281}, discuss the discrimination that starts in school by the restriction of curricula, and the socialisation processes by which girls train for the marriage rather than the labour market. Klein\textsuperscript{101} draws attention to the problems encountered by middle-aged women re-entering the LM, and OECD publications\textsuperscript{101-104} suggest ways of integrating older workers.

Women's low pay relative to men's is widely debated; writers conclude that women's lower earnings result from numerous factors, such as lower basic pay, overtime, shift premia and fewer fringe benefits\textsuperscript{84,106,257,258}. Other dimensions of the employment relationship are viewed as similarly unfavourable; e.g. fewer working hours, lower responsibility, fewer promotions, less training and lower skill classifications. Allen\textsuperscript{140}, and others cited in Dex\textsuperscript{281}, consider the subordination of women to have
occurred via social, cultural and physical influences, and with the mode of reproduction in the household unit; many feminist writers see patriarchy as the cause, see Dex. Allen argues that women's activities are continuously marginalized by language, ideologies and material conditions, and that society ignores women as "social persons" by encapsulating them within those of husbands and sons. Homes are seen as consumption rather than production units where women are in the position of construed dependence, yet having to shoulder all the time-consuming, laborious, caring work into which paid employment has to be fitted; these conditions reinforce LM divisions.

The relationship between Wages Councils and low pay receives much attention. Marquand indicates the importance of structural characteristics and summarizes the five characteristics of low paying industries as: (1) a high proportion of women workers; (2) a high proportion of unskilled workers; (3) industries dominated by small firms; (4) contracting industries; and (5) particular institutional factors, such as Wages Councils or government employment. Field and Winyard also suggest that the crucial variable in determining low pay is industrial structure, since this determines the ease with which trade unions and employers can organize. A proliferation of small firms is seen as an obstacle to increasing general wage levels, and point out as does Hakim, that smallness of firm size (7 employees on average) is characteristic of Wages Council industries. Nearly two-thirds of Wages Council workers are women.

Armstrong noted that skill divisions overlapped with the degree of capital intensity, men monopolising capital-intensive processes and being classed as skilled whatever the degree of skill invested in the operations performed. Dex concluded that there was a series of factors maintaining the sexual division of labour including, societal valuation of paid work, union negotiated labels for skills, and the attitudes to, and acceptance of, the sexual divisions by both women and men. Coyle and Phillips & Taylor concluded from their studies that women's work on hand-fed machines was classed as less skilled than the automatic machine minding work of men, just simply because women were performing it. There were instances when men took on women's jobs and succeeded in having them redefined as skilled.

Dex remarks that it is not surprising that males rates should be higher, since male dominated trade unions have historically fought to improve rates. Women, on the other hand, have been low in membership and
often under-represented by craft unions.

Orientations to work studies have begun to chart the differences in attitudes between women and men; men are often seen as more economistic than women and therefore as possibly more insistent on high skill gradings. Studies have generally failed to account for the interdependence in men's and women's orientations. Recent findings show that large proportions of men do not give pre-eminence to work\(^{281}\) (as is often asserted by employers of women), and that there are many similarities in men's and women's orientations. Coyle\(^{280}\) and Yeandle\(^{282}\) found women to be very attached to their employment; many worked from financial need, but nevertheless derived satisfaction and status from it. Orientations to work should thus be examined within the context of prevailing social structures. Debate also surrounds the possibility that orientations might be unstable and change with varying circumstances, see Dex\(^{281}\) for a discussion.

Increasing attention is paid to the difference between 'work' and 'employment'; work being the application of effort and concentration to a task, employment additionally involving a reward. This distinction is particularly appropriate to many women who work laboriously and unpaid in their own homes, many combining this with paid employment. One parent families are now more commonplace (partly because one in three marriages end in divorce) than is implied by the structuring of official documents and social benefits. The number of children now growing up in nuclear families (i.e. where mother, father and children, usually perceived as two, are all present) form a minority of young children. There is less stigma attached to single parenthood than formerly and many women now find themselves as sole providers for dependents.

A persistent theme in debates concerns the influence exerted on LM participation by the dual roles women generally perform; namely, by acting as providers of free caring services in the domestic environment, while at the same time undertaking paid employment, often part-time. Dex & Shaw's\(^{287}\) comparison of British and US childcare facilities revealed that far more US women worked full-time and paid for childcare which they could claim against taxation. British childcare was sparse or expensive relative to earnings and therefore women worked part-time and/or negotiated informal help from husbands, older children, kin and neighbours, a situation illustrated by Yeandle's study\(^{280}\). Homeworking is also a strategy for linking together domestic labour and paid employment, as Yeandle's study also illustrates.

The part-time employment pattern, sometimes seen as part of a general
shift in social patterns and women's more active (some would say more visible\(^69,91\)) part in the economy, has not significantly changed during the recession, and may even have accelerated slightly, see Table 2.10. However, Dex & Perry\(^{288}\) found that women did not unequivocally suffer more in recessions than men, but that part-time work was more unstable than full-time. In 1981 41.6% of all women in employment in all industries worked part-time in contrast to only 5.9% of men\(^{257}\). The increased participation of women is variously allied to: increased emphasis on consumption and thus the need to increase the family income; or more available time due to the application of modern technology to domestic labour saving devices; or de-skilling and the replacement of men by lower paid women.

Robinson & Wallace\(^{257,258}\) claimed there were 4.5 million part-timers in 1981, occupying 3.8 million jobs. This accounted for 21% of total employment; part-time employment growth equalled the entire increase in female employment. In 1981 84% of part-timers were women, most were married and more than 75% were in the lowest occupational jobs. An important feature of part-time employment appeared to be labour intensiveness; 87% of part-timers were in labour-intensive industries. Female full-time and part-time jobs were found to be classified by the same grading structure, but there was a high proportion of part-timers in the low grade jobs although no discriminatory pay rates for the same grade jobs prevailed\(^{257,258}\).

Often in service industries hours were low enough to keep earnings below the national insurance threshold. Robinson & Wallace concluded that part-timers' hours were determined to meet the operational requirements of firms rather than workers' needs; Dex\(^{281}\) cites Beechey & Perkins'\(^{286}\) unpublished study which suggested that flexibility was the keynote to understanding employers' demands for part-timers, and that women's claimed preferences for part-time patterns, given childcare needs, made them a highly suitable workforce. Bosworth & Dawkins\(^{259}\) reported several reasons why clothing and footwear employers used part-timers (i.e. (1) the inability to recruit full-timers (50% of responses), (2) that the processes did not need full-time cover (30%), and (3) to suit the needs of workers (10%)), and considered these to confirm DE results\(^{261}\). They suggested that the reasons given for the use of part-time workers might vary by size of establishment, by proportion of women in the workforce, and by the proportion of part-timers in the workforce. There was indication that establishments using a high proportion of females were less likely to allow
hours to suit the needs of the workers.

With regard to why the proportions of part-timers in their labour forces changed, clothing and footwear employers indicated the following reasons: (1) to suit the needs of particular workloads or departments (48%); (2) part-time work had been extended to additional jobs or departments (23%); (3) at the request of workers (16%); (4) the introduction of shift work (e.g. twilight workers (3%)). The following reasons were given for reductions in the part-time components of clothing and footwear companies: (1) the need for maximum cover of equipment (28%), and (2) reductions because they had taken part-timers when full-timers were unavailable (21%). Part-timers were the first to be made redundant in 2% of companies. Bosworth & Dawkins saw these findings as suggesting that part-time employment had secondary characteristics. In a somewhat dated study, the DE260 indicated that late arrival, early finish and voluntary absence were the principal reasons for lost pay, and that the incidence of lost pay was highest in the younger age groups. Full-timers tended to be worse than part-timers, (see Table 2.11 for the incidence of lost pay, and Table 2.12 for the hours lost in all manual categories). These data imply that part-timers had the best all-round performances with respect to lost hours and the incidence of loss of pay. The incidence was lower for men than women, but when they did lose pay men were absent for the same time periods.

At the outset of the research, publications on twilight workers and homeworkers were relatively sparse and little was known about these workgroups. No official statistics were gathered for either group and consequently their numbers and importance to the economy were unknown. In an historical review, Bythel37 mistakenly concluded that homework had ceased. Low Pay Unit publications88-92, Morse109, ILO110, EEC111, Amsden112, and Evans & Morgan113 provided useful starting points. Part-time evening workers usually worked between 5pm and 9pm, or 6pm and 10pm; the name twilight worker being derived from these times. Direct articles on twilight workers were few. IDS studies136,142,143 and Brown144 yielded some useful information, and the DE Gazette regularly reported the number of applications for exemption certificates (section 2.2). Thus, the literature occasionally classified them as part-time shift workers and oblique references to them appeared in part-time and shift work publications. Various articles describing the increasing trend in, and the characteristics of, women's part-time employment during the 1970s made scarcely any mention of twilight workers142-158.
references to them occurred in publications on women workers because the majority of twilight workers appeared to be women. Other publications referred to them as 'moonlighters' (i.e. employees with a main job who additionally worked in the evenings), but little firm information could be gleaned from this literature, especially specific information about twilight worker pay.

The IFF gave the most detailed and specific information on evening shifts, in which shift work was defined as, "a pattern of work in which one worker replaces another on the same job within a 24 hour period", but there was no clear indication whether twilight workers conformed to that definition. It stated that twilight shifts accounted for a significant number of shift workers. As a proportion there was evidence of a slight decline since 1964, but absolute numbers had increased from 67,600 in 1964 to 80,500 in 1978 in the manufacturing sector, see Table 2.1. IDS studies provided evidence to support this observation. Exemption orders consistently increased from 2464 in December 1959 to a peak of 23,096 in December 1974, but then declined to 13,841 in December 1977. These figures relate only to workers covered by the Factory Acts and were for exemption order applications rather than for orders actually used. The reasons for this apparently falling trend in twilight working since 1974 are obscure. It could be associated with equal pay legislation, or opposition from trade unions, or because many twilight workers would have been reclassified by EPCA as full-time employees and would qualify for legal provisions such as redundancy payments. This would make twilight workers more expensive to employ and discourage their use. In 1978 the 80,500 twilight workers were concentrated in a few industries with over one-third of them in food, drink and tobacco (Table 2.14), but this is not surprising given the number of public bars and restaurants to be manned in the evenings. Of the 2162 establishments employing twilight workers in the IFF survey, 1120 (52%) operated another shift system in addition to the twilight shift, whereas 1042 (48%) had no other shifts. There appeared to be an association between twilight working and certain other types of shift, but no attempt was made to analyse these relationships, see Table 2.15. Many establishments used more than one shift system and there was an indication that twilight working might quite often have been a component in 24 hour working. The average length of twilight shift was 4.34 hours; over two-thirds lasted 4 hours, but overtime was extremely rare, occurring in only 3% of establishments.

Several problems were identified with twilight shifts; IDS.
spotlighted difficulties in providing supervision and machinery maintenance. Recruitment difficulties arose respecting skilled maintenance and supervisory personnel for part-time evening employment. These services were therefore provided by full-time employees working overtime which imposed heavy burdens unable to be permanently sustained.

The reasons for using twilight workers were not openly confronted in the literature, but there was an implication in Bosworth & Dawkin's work relating to clothing and footwear industries, see above. IDS studies\(^{142,143}\) indicated that twilight shifts were introduced only for production needs. Three companies from a confidential Loughborough University study (Dr C J Wrigley, Dept. of Economics) said it was used to attract female labour, and one commented that the company was, "flooded with applicants and could afford to be selective".

As Hakim\(^{134}\) has recognised, literature on homeworkers can be group into three strands:

(1) studies by independent researchers and pressure groups based on empirical research: e.g. Brown\(^{88}\), Crine\(^{91}\), Edwards & Flounders\(^{123}\), Hope et al\(^{124}\), Shah\(^{133}\), Allen\(^{29,69,140}\), Huws\(^{226,262}\), Rubery & Wilkinson\(^{273}\) and Wray\(^{186}\).

(2) studies by public bodies investigating pay and conditions, often in particular industries: e.g. ACAS\(^{248,264}\), CIR\(^{114,115}\), NBPI\(^{116,117}\), Cragg & Dawson\(^{265}\), Hakim \(^{126,134,138,229,267,268}\), and Select Committees of the House of Commons\(^{245,247}\), and of the House of Lords\(^{246}\).

(3) reviews of existing information or legislation: e.g. Bolton\(^{127}\), Field\(^{89}\), TUC\(^{129}\), ILO\(^{110}\), Ewing\(^{224}\), Townshend-Smith\(^{274}\), Drake\(^{266}\), Leighton\(^{249,269,270}\) and Newell\(^{272}\).

A limited bibliography of the historical origins of homeworking is provided within reference 118.

Much homeworking literature concentrates on a fairly narrow set of labour supply issues. During the 1980s homeworking publications have become quite numerous. They have generated much interest and some attention has been directed at demand issues, these merely advancing cost-cutting and flexibility as motives for using homeworkers\(^{140,229,245}\). Studies generally do not address the issue of how homeworkers are used to provide flexibility, straightforward hiring/firing being implicitly assumed. Part C of this thesis addresses this topic. Common supply side issues concern speculations about the number of homeworkers, their reasons for undertaking
paid work at home, their levels of pay, employment status and working conditions, but homeworker data has not been compared to similar data for on-site workers doing the same work.

Homeworkers' working conditions first generated concern at the turn of the century when allegations of exploitation abounded; similar discussions re-emerged in the 1970s prompting a range of responses. The Low Pay Unit published bi-monthly newsletters and reports and formed a Homeworkers' Association. The DE established a Wages Inspectorate Homeworking Unit having one Inspector in each Division. It also created an Advisory Committee comprising trade unionists, DE officials and employers. Numerous voluntary organisations formed to press for homeworker protection and reforms; among these were the National Homeworking Campaign, London Homeworking Campaign, Leicester Outwork Campaign, and Saltley Homework Campaign. Sufficient pressure was generated to prompt an unsuccessful Private Members Bill and caused a House of Commons Select Committee to examine evidence. The latter reported that homeworkers were used by employers for two principal reasons: firstly, as a buffer against fluctuations in demand; and secondly, as a means of cutting costs by reducing overheads, saving factory space and improving competitiveness. It highlighted the vulnerability of 'traditional' homeworkers. Several Local Authorities have now appointed Specialist Homeworking Officers to monitor working conditions.

Attention has recently focused on the wide range of 'distance-working' employment relationships which include direct employment, genuine self-employment, and those areas that appear to bridge the gap, such as homeworking, outworking, sub-contract working, and freelancing on commission. Therefore clear definitions became important.

Definitions of homeworkers have varied; the CIR defined them as,"receiving work and payment directly from a manufacturing establishment for work done in the home". The NBPI classified 3 groups as: (1) those employed directly by firm and appearing on the payroll; (2) those employed by agents or intermediaries of a firm; (3) those of self-employment status. This showed a better awareness of the complexities of organizing domestic production. However, because the research topic focused on factory-attached 'traditional' homeworkers, often perceived as having the worst employment conditions, the definition contained in the Homeworkers' (Protection) Bill 1978 has been adopted, see section 2.2.

Speculations about homeworker numbers have varied widely; in July 1907 there were an estimated 9,000 homeworkers in East London, by 1948 the TUC
estimated 20,000 in the garment industries and 25,000 nationally\textsuperscript{127}, the NBPI\textsuperscript{116} suggested 15,000 in 1968, the CIR\textsuperscript{114} claimed 18,500 in 1972, and in 1976 the IDS\textsuperscript{136} stated that about 250,000 women worked for industry at home. Hunt\textsuperscript{100} estimated that, "3.7% of women were working in their own houses" in 1968. The DE estimated for the HC Select Committee\textsuperscript{245} there to be 200,000 — 400,000 homeworkers. More recent and reliable figures based on the 1981 Labour Force Survey, were published in 1984\textsuperscript{138} and estimates showed that up to 1.68 million men and women in roughly equal numbers worked at or from home. This figure included people working from home as a base, (i.e. self-employed craftsmen, professionals and freelances) and in this category men predominated heavily (71%). Women formed the majority (also 71%) of persons who worked at home mainly as homeworkers as defined by the Homeworkers (Protection) Bill, but statistics showed that white collar service work had overtaken traditional manufacturing work. Even so there were an estimated 72,300 'traditional industrial homeworkers' (more than the total employees of British Rail\textsuperscript{275}) linked to the formal economy. Hence, in number terms, Allen\textsuperscript{29} justifiably concluded that the construction of marginality around homeworking was open to serious questioning. A minority of Allen's sample\textsuperscript{69} worked for small local entrepreneurs, the majority working for large national or international companies. This was not a marginal economic activity, but it was bound up with the formal economy, and with the mode of reproduction in the household unit\textsuperscript{140}.

Homework was found to be moving into new areas in the late 1970s\textsuperscript{138} with the advent of new technology and this trend was expected to continue. Huws' sample\textsuperscript{226,262} consisted of home-based executives, computer programmers, systems analysts, word processor and key punch operatives who were more highly paid than traditional manufacturing homeworkers and some were even classed as employees. Those classed as self-employed were generally paid lower rates than on-site workers, and had more irregular employment than homeworkers classed as employees. She concluded that childcare was the major reason for taking work at home (74% of sample), but that other reasons were important such as, work flexibility and convenience (35%), lack of other work (14%) and the need to keep up-to-date (12%).

A wide range of pay levels was discovered, although low pay was the most usual finding. Rates varied from 4.1/2 pence per hour in 1974 (Brown\textsuperscript{88}) to £1.0 per hour in 1976\textsuperscript{124}; Huws\textsuperscript{226,262} found the highest paid professional workers. An often articulated claim was that the overriding motive for undertaking homework was economic necessity\textsuperscript{29,89}, whereas employers were believed to perceive homeworkers as working for 'pin
money'. Surveys showed that some low paid homeworkers worked for well-known, well-respected companies and there were indications that such companies paid particularly low rates. Tendering by agents and the selection of the lowest tender was seen as a major source of low pay. Expenses such as heating, lighting and power were often incurred and not reimbursed, and this had been a cause for concern since the turn of the century. Work collection and delivery costs were sometimes borne by homeworkers, and many were inconvenienced by work storage that consumed valuable, usually necessary, domestic living space. Homeworkers were paid almost exclusively by the piece or job load and calculation of hourly rates was very difficult because no accurate records were kept by either employer or homeworker.

Abolition of Wages Councils in favour of collective bargaining is unlikely to solve homeworker problems because it has been shown that few homeworkers are in trade unions. The traditional trade union view, as portrayed by Bolton, was that trade unionists wished to see homeworking abolished due to its perceived threat to factory jobs and pay. He outlined the difficulties that trade unions faced in trying to improve the lot of homeworkers. These difficulties were well illustrated by the statement, in para 2527 of Mrs. Patterson, a trade unionist who said, "I cannot say it is a walk over on the negotiation of rates for workers inside the factory, but the one real battle I have every time is to put even a half-penny on the piece-work rates for homeworkers. There is tremendous opposition to getting any improvement there."

More recently the Trade Union Statement indicated that trade union antagonism had changed to a desire to help, and indeed several trade unions including the National Union of Hosiery and Knitwear Workers (NUHKW) and the Nation Union of Tailors and Garment Workers, have repeatedly attempted to improve homeworkers' conditions but tracing homeworkers and the shortage of time and information were seen as great obstacles for the trade unions.

Links between ethnic minority workers and low pay were drawn by Stephen and Jain & Sloane. Ethnic minority groups were regarded by some as a 'reserve army' and Crine saw homeworkers in that light, but Shah investigating the employment conditions of immigrant homeworkers in East London found that they were skilled and relatively well paid. Hakim considered language difficulty to be a reason for undertaking homework.

Secrecy surrounding the homeworking arrangement was linked to welfare rights and homeworkers were found to be afraid of visits from social...
security, planning and tax inspectors because they feared loss of benefits. Homeworkers needed permission for 'change of use of premises', were liable for tax and national insurance contributions, and lost transfer payments, rent and rate rebates, and assistance with school meals and uniforms when their earnings were above the thresholds. Low earners were naturally concerned about the 'poverty trap', especially when their work was unstable or temporary, but the low earnings obtained implied this to be unlikely. It was expected that such circumstances would frustrate homeworker willingness to cooperate in the proposed research.

Many discussions have centred around homeworker characteristics and Bolton argued that the 19th century great depression set today's patterns: older women separated from their families, young mothers supporting a family, the under-employed, and the disabled; the only substantial section to be added has been immigrant labour. Homeworkers sometimes enlisted the assistance of families to complete workloads. Women of all ages and circumstances undertook homework, but the shortage of childcare figured prominently among the reasons advanced for women undertaking paid work at home. OPCS indicated that lack of childcare facilities was influential on women's work decisions. Over 33% of women in the OPCS sample were prevented from working by the need to look after children, and would have returned to work had adequate childminding facilities been available. However, Allen argued that concentration on childcare as a reason for homeworking had presented a partial view; redundancy, retirement, caring for the sick, handicapped, and elderly, poor personal health and disability, unemployment and single parenthood were also important causes. Hakim and Huws implied that homeworking offered flexibility of hours, but Allen found that homeworkers had little choice because the timing and amounts of work to be completed were so constraining as to leave little or no choice in practice. She concluded that the idea of autonomy to organize work according to wishes was a myth.

Lack of legal protection and state benefits have been a great concern, researchers having found that employers classed homeworkers as self-employed, and that few homeworkers paid national insurance contributions and therefore did not qualify for unemployment benefit. Allen asserted that homeworkers were caught in a conceptual limbo between employment and domestic labour, work and home, into which they were frequently trapped by responsibilities for infants, the sick, the old and the handicapped. This highlighted the law's neglect of the issue of how work and payment for work...
were organized, and she pointed to the myth of the separation of home and work for many women arguing that women's labour had been an integral part of production throughout the long period of industrialisation\textsuperscript{140}. Consequently, homework was an old form of production that had been thoroughly integrated into developed industrialism to become inextricably linked with the formal economy, although the analysis of homework's present day role was in its infancy\textsuperscript{29,69,140}.

Thus, despite the body of protective employment law and the EOC's activities, the literature survey generally indicated LM inequality between women and men, and between various groupings within the female workforce.

2.4 LITERATURE RELATING TO THE SELECTED LABOUR MARKET

Charnwood Borough Council was formed 1974 with the merger of the towns of Loughborough and Shepshed and the parishes of the Rural District of Barrow-upon-Soar, then giving it a population of 130,000\textsuperscript{162}. It comprises 23 parishes\textsuperscript{163} and covers an area of 108 sq. miles in a triangle between Derby, Nottingham and Leicester. The central area is the Soar valley, the River Soar being the main southern tributary of the River Trent. Along the Soar lie most of Charnwood's larger industrial shoe and hosiery villages, culminating in Loughborough, Leicestershire's second town. Hosiery mills mark the area's industrial history; Loughborough is also well-known for its engineering and educational establishments. To the south of the borough lie the busy towns of Syston, Thurcaston, Birstall, and Anstey, but these form the outer suburbs of Leicester and have consequently been excluded for the purpose of this study due to their 'city' associations. Loughborough is accessible by rail (main midland route to St. Pancras), road (A6 and M1) and air (East Midlands Airport).

From A.D 1400 to 1660 the wool trade was important, but it declined and by 1700 malting was more significant. The region has been central to the development of the H&K industries, three important inventions having been developed either within or very close to Charnwood's boundary. About 1800 Joseph Paget introduced the worsted hosiery trade and also about that time a Mr. Cartwright set up mohair spinning. John Heathcote lived in Long Whatton, (just outside the boundary), went to school in Hathern (just inside the boundary) and between 1805 and 1808 worked in his Kegworth workshop on a model of the first bobbin-net machine which was a mechanisation of pillow-lace making\textsuperscript{162,164}. He set up in partnership with
a Mr. Boden and brought the bobbin-net trade to Loughborough in 1809. On Friday, June 28, 1816 there was a 'Luddite' attack on his factory; 55 frames were smashed and 200 men thrown out of work. Later that year Heathcote moved his operations to Tiverton in Devon where its successor still remains. According to Chapman the term 'Luddite' owed its origin to a spontaneous machine breaking incident in Shepshed, although some writers place it in Anstey. In Loughborough, between 1857 and 1860 Mr. A Paget invented an automatic narrowing machine which worked 3 times faster than other machines and produced more regular fabrics, and between 1846 and 1864 William Cotton was inventing and perfecting his fully-fashioned multi-width knitting machine which was capable of mass-producing shaped, regular-knit goods. Many other improvements to H&K machines were invented in the nearby cities between 1758 and the present day. Thus local manufacturers draw their labour from a region with long traditions of H&K production. Today's H&K products include fully-fashioned knitwear, socks, cardigans and jerseys; the manufacturers being supported by local knitwear dyers and accessory producers.

However, engineering was the largest industrial activity in 1980. Loughborough housed Herbert Morris Ltd. (crane and hoist manufacturers), the Brush Electric Company (motors, generators, control gear, transformers and rail traction equipment), Taylor's Bell Foundry and other branches of engineering including textile machinery, precision tool, sheet metal products, boiler and compressed air equipment manufacturers, as well as bus and coach builders. The well-known children's Ladybird books are printed in Loughborough and there are also box, drawing office supplies, tent and marquee manufacture. It is the home of the Pharmaceutical and Scientific Equipment Divisions of Fisons Ltd, and Riker Laboratories Ltd also manufacture pharmaceutical goods and fine chemicals.

In Shepshed, footwear and hosiery are the traditionally manufactured goods, with men's and children's socks as the major items, but it also houses the Precision Rubber Division of Dunlop Ltd and other factories making hosiery shapes, display units, boxes and cartons, glove fabrics and other knitted textiles. In the Domesday survey it was mentioned as 'Scepeshefde Regis' which referred to a hill where sheep were grazed. It had a weekly wool market which flourished until the end of the 14th century. Throughout the centuries woollen and hosiery industries remained pre-eminent in Shepshed which was relatively isolated until the 19th century when the Charnwood Forest Navigation Canal and later the Charnwood Forest Railway were built to link it with Loughborough and Coalville.
Sileby stands on the east side of the Soar and is another hosiery and footwear town specializing in ladies' and fashion footwear. In 1980 it also contained engineering, brickmaking and wallpaper manufacture. A few framework knitters' houses still survive, but its industrial village character is being changed by large residential developments.

Quorn and Mountsorrel are less industrialized. Both straddle the A6 on its route between Loughborough and Leicester on the Soar's west bank. Footwear, elastic and elastic webbing are manufactured in both settlements. Mountsorrel is famous for its granite quarry, but it also manufactures boxes, cartons and rivercraft and on its southern boundary is a Rolls Royce engine factory. Barrow-up-on-Soar is a small residential and industrial town on the east bank of the Soar. Its industrial base is mainly hosiery, catering for the chain store market, but it also has limestone and manufactured concrete goods.

Most of the remaining settlements of Charnwood are small, and characterized by agriculture. These include; Barkby, Barkby Thorpe; Beeby, Cossington, Cotes, Hoton, Newtown Linford, Prestwold, Queniborough, Ratcliffe-on-the-Wreake, Rearsby, Seagrave, South Croxton, Swithland, Thrussington, Ulverscroft, Waltham-on-the-Wolds, Wanlip, Woodhouse, and Wymeswold. Important residential settlements within the selected region of Charnwood are Hathern, Mountsorrel, Quorn, Queniborough and Rothley, and the settlements excluded from the survey of Birstall, Syston, Thurcaston and Thurmaston.

Thus, labour was drawn from the settlements in the countryside surrounding Loughborough town, but the factories were largely located in the settlements underlined above. Table 2.16 details Borough related statistics of the principal settlements in the chosen region\textsuperscript{163}. Charnwood Borough had unemployment rates of 3.7% (total), 4.1% (men) and 3.0% (women) in March 1980. The area usually had a lower than national unemployment rate, possibly due to its diverse industrial base. Nevertheless, the unemployment storm clouds had been gathering; "January 1980 saw the worst batch of redundancies the area had ever known, with worst hit being the hosiery and knitwear industries"\textsuperscript{167}. Unemployment rates rose to 5.5% (men) and 5.7% (women) by October 1980, as the deepening recession impinged more on women.

There was local general knowledge that the H&K industry employed many women. The chosen settlements had long traditions of footwear, hosiery and knitwear manufacturing. Head\textsuperscript{160} claimed that the transition to factory production was slow, partly because of the well-established system of
'putting-out'. Marglin argued that the factory system was not technologically superior to the putting-out system until technological change was channelled exclusively into that mould; the factory system being introduced to transfer control over the product and the time worked to the capitalists to end what was perceived as workers' dishonesty and laziness. In pre-factory times it was usual for wives and daughters to 'hand-finish' garments knitted by their menfolk; these settlements had been associated with domestic production and putting-out since the beginnings of the industry. The author therefore considered it to be highly appropriate that these same small settlements and industries should be studied as examples of modern day homeworking.

2.5 SURVEY OF LITERATURE RELATING TO SELECTED INDUSTRIES

The H&K trades comprise all those firms engaged mainly in the 'knitting' of goods. The industry is defined not by raw materials, but by the nature of the process. Since William Lee mechanized the knitting operation in 1589 for the purpose of knitting hose the industry has been called the 'hosiery' industry even though his invention has been developed and modified to produce a wide variety of products. Today, hosiery applies to many kinds of knitted produce including underwear, outerwear, gloves, scarves and other kinds of clothing. However, the making-up of clothing cut and sewn from knitted fabrics is excluded from Minimum List Heading (MLH) 417, and similarly, such manufacturers have not been included in this research. The location of the UK H&K industry is as shown in Figure 2:9, from which it is seen that that the East Midlands is one of the two principal regions for the manufacture of H&K goods.

An HMSO Working Party reported in 1946 that the percentage breakdown of workers engaged in the main productive operations of the hosiery industry was: winding 5%; knitting 25%; making-up 49%; mending, boxing and counters 17%; dyeing and finishing 4%170. Worker numbers had decreased substantially over the decade prior to 1980, the extent being claimed as, "one in ten jobs lost of over the last 5 years"167; Table 2.17 shows declines in both employment and industrial production173,177. HMSO170 furnished evidence to show that this had been the employment trend since the second world war. To assist the industry the MFA set quotas to prevent the home market being swamped by exports from developing countries, a matter of persistent agitation by the industry since its early development (cf Henson, Felkin161 with 179). The NEDO Sector Working Party reviewed the industry, collected statistics (Table 2.18), and issued
guidelines to manufacturers on the improvement of home marketing. It encouraged them to grow by exporting high quality goods to developed countries, since UK manufacturers exported less to West European markets than most other EEC producers in 1976. The Loughborough District Trade Union Official backed this kind of export drive.

Table 2.19 shows that the British textile industry generally had a fragmented structure; although a few large establishments existed, it was characterized by a proliferation of small manufacturing units. This structure has been associated with low pay (section 2.2), and thus the industry appeared a good subject for a study of segmentation. Total sales of the H&K industry (MLH 417) in 1978 were £1,013M. The major components of this figure were: pullovers, jumpers and cardigans, £398M; weft- and warp- knitted fabrics, £325M; underwear, £141M; tights, £91M; socks, £52M; and knitted shirts, £33M.

Pool concluded that H&K companies operated in competitive conditions and suggested that Employers' Associations acted as competition levellers by providing the same information to all manufacturers. L.C.C. claimed that small companies were more profitable than large ones due mainly to their greater flexibility and adaptability to changing circumstances and fashions. Seasonal and fashion fluctuations were confirmed by HMSO, NEDO, and a recent illustration of a short-term fashion trend has been the hand-knit boom of the late 1970s. Nevertheless, the regularity of summer and winter seasons was expected to produce similar seasonal product market conditions for many manufacturers. Unstable profits in the industry were confirmed by Pool and the respondents to the pre-pilot study who insisted that the industry had suffered badly in competition with cheap imports from developing countries. These claims were repeated by respondents in the main study. The Multi-fibre Arrangement (MFA) also bears witness to these conditions.

According to Pool, 1957 there was a preponderance of small to medium sized firms served by Employers and Research Associations who promoted competition by acting as direct agents in helping the survival of the many. This had the effect of making the industry more competitive although it was not designed to do so. It was done by giving members equal access to technological, costing and marketing information which created market conditions whereby cost and price differences were minimized. In his 1955 Report he concluded that his inquiry had established that the two fundamental conditions of effective competition, complete freedom of entry and a multiplicity of independent firms producing closely competitive
products, were satisfied to a very high degree. Several firms in his sample had started modestly in outbuildings such as sheds, garages, converted stables or even in the living room of the proprietor's home, often necessitating the additional use of homeworkers. Boraston et al. found the H&K industry to be highly competitive with comparatively low profit margins. They remarked on the close social relations between knitters and managers, but concluded that size of establishment significantly affected trade union influence; large establishments were more independent while smaller ones placed more reliance on full-time trade union officials.

2.6 CONCLUSIONS TO BE DRAWN FROM THE LITERATURE: HYPOTHESES REVISIONS

The literature survey yielded clear insights to suggest that women in general, and twilight and homeworkers in particular, might be classified as secondary workers in a segmented LM structure, but it provided few guidelines, little concrete evidence and insufficient data to construct a statistically testable single hypothesis of general demand that would integrate men and women workers, and shift, full-time, part-time, twilight and homeworking work patterns into a unified body of theory. The issues discussed in Chapter 1 still appeared to be relevant and so the proposed empirical research was to concentrate on the identification of key variables in order to provide the basis for econometric treatment by other researchers. The original hypotheses of worker supply and demand did not need substantial revision prior to the outset of data collection. Women workers were widely reported as earning less than men which suggested male/female segmentation, additionally, the 'cheap labour' hypothesis of labour demand suggested further segmentation. The question remained, if homeworkers were very cheap to employ, why did they not form the majority of each employer's workforce? Nevertheless, the 'under-cutting tactic' supposedly frowned on by trade unions needed investigation. No detailed indication had been found of the principal causes of female workgroup creation, such as the relative importance of home and family constraints, 'divide and conquer' techniques, shortages of worker numbers, skills or factory space. However, in the absence of better explanations, the 'cheap labour' hypotheses formed the basis of female, especially homeworker demand, while the 'fill the gap between day and night' assumption still formed the basis of preconceptions about twilight workers.
3.1 SUMMARY OF EMPIRICAL DESIGN DECISIONS

The empirical programme emerged from a complex decision process backed by thorough investigation. The following decisions were taken:

(a) A multi-disciplinary approach was to be adopted.

(b) The research was to be conducted at the micro level. Due to financial constraints, a local labour market study was to be undertaken in the north of Charnwood Borough rather than a national survey, but should a low response rate be obtained, the boundaries could be extended to encompass the city areas of Derby, Nottingham and Leicester.

(c) An industry conforming to Averitt's peripheral image was to be selected. To permit 'fair' comparisons and hold environmental factors reasonably constant, an intra-industry study was to be undertaken in the H&K industry. Workers would be performing the same or similar jobs for the same employers, and direct production workers only were to be compared. As a fall-back position if a low response rate was obtained, the footwear industry might be included. Data was to be collected over a short time period to avoid environmental changes.

(d) Since there were advocates and opponents for all theories, determination of LM structure was to be an important feature of the empirical work so as to identify which theory best fitted the circumstances. Possible segmentation was to be examined firstly by comparing full-time men with full-time women, and then comparing twilight workers and homeworkers (as examples of secondary labour) with full-time women. The primary focus was women's LM position which was to be put into context by examining that of men.

(e) Data was to be collected by means of employer interviews and would concentrate on demand issues, but would also examine supply issues where these impinged on demand. Three distinct data collection stages were involved, see Table 3.1.

3.2 PRELIMINARY SOURCES OF INFORMATION

There was a lack of general knowledge, publications and statistics relating to homeworking, largely because it had been widely believed to have disappeared prior to 1914. Primary data had been generated and so, concurrently with the literature search, preliminary inquiries were undertaken in an attempt to tap information sources about workgroups...
generally, and homeworkers in particular, without jeopardizing access to possibly unco-operative firms. Clearly, people employed in local industries could possess valuable information about current practices, as could agents of official bodies with responsibility for monitoring employment relationships. Therefore, personal networks were informally tapped along with formal structured approaches to relevant institutions.

Informal discussions were undertaken with friends and acquaintances currently working in industry and as homeworkers. More formal unstructured discussions took place with representatives of the Chamber of Trade, the Citizens Advice Bureau and workshops for the disabled. Results indicated that several local companies used the workgroups concerned, and gave some insight into workplace arrangements. Another fruitful activity in identifying companies was a detailed analysis of the situations vacant advertisements in the local press. Such preliminary investigations, summarized in Table 1.1, revealed the number of companies employing twilight and/or homeworkers inside the chosen LLM and immediately outside it in the adjacent city areas.

To ensure that differing perspectives of twilight and homeworking arrangements had been considered prior to compiling the interview schedule, formal structured discussions were conducted with local officials:

(a) public health officer;
(b) inland revenue officer;
(c) social security officer;
(d) DE officer;
(e) wages inspector (with responsibility for homeworkers);
(f) factory inspector;
(g) National Secretary of the National Union of Hosiery Workers (NUHKW);
(h) 2 district trade union officers;

Preliminary investigations revealed much local awareness that H&K industries employed many female workers, operated in price-competitive product markets subject to seasonal and fashion fluctuations, and that many companies had unstable profits. Many thought the industry had suffered as a result of cheap imports from developing countries, claims that were echoed by respondents during the main study and evidenced by the Multi-fibre Agreement. High female employment was confirmed by the local DE Official who was responsible for collating industry statistics. He claimed that:

"The region had a high level of female manual employment largely due to the hosiery industries".

Although the DE collected employment statistics, numbers by industry were confidential. However, the compiler indicated that the telephone directory's yellow pages would furnish the most complete duplication of his
list of companies. The DE Official expressed opinions that H&K employers:
"...seemed afraid of LM legislation", and "...appeared not to understand it", and "...were unwilling to regard twilight workers as 'normal' employees because they were brought in on a temporary basis", and "... often did not issue statements of terms and conditions of service to twilight workers as required by employment legislation".

He also had private knowledge about low levels of homeworker pay.

The Factory Inspector, who had his office in the City of Nottingham, expressed the opinion that small rather than large companies tended to use homeworkers. In the course of his duties he visited many ethnic minority women who were undertaking homework.

3.3 THE PRE-PILOT STUDY

Issues raised by the preliminary work posed many questions. By ordering these into a flowing and logical order an interview schedule was designed for testing via a pre-pilot study. The schedule was divided into three sections, each being subdivided into several topics as follows:

(1) Company Strategies and Policies
Topics included: the characteristics of the company (number of workers and branches); profit levels; expansion and contraction policies; labour and product market conditions; employment policy; response to legislation; and the employment and unemployment levels in its locality.

(2) Employment Condition and Worker Performance
Topics included: recruitment; training; job allocation; dismissal and redundancy; existence and application of sickness, pension, maternity and holiday schemes; the provision of facilities; worker productivity; quality of work; experience; absenteeism; turnover; mobility between groups; the incidence of disputes; whether the employer deducted tax and national insurance contributions for homeworkers; and trade union involvements with the above dimensions of the employment situation. (This was the longest section of the schedule)

(3) The Cost of Employment
Topics included: pay levels; methods of payment; premia and bonuses of various types; hours of work; and whether costs were incurred in work collection/delivery and machinery maintenance for homeworkers, and if so, their order of magnitude.

Much thought had been given to the exact form and scope of the interview schedule because it was to be used in census fashion over a very short period on a 'once and for all' basis. Comparisons of pay and
conditions of service could only be fairly and accurately conducted if all data were collected concurrently. It was anticipated that, because homeworking was a very sensitive area of the LM\textsuperscript{91,124,264}, the interviewee might refuse or quickly curtail an interview should the wrong approach be made; for this reason a rule was self-imposed that only one visit to each establishment would be attempted. This course of action was adopted to protect future researchers.

The schedule was lengthy, but there was no indication which issues and questions could be safely discarded, or indeed whether all important topics had been included. Consequently, a pre-pilot study was planned with the broad objective of reducing the size of the schedule without undermining the thrust of the research. It was felt that the duration of each interview had to be minimized to gain the co-operation of busy industrialists in competitive industries. It was decided to conduct the pre-pilot study within the selected H&K industry but outside the selected LLM.

Three companies were approached, but one refused to co-operate. A large establishment situated centrally in one of the nearby cities assisted by inviting the author for an afternoon's visit around the factory to discuss in depth its labour recruitment and adjustment policies with senior management. This presented an excellent opportunity to establish background information about industry-wide product demand, competition, profit levels and range of outputs, as well as to test the relevance of questions and seek advice about the availability of data to be extracted.

The schedule was properly tested in a third H&K company in Derbyshire that specialized in full-fashioned knitwear of acknowledged high quality. The interview lasted for 4 hours during which time it was shown to be impossible to collect, under section 2 of the schedule, detailed data for each employee due to shortage of time and the specific nature of the data required. The interviewee, the managing director, was extremely helpful. In neither of the visited pre-pilot companies was any reticence to confront the homeworker topic encountered; each used homeworkers, although the large city centre company administered this through an intermediary.

The pre-pilot exercise was extremely valuable in that it identified a few areas where the schedule could be reduced: either data was unobtainable since records were not kept, or access would be refused or too time consuming. Given the large number of employees and the wide range of topics to be delved into, it was clearly impracticable to obtain employee-specific data. Collection of establishment-aggregated data was thus resolved to be the only practical option. Rankings were introduced for
those topics where doubt about the keeping of records had been expressed. None of the explored issues was shown to be irrelevant although some questions were superfluous since the information could be obtained from elsewhere. Rather than just narrow the field of investigation, the pre-pilot exercise had also indicated the need to widen it. It showed the need to widen the schedule's range to include the topics of machinery utilisation and the use of shift workers in order to obtain firm-specific demand patterns since the labour forces in both pre-pilot companies were segregated by gender into capital and labour intensive types of production. Consequently, several alterations were made to the research instrument. Questions relating to opinions, profits and responses to legislation were excluded since it was considered to be a better use of valuable interview time to concentrate on the extraction of quantitative data; it had been experienced that respondents furnished a vast amount of qualitative, explanatory data in the course of answering quantitative questions. Questions were therefore re-drafted to facilitate yes, no, DK answers, or to provide values. The layout was carefully re-designed to save interview time; anticipated answers were provided to permit speedy circling creating time for shorthand notes of all comments. Immediately after each interview, comment sheets were compiled from these verbatim reports. The revised interview schedule is included as Appendix I.

3.4 BACKGROUND TO THE PILOT STUDY

A decision was made to test the revised interview schedule in a pilot study within the selected LMM but outside the selected industry. It was decided to conduct the pilot study in the boot and shoe manufacturing industry because there were such establishments in the LLM and it was expected that footwear manufacture would exhibit similar characteristics to the H&K industry, such as seasonal business fluctuations, workforce utilisation, and in the types of machinery used. It was anticipated that sewing operatives might move freely between the H&K and footwear industries of the LLM and consequently it would be advisable to study both industries.

A literature survey confirmed similarities in market conditions between H&K and footwear industries. The footwear industry was also subject to seasonal and fashion fluctuations and to intense foreign competition. It predominantly employed women, many on stitching operations that were labour intensive, and it had experienced a falling employment trend over the previous decade.

Between 1966 and 1978 employment in the footwear industry fell by 3 - 5
31,000 to 75,000 employees, total output fell by 20% and the number of firms in the industry fell by 30% to 560 firms in 1978\textsuperscript{180}. Fifty six percent of the workforce were women, and manufacturing was concentrated in Northamptonshire, Leicestershire, East Anglia, Lancashire, Somerset, Bristol and the South West, see Figure 3:1. In 1950 only 4% of U.K. footwear sales were imported, but by 1978 imports totalled 42% of sales. There were few economies of scale obtainable beyond an employment level of 250 persons\textsuperscript{181} and consequently the majority of manufacturing units were medium sized. The UK footwear industry was technologically equal to those of other countries, but its major constraint in 1980 was international protectionism. More than 75% of the world's footwear producing nations operated behind significant tariff and non-tariff barriers it was claimed\textsuperscript{181}. Consequently, calls were made for EEC to negotiate a Footwear Agreement similar in nature to the Multi-fibre Agreement (MFA) for textiles.

Regarding trade union organisation, the H&K and footwear industries were similar in their reliance on full-time officers due to similar work organisations that inhibited collective action. The boot and shoe manufacturing industry, famous for its conciliation and arbitration procedures, had an agreement on incentives based on a time study with prescribed values for converting time into earnings\textsuperscript{176}.

3.5 INTERVIEWING TECHNIQUE

Initial contact was made by telephone to request an interview. On making contact with the individual responsible for labour management, normally the person with highest authority, the purpose was explained and an interest expressed in twilifters and homeworkers. In anticipation of sensitivity about secondary labour, emphasis was placed on the overall patterns of labour demand rather than on demand for homeworkers. The probable time commitment was also discussed. All such telephone requests were greeted with cordiality and where subsequent interviews were arranged the utmost co-operation was offered by all members of each establishment's staff. It is believed that no hostility was encountered because the wider aspects of the study were stressed rather than giving the impression of probing into homeworker use.

The schedule (Appendix I) was constructed to allow topics to flow in logical order, and question sequence was deliberately arranged to put respondents at ease at commencement by covering biographical and other important but uncontroversial issues. By this strategy it was hoped to
gain the confidence of respondents wary about answering detailed questions on the 'delicate' topic of homeworking. Controversial questions were placed about three quarters into the schedule to ensure that respondents would be relaxed and reassured regarding confidentiality by the time they were reached. Furthermore, numerous questions would have been answered by that point, few of which could be regarded as delicate, that a sudden change of attitude would have been required to hedge or refuse an answer. It was hoped that this arrangement would encourage frankness, which in retrospect, it did. To allay possible fears about specific probing regarding homeworkers, each question was first directed towards shift workers, then full-time, part-time and twilight workers; homeworker replies were collected lastly. The schedule's final section again comprised uncontroversial questions so as to leave a pleasant parting atmosphere and the impression that homeworkers had not been the most important feature. Questions were collected into five sections:

A. IDENTIFICATION OF THE COMPANY AND RESPONDENTS;
B. IDENTIFICATION OF THE WORKFORCE GROUPS;
C. CONDITIONS OF SERVICE;
D. REMUNERATION;
E. PERFORMANCE.

Apart from Section A being a natural starting point, it enable respondents, some of whom were entrepreneurial owner/managers, to discuss the subjects they appeared to like most, i.e. themselves, their companies and trading. This was a convenient prelude to an amicable interview and it yielded much useful information. If it was sensed that time would not permit the schedule's completion, interviewees were discouraged from discussion. The questioning sequence was always rigorously adhered to.

Worker numbers, skill levels, numbers of operations and methods of payment were identified by the completion of a box chart similar to that of Figure 4:2. The remainder of the schedule was completed by systematically recording details in the spaces provided, or by circling the appropriate ready-typed answers since this obviated repetitive writing of the same answer and provided sufficient time for shorthand, verbatim notes to be made of comments, phrases and distinctive words. Within 24 hours these were transcribed to ensure that nothing that had been said was lost.

Worker characteristics were considered relevant to the effects of the domestic role, differently sized LLMs, racial and gender segregation and to provide some evidence of financial commitments. Conditions of service were considered necessary to determine the structure of LLM as a pre-requisite
to identifying the inter-relationships of workgroup demand and they were introduced sequentially from the recruitment to worker quit. Respondents willingly replied to all questions including those on work allocation, redundancy and remuneration. Difficulties with answers about remuneration did not generally spring from an unwillingness to answer, but rather from complications caused by piece-rate methods of payment. Questions applicable to only one group were asked of all groups to avoid the impression of probing into sensitive areas. The final section on worker performance was well chosen as a concluding topic since it allowed respondents to evaluate the workgroups and explain production difficulties. Where circumstances allowed, interviews were terminated by general discussions about capital equipment used, and the establishment's policy on labour usage.

3.6 EMPIRICAL FINDINGS OF THE PILOT STUDY OF FOOTWEAR MANUFACTURERS

The pilot study was undertaken during October 1979, and the sample of interview companies comprised 70% of the population of footwear manufacturers in the LLM, i.e. 7 establishments. Products included boys' and ladies' fashion footwear.

Forty-hours was the standard work-week length, but there were part-timers who averaged 33.5 hours per week. The employers definition of part-time typically was 'workers with fewer than the normal weekly hours of the establishment'. The pre-pilot study had indicated the presence of a sizable group of part-time workers, but at the time this was not thought to be of importance. However, the first two pilot interviews revealed a similar situation in the footwear manufacturing industry and their significance was increasingly realized. Part-timers were frequently referred to by respondents who found difficulty in answering some of the questions without drawing distinctions between them and the full-timers. It was feared that if part-time and full-time statistics were aggregated, it would mask any characteristic differences between the workgroups. Consequently, subsequent to the first two interviews of the pilot study, statistics for part-timers were collected separately. As a result, the number of part-time workers present in the pilot sample is somewhat understated, but fortunately the two companies where part-time statistics were not collected separately were small in size.

Fifty-five homeworkers, but no twilight or shift workers were used by these footwear establishments, see Table 3.2 for workforce composition. Table 3.3 shows that some 60% of all workers were classed as highly skilled. There was a strong bias towards the higher skills in the male
full-time and female part-time groups, and towards the semi-skilled category in the homeworkers group. Employers always sought experience of similar work before recruiting workers, and although this requirement was sometimes relaxed for the in-factory groups it was not for homeworkers. Several ex-hosiery workers had been recruited to these footwear establishments. Each establishment's workforce was completely job segregated by gender, with men operating various large-sized machines and women performing varied stitching and hand operations. Less than 10% of factory operations were performed by homeworkers.

The National Union of Footwear, Leather and Allied Trades (NUFLAT) represented all the in-factory workers, but none of the homeworkers were believed to be members. All establishments successfully operated closed shop agreements; respondents indicated that the union concerned itself almost wholly with remuneration.

Space limitation precludes the inclusion of the detailed statistics of this pilot survey, but the overall picture was of a male segment that was predominantly British, was generally older than the female groups (63% of men were aged over 40 years), and had proportionately more skilled workers who travelled further to work than the female segment. Full-time females lived nearer to the factories, were younger than the men (but older than homeworkers), were proportionately less skilled than the men and part-timers, but more skilled than the homeworkers.

Homeworkers were generally British, were the youngest group of workers, 73% had dependent children, and 40% were owner-occupiers. Respondents complained of a shortage of full-time men and women, but stated that there was an excess supply of homeworkers. In all respects homeworkers had poorer work conditions. There was much competition for homeworking jobs; often wives or ex-employees were contacted making advertising unnecessary. More stringent selection criteria operated than for in-factory workers and these were usually concerned with characteristics such as trustworthiness which respondents judged to be indicative of an ability to work unsupervised. There was no training and no opportunities for promotion or upgrading. Holiday, pension and bonus benefits were generally not extended to homeworkers, although two small establishments gave minimum amounts of holiday pay. Supply of work to homeworkers varied more than to in-factory groups. Nevertheless, several respondents considered that many full-timers and part-timers would opt for working at home if permitted to do so; respondents stood firmly against such mobility.
Remuneration data suggested that there were two distinct grades of homeworker. Firstly, the skilled machinists who often received equal remunerative treatment, and secondly the semi-skilled hand workers who obtained the minimum pay (or even less) than was permitted for in-factory personnel at age 18. Homeworkers' average weekly earnings were considerably lower than those of in-factory workers, but this could spring from either: lower rates of pay than those paid to in-factory counterparts; or lower rates due to lower skills; or limitation of earnings. Of the homeworker sample, 64% could have been paid lower rates than those normally paid for similar skills 'inside', but it was not possible to establish the exact extent of underpayment due to absence of personnel performing identical tasks inside the particular factory employing these homeworkers. All but 4 homeworkers were paid by piece rates. Where it was normal to calculate pay by time rates for an operation inside the factory, the minimum pay allowed to personnel aged 18 was often converted to piece rates for homeworkers who could be aged 30 or over.

A clear spill-over effect from trade union activity was evident for those homeworkers who received either equal treatment or minimum pay rates, even though employers thought them not to be union members. Nevertheless, many homeworkers knew of the union's existence from their on-site days. Employers considered that trade unions would expect homeworkers to be laid off before factory workers.

By most measures of performance, homeworkers were ranked equal to or better than full-time day workers. These aspects included quality of work, voluntary turnover, competence, refusal of work (the proxy for absenteeism), and disputes. No records were kept of homeworker hours of work so assessments of homeworker productivity were purely subjective. Homeworkers were judged to be less reliable than in-factory workers and this was sometimes blamed on lack of supervision.

3.7 CONCLUSIONS TO BE DRAWN FROM THE PILOT STUDY

Several issues were identified as important. These data indicated that homeworkers were, in fact, cheaper to employ (a full analysis of this issues has been left to the main study), but despite this, employers generally limited homeworker numbers regardless of shortages of in-factory full-timers and excess supplies of homeworkers. These actions suggest that the 'cheap labour' criterion of demand was not the major motive of employers. The importance of control was unarticulated but implicit in the allocation of lower skilled work to homeworkers and in recruitment of them
via the extended internal labour market (EILM) as Manwaring terms it, i.e., external contacts of workers who were members of the internal workforce. Regular contacts with internal workers could provide better links and probably more control over the homeworker. Differently size LLMs for the various workforce groups were implied by full-time men, who were the highest paid group, travelling furthest to work.

The decision to include part-timers as a separate workgroup was justified by the differences between them and full-timers, particularly their skill levels. Part-timers were clearly an important element in recruitment decisions, since they were present in all establishments visited. Consequently, it was decided to include them as a separate group in the main investigation. Although it would have been preferable to include specific detailed questions about machinery costs and utilisation, it was necessary to include these issues as open-ended discussion at the termination of each 2 hour interview should the time be available and established rapport be favourable. This strategy was adopted because machinery costs could be obtained from elsewhere. It was also decided to confine data collection for men mainly to job allocation, remuneration, training and a limited number of other issues to minimize the time requirement on these topics since the focus of attention was female labour. Male performances were not considered because they were not in competition for the same jobs as women. Other than these additions and deletions, the pilot interview schedule remained unchanged for the main investigation.

The strategy of 'homing in' the pilot studies towards the chosen industrial LLM by conducting pilots firstly within the selected industry but outside the selected LLM, and secondly within the selected LLM but outside the selected industry had provided valuable insights and gave experience in conducting interviews in appropriate firms without jeopardizing the chances of success or reducing sample sizes for the main investigation. In retrospect, it can be concluded that the footwear manufacturing industry was well-chosen as a subject for the pilot study because anticipations of mobility between footwear and hosiery industries was confirmed to a limited extent, and patterns of labour usage by these industries exhibited remarkable similarities.
PART B

INVESTIGATION AND ANALYSIS
CHAPTER FOUR - INTRODUCTION TO THE EMPIRICAL WORK

In order to avoid a distorted picture which could occur in changing environments, all main study interviews were confined to the month of March 1980. This allowed wage and conditions of service comparisons to be fairly made, and a simultaneously accurate picture to be portrayed. Table 3.1 illustrates the data collection programme.

4.1 THE SAMPLES

It was intended to approach all establishments in the LLM because limited access was anticipated and the largest possible sample was desired. No official catalogue of the region's H&K companies existed, other than the DE Officer's confidential list, but as he suggested, the current telephone directory yellow pages provided a good duplication. The list of companies using twilight and homeworkers compiled to produce Table 1.1 was augmented from yellow pages and attempts to further extend it by asking respondents for names of competitors confirmed that it was complete. All companies were approached; although it was impossible to visit all, 25 interviews were successfully completed. Six companies refused: two stated that they were in the midst of redundancies and were too pre-occupied; two sister establishments refused because it was Head Office policy not to give interviews, but workforce numbers were supplied; two further establishments declined for no stated reasons. In addition 8 establishments could either not be contacted, or mutually convenient times could not be arranged. However, 3 of the latter gave shortened telephone interviews and although detailed statistics on conditions of service could not be obtained in the curtailed time, labour utilization practices were ascertained. These establishments have not been included as part of the sample, but they strongly appeared to conform to the same patterns of labour usage as in the 25 formally interviewed establishments. It was calculated that 64% of establishments then operating within the LLM were included in the sample and this would have been increased to 72% had the telephoned establishments been included.

4.1.1 The Respondent Sample

Of the 25 respondents, 22 were male. Table 4.1 summarizes the interviewees' years of current experience, but it would be misleading to assume that the average duration of 9.8 years typified their total
experience in the industry. Two respondents had been factory managers for one year, but each had previously gained many years similar experience in other establishments. Four owner/managers had formed their companies less than 10 years previously after working as managers for other employers. Three directors of large, long established companies were members of the founding families and as such had been associated with the industry for virtually the whole of their lives. Therefore, the comments offered and the data provided by these respondents were well-informed and representative of their establishments and of the industry generally.

4.1.2 Profile of the Establishment Sample

Table 4.2 lists the sample by decreasing size of workforce and shows type of ownership and establishment age. Ten were public limited liability companies and 4 were owned by the same large company. Six different conglomerate company groups owned one interviewed establishment each.

Figure 4:1 shows establishment size plotted against its age. Public companies are encircled, the (x) symbols denoting that 17 establishments principally produced knitwear whereas (+) symbols indicate that 8 establishments specialized in hosiery. However, 4 of these made subsidiary products: one manufactured both knitwear and underwear; one hosiery and underwear; and two produced knitwear, hosiery and underwear.

There was a wide cross-section of establishments; sizes ranged from the smallest with only 4 employees to the largest with 236. The adjectives 'large' and 'small' are therefore relative to the sample's size range, and the distinction is somewhat arbitrary. A 30 employee establishment was chosen as the cut-off point between large and small because clustering occurred below that size, and it conveniently separated the public limited companies into the large sector. Large sector companies were predominantly knitwear manufacturers (11 knitwear, 3 hosiery), while the small sector was more equally balanced (6 knitwear, 5 hosiery).

In an analysis of the H&K industry, Pool168 claimed that firms grew over time. This implied that the largest companies would be the longest established. It was realized that a good fit to a regression line would not establish causation, but to test Pool's hypothesis, a linear least-squares regression182 was calculated to examine whether, for this sample, the size (y) of an establishment increased with its age (x). This yielded the equation:

\[ y = 17.7 + 1.42x \quad (\text{with } r^2 = 0.54) \]

Only 54% of the variance in y was attributable to the regression of y...
on x, while 46% of the variability in an establishment's size appeared to be associated with factors other than its age. However, certain qualitative data could account for much of the scatter. For instance, the establishment marked T in Figure 4:1 was, in reality, a growing company that had, 31 years previously, taken over the premises of an existing hosiery establishment, and thus could be considered as older than indicated. Those marked B were establishments that had additional branches outside the LLM and the parent companies were therefore larger and often older than shown. Company P could not expand its premises because it was closely confined by residential housing and had therefore reached its optimum size in that location. In fact, it had been taken-over by the largest establishment, L, and its manufacture segregated. Establishment C had contracted since its post-war peak; obviously some companies were more successful than others. Moreover, the adjustment process of Chapters 14 and 15 shows how worker numbers can vary to create over- and under-capacity situations, and this must additionally frustrate regression analysis when worker numbers are the dependent variable. Thus, the above qualitative data has permitted a better interpretation of the regression exercise by indicating that many of the scattered points would in reality be a closer fit. This indicates the benefits to be obtained by combining qualitative and quantitative analysis in socio-economic studies. Indeed, an absence of such qualitative data would throw the use of regression analysis into doubt in this instance because Figure 4:1 presents an instantaneous picture of a dynamic situation in which birth, growth, stability and decline are all represented. In general terms most establishments had apparently grown over time.

4.1.3 Profile of the Worker Sample

Figure 4:2, a diagrammatic representation of the profile of the complete direct production workforce, relates to Figure 4:3 which shows aggregate group numbers and percentages comprising the sample of 1532 direct production workers. See Appendix III for abbreviations used for the various workgroups, segments and components.

The male segment comprised 349 indoor workers, and because there were no male homeworkers, the component (Im) and segment (M) were identical. The core of the male segment had 201 shift workers and 142 full-time day workers; the only male group that could have been regarded as secondary comprised 6 part-time day workers most of whom were over retirement age. The composition of the shift worker group (Sm) was identical to (S) because
no women worked shifts. 

The female segment comprised both indoor and outdoor components; the composition of the female groups (Tw) and (Hw) being identical to (T) and component (H) because there were no corresponding male groups. The core of the female segment comprised 565 full-time and 477 part-time day workers; secondary groups were the 14 twilight workers and the 127 homeworkers. Homeworkers, although relatively few in comparison to core female workers, were almost as numerous as the full-time males. H&K industries normally employed more females than males and in this sample the overall ratio of all men to all women was 1:3.86. However, the ratio of finishing operatives to knitters varied slightly by company and by size of company, but the greatest variation appeared to stem from the kind of product, hosiery companies generally having a lower ratio than knitwear companies (i.e. hosiery = 1:2.1, knitwear = 1:5.03). A more detailed analysis of the workforce has been deferred to section 4.3 as this will be more readily appreciated after a consideration of organizational patterns.

4.2 ORGANIZATIONAL PATTERNS

A background awareness of the organization of capital and labour, and the manufacturing processes to which these were applied, is useful to put the empirical research into context.

4.2.1 Manufacturing Processes

Companies varied in their approach to the relationship between orders and production. Some produced to meet specific orders, i.e. the order was first placed by the customer who stipulated the style, colour and sizes. Others first manufactured products and then sought customers. Different approaches to the order/product relationship were associated with the dangers inherent in manufacturing output before it was sold; materials must be purchased before production and these were costly and tied up circulating capital. Time-lags could create cash-flow difficulties since seasonal peaks required companies to have money available for the forthcoming season's orders. To miss the busy season could be disastrous for establishments in trading difficulties since a bad choice of style, design, pattern, colour, texture, or even weight, could make garments unsaleable. Consequently, employers who varied stocks were subjected to the vaguenesses of both fashion and the weather. The author was informed that unsold stocks had resulted in the demise of 3 knitwear manufacturers from one small settlement during the previous 10 years.
Whatever the order/product relationship, garment manufacture in both hosiery and knitwear establishments occurred in two distinct, easily separable stages. **Stage one** comprised the knitting and formation of basic shapes. **Stage two** involved the making-up of these shapes into finished garments and their presentation for sale. In the industry, and in this thesis, these stages have been referred to as **knitting** and **finishing** respectively.

### 4.2.1(a) Hosiery Processes

Socks were knitted in tubular form on single or double cylinder, automatic, circular knitting machines costing between £8,000 and £12,000 each. The machines, being automatic, needed intermittent attention to prevent production faults and secure yarn supply. Machines were arranged in rows in adjacent alleys to facilitate the servicing of between 14 and 20 machines which made each operative responsible for between £112,000 and £240,000 worth of machinery. Knitting was therefore a highly productive operation and also highly capital intensive. Finishing operations, which were sometimes performed in separate premises, comprised toe-closing, dyeing, turning, pressing, examining, pairing, labelling, packaging and preparing for dispatch. Toe-closing has traditionally been achieved by the highly skilled, labour-intensive 'linking' operation in which the knitted loops in the toe ends were carefully matched and joined together. Except for very high quality hose, linking was being replaced by various stitching systems using machines costing between £5,000 to £15,000. Toe-closing had thereby become de-skilled, although more capital intensive. Some of the larger manufacturers dyed their own products, but many subcontracted to specialist dyers. Examining, pairing, labelling and preparing goods for sale were the most labour intensive manual operations and manufacturers had searched for, but not found, a viable automatic process. Monitoring of quality and progress was often assisted by smooth topped racks for interim storage which provided easy, simple and quick checking.

### 4.2.1(b) Knitwear Processes

Knitwear production followed a similar pattern to hose manufacture, but making-up operations were more numerous since the garments had more complex shapes and were composed of several separate pieces. Outerwear garments were manufactured by two basically different principles; the **fully-fashioned** and **cut-and-sew** methods. Fully-fashioned garment pieces
were shaped by the machine during knitting; machine prices ranged from £250,000 to £340,000 for the more complex, each of which had up to 16 knitting heads. In the cut-and-sew method, large circular knitting machines costing between £22,000 and £40,000, or flat- or vee-beds (£26,000 to £37,000) produced continuous fabric from which the shapes were cut in a manner identical to clothing manufacture from woven cloth. In both methods, the knitting machinery was automatic, requiring control of settings to prevent fabric faults and servicing to ensure continuity of yarns. Operatives minded one, or sometimes two fully fashioned machines each, thereby being responsible for up to £680,000 worth of machinery which made the knitting of such knitwear the most capital intensive operation in the industry. As with hose manufacture, machines were arranged in rows and alleys for easy routine attention, and this caused the knitting and finishing stages to be separated into different factory locations. To ensure continuous production, several rows or courses of connective thread were inserted between garment pieces or blanks, and after the fabric had left the machine the pieces were separated by hand-unravelling the connecting thread by drawthreading, a very simple but time consuming manual operation for which homeworkers were often used. Drawthreading was used to separate collars, cuffs and welts produced on heavier gauge machines, the peripheral knitted loops of these sub-pieces being manually threaded onto bars by an operation known as running-on, before being loaded onto finer gauge machines for fashion knitting, an operation called bar-loading. In large establishments the division of labour was such that specialist bar-loaders were employed to assist the knitters.

Finishing operations comprised stitching garment pieces together by lockstitching and/or overlocking. A lockstitch machine produced the same stitch as a domestic sewing machine. An overlock machine, used for sealing seams, prevented fraying by throwing the thread around the raw edges before passing it through the fabric. Both of these machines commonly were used for making the cheaper cut-and-sew garments; in true fully-fashioned quality garments, the highly labour-intensive linking operation was used whereby each looped stitch of the two pieces to be joined was selected by the skill of hand and eye and carefully placed on the appropriate pins of a linking dial before passing yarn through them loop-by-loop. Loose ends from stitching operations were 'bartacked' out of sight, and buttons and buttonholes added using specialized machinery. After completion, the garments were steamed and pressed into shape and presented for sale by labelling, bagging and preparing for dispatch. Slightly faulty garments
could often be reclaimed by mending, a skilled, but time-consuming hand operation; quite frequently styles were designed which required hand sewing or embroidery. As with hose manufacture, finishing operations were not automatic, each item being hand manipulated. These were labour-intensive jobs, with one machine per operative (where machinery was used). Machinery prices varied according type, model and make, but typically, lockstitch and overlock machines ranged between £800 and £1,200 each. Some garments were knitted using coloured yarns thereby obviating later dyeing, but dyeing was often performed on self-coloured garments, and even on patterns where yarns of differing dye affinities picked up different colours from the dyebath.

4.2.1(c) Organization of Processes

Production in all establishments was organised on a 'batch' system, with each style, colour and size being bound into standardized bundles. Garments or paired socks had been traditionally counted in multiples of dozens; although a strange numbering system the practise continued in all establishments with output still counted in terms of hundreds (or thousands) of dozens per week. The number of dozens that constituted a batch varied among establishments; in some it was 10 dozens, in others 20, 30 or 50 dozens. Knitting machines, being automatic, could be fitted with counters to record output which was batched for control purposes and during the subsequent finishing processes there was a continuous flow of work from one operation to the next in a manner suggestive of a conveyor belt. Each finishing operative worked in batches so as to check flow and permit accurate wage calculation. This complicated the taking-over of a colleague's work or machine as was required by a shift system. Full-time male time-rate workers were often employed to provide a human conveyor belt by man-handling batches between processes and operatives. In contrast to the continuous flow of work available to factory employees, homeworkers had to operate by discreet, small-batch methods since their work was delivered at weekly or twice weekly intervals. The implications of the nature of work supply are discussed in 9.6.1.

In all establishments, work patterns (4.2.2d) and the sequencing of operations caused segments to be physically segregated into different work areas, and the two stage sequence of production permitted establishments to specialize in one stage only, i.e. either knitting or finishing. Large companies tended to segregate the knitting and finishing operations into separate establishments, sometimes in different regions, because their
knitting machines were sufficiently numerous to completely fill available premises. Thus there were entirely male, and entirely female segregated establishments, although some of the latter used retirement age full- or part-time men for routine deliveries between establishments. Some integrated companies segregated the knitting and finishing stages into different parts of the same factory and this type of organization has been called a segregated workforce. Other companies with small premises segregated knitting and finishing within different areas of the small room. Regardless of how segregation was effected, production processes followed the same sequence and flow. Of the 25 interviewed establishments, 6 were segregated and performed only stage two; one performed only stage one (i.e. knitting on commission from larger companies and using homeworkers to separate knitted blanks); 11 had segregated workforces; and 6 had their workforces segregated into different work areas, see Table 4.3. In only one establishment were men and women full integrated; women had proved to be more satisfactory (see 5.2.1a) and were used alongside men for hand-machine knitting, but even so, the finishing operations occurred in a separate area of the same room.

This latter example emphasises that separation of the workforce by gender resulted from the sex-typing of jobs (see 8.2.1). Efficient production required the positioning of machinery to reduce internal transport and to provide a smooth, convenient flow of work through the sequence of operations. In all instances, factory layouts had been adopted to achieve this flow within the constraints of the number of machines to be housed in the existing, often old, accommodation.

The two easily separable stages of manufacture permitted individuals without factory premises to undertake the whole, or parts, of the finishing stage by using homeworkers since finishing equipment was 'domestically' sized. The knitting was generally unsuitable for domestic production because the automatic knitting machines used for hosiery and knitwear were large-sized. However, certain types of small hand machine were ideally suited for home use (e.g. Griswold circular, and hand flat machines).

4.2.1(d) Patterns of Reorganization

Section 4.1.2 illustrated the dynamics of the survey LLM, and while it indicated stable, expansionary and contractionary trends, it concluded that firms generally grew over time. Expanding establishments tended to become short of factory space for additional machinery and operatives, especially small entrepreneurial companies that had commenced from low financial bases
and had been unable initially to obtain large or extendable premises. Nevertheless, production above full capacity had been achieved by the use of secondary workers. Floor space had been reorganized to introduce additional machinery into space formerly occupied by simple, labour-intensive, space-consuming operations that required hand manipulation (such as turning, examining, folding, pairing, mending, labelling and packaging) which were subsequently 'put-out' to homeworkers. Such 'first-phase rationalization' persisted until new or additional premises were obtained.

After added floor space had been provided, production could take place on more than one site if necessary. With multi-site production, reorganization usually continued by placing the first stage of production on one site and confining the second stage to one or more other sites. Whether production proceeded on one or more sites, the increased floor space allowed simple put-out hand work to return to internal production. The provision of additional space and the bringing inside of the finishing operations has been termed 'second-phase rationalization'. Second phase reorganization had given rise to the entirely female establishments (marked ** in Table 4.2) that were without twilight and homework labour. However, in first-phase rationalized establishments a hardcore of well-respected homeworkers benefited from constant workloads because their jobs were essential and not undertaken on-site. This growth process helps to explain why homeworkers comprised higher proportions in the female segments of small companies which were most likely to have undertaken first-phase rationalization.

4.2.1(e) Varying Productivity Levels

In the first stage of production, each operative was highly productive because numerous automatic machines (or knitting heads) were allocated to each knitter. In the second stage, operatives either used no machinery at all or operated one non-automatic machine each. Consequently, the second stage had low productivity relative to the first. Although employers balanced their capital and labour resources to permit a constant work throughput at each production stage, as pace increased, or an unbalanced amount of overtime was applied, output levels became out of phase and snarl-ups of work in progress occurred. Bottlenecks arose (see 12.5.2a) because more output was achievable on high than on low output operations with a given additional input of labour, see Figure 12:5 which illustrates such unbalanced overtime input. As production demand increased a greater
number of additional operatives were required for the low productive than the high productive operations so as to process the large increase in output from high production machinery. When demand decreased, a relatively large number of these low output operatives became superfluous, since each produced smaller proportions of total output than high output operatives. This suggests that when men do capital intensive and women do labour intensive jobs, as in the H&K industry, men will have relatively more stable employment but their piece-rate earnings will vary over a wide range.

4.2.2 The Organization of Labour

4.2.2(a) Divisions of Labour

Differences in size of company resulted in variations in the divisions of labour. Male segments of the larger establishments of the sample contained specialist knitters, barloaders, yarn distributors, warehousemen, dyehousemen, and supervisors. They also employed specialist mechanics, many of whom worked full-time days to service finishing machines. In the female segments of these establishments, numerous operatives of the same type were required because each produced a small proportion of the company's output. Alleys of similar machines were arranged in separate departments according to the operation performed. The volume of work was such that it enabled them to divide the required processes into a large number of different jobs, some of which arose only intermittently or were of such low volume as to require only a part-timer, a demand criterion identified by Bosworth & Dawkins²⁵⁹.

Small sector employers claimed that they could not afford the employment of specializing personnel. In their male segments, knitter/mechanics both operated and serviced the machines and some additionally acted as supervisors. Small integrated establishments had no auxiliary males to give back-up services and lack of such facilities had implications for choice of payment system, see 4.2.2 (c) below. Within the female segments of small establishments several operations, usually the hand variety, were combined into one job. Few machines of each type were needed, so the different models were arranged sequentially according to production flow, and were gathered together into the 'finishing department'. This contrasts with the much larger establishments that had several departments within the finishing stage of production, each with its own departmental manager.
4.2.2(b) Management Structures

Factory managers assisted by departmental managers who themselves were supported by production supervisors were present in only the largest establishments. Structured communication routes to control both product and labour were clearly evident. In contrast, small companies were generally characterized by the absence of formalized structured control mechanisms, although some owner/managers had supervisory assistance. Small company owner/managers worked manually alongside the knitting operatives and conducted trade in between times aided by secretarial help. Thus, managerial control structures varied according to size of establishment. Large companies could be characterized as having formalized hierarchical and bureaucratic control structures related to manufacturing processes as suggested by Marglin and Goldman & Van Houten. In small companies, the workshop type of simple control of both product and labour was 'personalized' by the very close friendly association of owner/managers and workers on the factory floor, a characteristic also observed by Boraston.

4.2.2(c) Methods of Payment

The methods by which employees were recompensed were closely allied to divisions of labour. It was common for the two basic forms of remuneration (i.e. time rates and piece rates) to be used simultaneously. The time based schemes remunerated at (x) pence per hour for only the hours worked, while under payment-by-results (or incentive) schemes employees earned (y) pence per unit, or dozen units, completed. The piecerate method of payment led to complications when workers were relocated or given extra tasks (see 8.2.2a), so some switching between methods occurred. In order to be 'fair' to time paid workers during heavy work loads a few companies paid them productivity bonuses to recompense them for high productivity, see 8.4.5. As a concession for return to an entirely piece rate system from the various flat rate payments that had been introduced during government incomes policies (i.e. consolidation), an enhanced graduated weekly payment system had been nationally agreed for when output levels were particularly low and short-time working was needed, see sub-section 11.2.1(a). The merits and demerits of using payments systems as a LM adjustment mechanism are assessed in 13.2, which also concludes that "incentive schemes are most appropriate for repetitive jobs to encourage dexterity and speed, and time rates are more suitable for tasks where precision is more important than speed, or for one-off, varied or complex jobs in which the recording of operations is inappropriate".
With the introduction of each new style, new rates had to be established for all operations, but this could lead to wage drift, see 8.3.4(a). Table 4.4 shows the numbers and percentages of workers in each group recompensed by each system. Clearly H&K were predominantly piece work industries due to the repetitive nature of bulk production of particular garment styles. However, various jobs were unsuited to piece rate methods and work group differences are highlighted by the proportionate variation of time payments which indicate the performance of such jobs. For instance, 62% of full-time and 83% of part-time males were time workers in comparison to less than 20% in all other groups. These variations can be explained by reference to Tables 8.1 and 8.2 which show that the majority of these males were doing jobs that were either unsuitable for piece-rates (e.g., mechanics and supervisors) or varied tasks (e.g., stores or warehouse duties). Shift workers were, without exception, time paid for flexibility reasons, some being only temporarily transferred. Within the female segment, time workers were either those on precision jobs (e.g., mending, linking and inspection) or were those who performed semi-skilled hand jobs in which a variety of operations were undertaken, these latter also being done by some part-time men. The 15% of part-timers paid by time rates suggests that employers had modified their hiring standards relating to hours (Instrument U,14.2.4) rather than their skill stipulations (Instrument S) by resorting to part-time females to obtain precision workers. The two time paid twilight workers were being so remunerated temporarily while undertaking training, it being intended to transfer them to piece rates when proficient.

4.2.2(d) Work Patterns

The concept of the 'normal' or 'basic' day in sample establishments was typically 8 working hours and this applied to both single and multiple shifts. Although some night shifts comprised more than 8 hours, workers maintained the 'normal' or 'basic' week of 40 hours. Each group's average weekly hours and overtime is fully considered in Section 9.6, see Tables 9.33, 9.34.

In Figure 4:4 typical work patterns (shown horizontally) and relative size of each workgroup (shown vertically) have been plotted as bar charts against the time of day to illustrate the group interactions and communications that regularly occurred. 'Vandyked' band ends denote that start and finish times varied. Only knitters worked the shift patterns and only men were employed on the 'normal' knitting operation. Employers
variously claimed that women were "unable", "unwilling" or "prohibited" from working shifts, these same explanations being used to justify women's non-employment on highly paid knitting operations. The most usual pattern was the double day shift 5 days per week. In these one man worked from 6 am to 2 pm, and another from 2 pm to 10 pm. Of the 11 establishments operating shift systems, only 2 worked a continuous 3 shift 5 days per week pattern (for a fuller description of shift-work patterns see Bosworth & Dawkins 78,79,141). The very costly fully-fashioned machines were used by these establishments. Working times for single shifts were typically 7.30 am to 4.30 pm with a 1-hour break for lunch, these times applying to both men and women full-timers. One establishment worked 8.1/2 hours 4 days per week to allow an "early finish on Fridays for weekend shopping."

Part-timers had individually variable start and finish times depending on their commitments, preferences and employers' permission. They averaged 30 hours per week and this allowed mothers to deposit children at school, start work at 9am and finish at 4pm to coincide with school times. It was claimed that mothers with primary school children generally "worked fewer hours in order to dovetail with school finishing times." Working hours of both twilight and part-timers varied individually and, as 11.4.1 considers, hours worked are critical to the statutory provisions received. Twilight workers with 15 or 16 hours per week (see Table 9.33) attended for 4 hours per evening, and 4 days per week; those with 22 weekly hours attended for 4.1/2 hours, 5 days per week. Start times were either 5pm or 6pm and finish times were between 9pm and 10pm.

Homeworkers were generally unable to interact with indoor components. Although their actual hours were not accurately known, their work pattern as borne out by respondent comments and implied in the literature 140, has been similarly depicted in Figure 4:4. Although hypothetical, this work pattern would be necessary for mothers of young children to combine domestic work with the equivalent of full-time employment, and it is obvious that such a work pattern would be fatiguing if sustained. It illustrates that some work was performed before preparing children for school with another burst of activity between escorting them and preparing lunch. There was a long break in the afternoon to collect school children, shop, prepare the evening meal and put children to bed. Further work was done in the evening. This work pattern is consistent with statements made by homeworkers on radio and television broadcasts 76 and although it stretched intermittently from roughly 7 am to 10.30 pm with no real rest periods only about 8.1/2 hours of productive activity took place. This

4 - 13
underlines Allen's assertions of neglect regarding the organisation of work and its payment and the mythical separation of home and employment for many women; 13% of her homeworker sample worked more than full-time hours. It also clearly illustrates the myth about homeworker autonomy in the choice of work scheduling. Figure 4:4 indicates the lack of communication that could have existed between male and female segments and between the secondary groups and the core of the workforce and management. Most of the indoor components could have been unaware that their employers used twilighters and homeworkers, since there were no points of contact unless twilight workers inadvertently arrived before the full-timers left. The only effective communication link for twilight workers would have been with the second crew of shift workers, who could act as intermediaries on the following afternoon. Furthermore, work patterns, job segregation, and the physical separation of shift workers and the female segments all suggest that there was little daily interaction between the male shift workers and the daytime groups since meal breaks did not coincide. The greatest level of communication and interaction was possible between full- and part-time females whose work operations were integrated.

Band-widths in Figure 4:4, which represent relative numbers, show that interviewed establishments were populated mainly by females during normal daytime hours; the H&K industries can therefore be justifiably termed 'female' industries.

4.3 Variations in Workforce Composition by Size of Establishment

The percentage that each group comprised in the 1532 total direct production workforce is shown below each box in Figure 4:3. Group percentages within each of the 25 establishments' workforces varied considerably. Tables 4.2(a & b) detail proportionate compositions according to size of establishment, defining 'large' as 30 employees or more as in sub-section 4.1.2.

Variations in the male segment can be interpreted by reference to male occupations (8.2.1 c) because, other than shift and full-time day knitters, workers in male groups were not substitutable for each other. The majority of male full-timers worked on later stages of production that required different skills, see Table 8.2. Tables 4.2 show that 8 firms (57%) in the large sector used a shift pattern compared to only 3 (33%) in the small sector. In the large sector, only two establishments (marked K in Tables 4.2) employing 14% of the worker sample, knitted on a full-time day plus overtime basis. Respondents indicated that "extended days" stemmed from
two influences: firstly, small establishments had insufficient men (e.g., 3 knitters) to run successful shifts systems since there was little room for manoeuvre; secondly, weak order books did not justify shift operation, but when orders increased shift systems would resume. Nevertheless, substantial overtime gave these factories considerable production flexibility and increased worker earnings.

Shift workers were employed in the large sector as knitters (190=60%). Allowing for the 30 knitters in establishments marked K, full-time males in the large sector (99=31%) performed operations other than knitting, but in the small sector, only a solitary part-timer was so engaged. Single and double stars in the DP column of Table 4.2 denote that these establishments undertook only the first stage or only the second stage of manufacture respectively. Males in second-stage establishments only worked full- or part-time work patterns.

In sharp contrast, all groups in the female segment performed the same series of operations, see 8.2.1(c), and these were undertaken only on a daytime basis. No shift system had ever been tried because as was stated, "It would be impossible to recruit sufficient females to work a shift system". This assertion is doubted by the author who had interview a local city bakery company for a different research project where shift women (some working nights) were in plentiful supply.

Table 4.2 shows that all large establishments used both full- and part-time females, whereas only 8 (73%) of the small establishments used full-timers and 10 (91%) employed part-timers. In both large and small sectors when twilight shifts were used, a shift system for knitting was also present, so causing premises already to be occupied. Twilight shifts were generally used by large establishments (4 out of the 5). Only two twilight workers were employed in the small sector and these were being introduced as an experimental alternative to homeworking. Conversely, homeworkers were used more heavily by establishments in the small sector (8=73%) than in the large sector (9=64%), and the 72 homeworkers comprised the highest proportion (43%) in the total female segment of the small sector in comparison to only 5% of the large sector. Of the 1014 female workers in large establishments, 534 (53%) were full-timers as against 31 (18%) in small companies, an indication that the larger firms more successfully attracted full-time females. A more even distribution is observed for the part-time groups, with 413 (41%) and 64 (38%) in the large and small sectors respectively, but in the small sector, part-timers outnumbered full-timers by more than 2:1.
The findings of this chapter can be summarized as follows:

(i) knitting machines were only used on a shift or extended day basis, all other machines being operated either on a full-time day basis or less;

(ii) employers switched between male groups only for the knitting operations, the majority of full-time day males performing work requiring skills other than knitting;

(iii) males could obtain non-knitting full-time jobs only in large H&K establishments;

(iv) 95% of shift working was in the large sector;

(v) female workgroups were heavily used by both sectors; they performed the same set of operations and could be readily substituted for each other;

(vi) large establishments more successfully attracted full-time females;

(vii) part-timers outnumbered full-timers by more than 2:1 in the small sector;

(viii) twilight workers comprised a very small proportion of all labour forces;

(ix) twilight shifts mainly existed in the large sector and were accompanied by other shift work patterns, but they did not constitute an integral part of those patterns because finishing jobs, not knitting operations, were performed by twilight workers;

(x) homeworkers were the largest female workgroup in the small sector.

These findings pose several interesting questions, for instance:

* Why do small establishments use more homeworkers?

* Why do part-time females outnumber full-time females in small establishments?

* Why are twilight workers found in conjunction with shift patterns?

Part C of the thesis considers many of the issues raised in this chapter.
CHAPTER FIVE - THE SUPPLY OF LABOUR

The nature of the topic dictated that, although the research was primarily concerned with demand, supply influences should also be considered since female workgroup formation could be influenced by constraints on market-available time. As interviewing was confined to employers (see 1.6), data presented in this chapter are somewhat limited in that each supply influence could form an entire research project, but here it is used to verify some preliminary assumptions and establish the background for the more central study of workgroup demand.

For a given level of residential development the size of the area tapped will affect the supply of potential workers. Sub-section 1.10.1 postulated that the distances employees might be prepared to travel would depend on their earnings and travel costs in terms of time and money. Workers with low earnings would travel shorter distances than those with high earnings. Constraints imposed by the roles adopted by women in the family unit were expected to limit the time available for market work thereby causing them to opt for employment with fewer than normal hours, times outside the normal workday, or away from the normal workplace, whereupon their earnings would probably be lower and this would impinge on the geographical area tapped and reduce the number of households from which labour could be drawn. From this it could be inferred that there would be smaller pools of such female workers.

Section 5.1 tests the validity of the prediction of differently sized external local labour markets (ELLMs) by analysing relative distances between home and work for each workgroup. Section 5.2 examines the levels of supply that employers stated they faced for each group and Section 5.3 investigates the suggestion that free or assisted travel to reduce employee costs could be a strategy for overcoming shortages of labour by expanding ELLM boundaries. Section 5.4 reviews differential recruitment methods as a further strategy for attracting labour and Section 5.5 examines the relaxation of the full-time (40 hours per week) stipulation. Inferences able to be drawn from these data are discussed in Section 5.6.

5.1 DISTANCE BETWEEN FACTORY AND RESIDENCE

Table 5.1 shows the number of workers in each group residing within specified distance bands around their factories. Sample sizes were unavoidably reduced due to insufficient time to extract information from
records. Whenever statistics had to be sacrificed, an assessment was obtained regarding home-to-factory variations by workgroup. Although less precise data, there was a general consensus that males travelled further than females. There was some indication of elongation of boundaries along bus routes as suggested by Goodman. The cumulative percentage distribution (Figure 5:1) confirms the prediction that workgroups were drawn from differently sized ELLMs. When compared with earnings levels (sub-section 8.3.1) an association with travelling distance was revealed; the higher the earnings, the larger the area tapped. For example:
(a) proportionately, males, who had higher earnings travelled further than the full-time females;
(b) part-time females generally travelled shorter distances than full-time females and although they received the same pay rates (see 8.3.1 (b)), their fewer average hours resulted in somewhat lower earnings;
(c) almost all twilight workers resided within 1 mile of their factories. Even though paid the same rates, earnings were lower than for other in-factory females due to fewer hours (see Table 9.33); and
(d) homeworkers were a special case. This sample of homeworkers expended neither time nor money on travel and so the entire costs were transferred to the employer (see Tables 9.1 & 9.2) who was in a position to determine his own ELLM boundary. Homeworkers were the largest female group in the 5-7 mile distance band. With regard to suggested segmentation within the homeworker group itself (see 12.2) it is possible that these were the 'primary', or 'core' homeworkers and that employers were willing to transport work out to them over considerable distances to obtain their skills.
It is therefore concluded that travel costs offset by higher earnings, were important determinants of the geographical area tapped when travel was funded by the employee. For employees who worked fewer than full-time hours, time spent in travel was possible earning time and thus each additional distance unit had a high marginal cost. For full-time employees, travel time fell outside normal earning times so the marginal cost of each unit of distance was not as high as for the less-than-full-time groups. A more detailed investigation of this using employee-specific data could more fully test such a hypothesis.
Employers were also asked the names of settlements from which they drew their labour. The settlements and numbers of commuters revealed that there was only a limited amount of mobility between the chosen area and the
neighbouring larger settlements of Coalville, Ashby-de-la-Zouch, Syston, and Leicester, but that companies were able to draw from the rural villages in the surrounding countryside. There were relatively more overlaps between the smaller settlements of Barrow, Shepshed and Sileby with the town of Loughborough itself, whose companies were able to benefit from rural bus services to a better extent that were the smaller settlements. Nevertheless, the general impression gained was that Shepshed and Sileby were, to great extents, self-contained occupational LLMs.

5.2 LEVELS OF GROUP SUPPLY

The findings of 5.1 suggest two antithetical deductions. Firstly, that groups willing to travel furthest will be in greatest supply because a larger number of households can be drawn upon, whereupon males and homeworkers will be in greatest supply followed respectively by full-time, part-time, and twilight females. The opposite inference is that employers resort to strategies to attract labour from further afield when faced with workgroup shortages and thus the sequence will be reversed.

To clarify the position regarding differently sized ELLMs respondents were asked to state the levels of supply; attempts to quantify these levels were made by collecting data on the average number of applicants responding to each advertisement and the number of unsolicited applications for jobs in each workgroup. Respondents stated both the present and the most usual situation prior to the oncoming recession which was resulting in slackening markets that were eroding the characteristic differences between the workgroups. They also confined their answer to 'suitable' applicants rather than to the total potential supply; the concept of suitability is considered in sub-section 9.3.1

5.2.1 Stated Levels of Group Supply

Figure 5:2 shows the levels of group supply that respondents claimed to face under usual circumstances prior to the recession. It was anticipated that they would have clear perceptions of the potential labour pools on which they could draw, but many "don't know" replies were obtained. These were occasioned by not having tested the ELLM due to their ability to retain existing personnel, and this indicated internal adequacy although the external market could have had excesses or shortages.

5.2.1(a) 40-hours-per-Week Males (Sm+Fm)

Responses for males were not as clearly defined as those for females.
Seven establishments (employing 183 males) stated that there were adequacies, and a further 10 (44 males) had not needed to test the market for a protracted period of time. One large factory (75 males) reported an excess. In contrast, 3 factories employing only 13 males in total reported shortages; it was therefore concluded that a general adequacy of male labour existed in these ELLMs. Since two of the firms reporting shortages were in the same settlement as the large factory with the excess, establishments in that settlement were examined as a case study.

This settlement had a long history of H&K and footwear manufacture and the establishment with an excess of males was the largest male employer in the sample. The respondent claimed that because hosiery and footwear industries predominantly employed women there was a shortage of female labour, but men had to travel away from the settlement to obtain employment; indeed, he rarely needed to advertise and when he did, "the factory was inundated with applicants who wanted to work nearer to home". This he believed was "the opposite of the national situation".

Of the 5 other establishments, 2 had reported supply of male labour to be adequate "at all times"; another that,"males rarely left their jobs"; these latter companies had not tested the ELLM recently. However, 2 small employers had reported shortages. In the first, 4 knitters were employed on a full-time day basis and paid by time-rates. Pay was relatively low for the basic 40 hours, but the men regularly worked 6 weekly hours of overtime to increase their earnings to parity with those of local companies. In the second, 3 knitters were employed on a full-time day basis manufacturing heavy gauge mens' outerwear on domestic-type hand-operated knitting machines, the proprietor admitting this to be "a repetitive and boring job". No overtime was available and average pay rates were low so this yielded particularly low average earnings. There had been a sustained high male voluntary turnover level, to counteract which the proprietor had "resorted to women" for the knitting operation whom he had found to be "more satisfactory and stable". Nevertheless, a limited number of the machines had been motorized and these had been allocated to men.

With regard to the fact that only 7 males were employed by the 2 establishments reporting shortages while 75 men worked for that with an excess it is apparent that there was, as claimed, an excess of experienced labour in that particular small settlement. It would appear that males were avoiding those companies reporting a shortage perhaps because of the
relatively poor pay to which the full-time day work pattern contributed. It therefore seems reasonable to conclude that males were showing themselves to be discerning in their choice of employer. One company had reported a shortage in the other small settlement and in this, an above average wage company, the proprietor held strong views about recruitment, selection and trade unionism and was the only employer who volunteered comments that he would penalize employees for joining the union by removing 'perks' and reducing high annual pay increases to the levels nationally negotiated. This employer was therefore probably creating his own shortage by setting over-stringent selection criteria relating to personal attributes.

A shortage of skilled knitters is regarded as typical of the industry generally. However, these findings clearly indicate that the potential labour available to companies can vary substantially within a confined geographic area. In this LLM, a company's supply of male labour appeared to depend on its wage levels, its location and its employment record. This underlines the importance of a reputation as a good employer as is postulated by cost-minimising IC theorists. The findings could also suggest that a solely full-time day working pattern was unpopular if it led to low earnings.

5.2.1(b) Full-time Females

Of 22 establishments employing full-time females two reported adequacies, while 3 small companies had not tested the ELLM. Seventeen establishments reported shortages of "suitable" workers. For these employers, 'unsuitable' referred to lack of experience, or to an obvious lack of ability when tested on factory machines, see also 9.3.1. It was thus concluded that there was a general shortage of full-time females.

5.2.1(c) Part-time Females

Of 24 establishments employing part-time females, one response was missing while two had not tested the market. Three respondents qualified replies by stating that the supply was only adequate for personnel with experience of certain specific specialized skills (e.g. linking) as is denoted by the abbreviation SK in Figure 5:2. All the respondents reported an excess of part-timers and it was concluded that a general excess of part-time females existed in the ELLM.

5 - 5
5.2.1(d) Twilight Workers

Only 5 establishments employed twilight workers at the time of survey, but 5 employers who used them intermittently also responded. All reported an excess, one respondent commenting that he need "never advertise for them", and another had been "bombarded with applicants" when he had been "foolish enough to put an advert in the paper". It can be concluded that a large excess of twilight workers existed in the ELLM.

5.2.1(e) Homeworkers

All establishments (22) that had ever used homeworkers responded to the question on homeworker supply. Only one made a "don't know" reply because ex-employees were always approached and the ELLM was never tested. Eighteen respondents indicated a greater excess than for part-timers. Several said that the excess was confined to the low-skill operations and 4 of these gave double and conflicting replies; i.e., shortages of skilled operatives and excesses of semi- and unskilled workers. Nevertheless, 3 companies experienced an adequacy of skilled machinists. It can be concluded that there was a general excess of homeworkers in the ELLM.

To summarize: males were generally adequate for requirements, but an individual establishment's supply could be affected by its circumstances. There were widespread shortages of full-time females, especially experienced machinists, but excess supplies of potentially suitable workers for all other female workgroups. However, for certain skilled 'female' operations there were general shortages of experienced personnel across all workgroups, a situation confirmed by the literature. However, these findings reflect assessments by respondents based on their experiences in these particular occupational ELLMs and, although reliably obtained, the responses gave no measures of the extent of the excesses and shortages. To remedy this, quantifiable questions asked.

5.2.2 Average Number of Applicants per Advertised Vacancy

This topic prompted a low response rate for several reasons. Firstly, not all companies advertised their vacancies. Secondly, a few had not advertised for labour in the recent past due to the depressed state of the product market. Thirdly, some found the response rate to advertisements varied with the season, so that it was inappropriate to give a quantitative reply; during summer holiday periods there were few applicants, but approaching the Christmas spending periods there were many. Consequently,
only from the larger establishments were quantitative replies received because they undertook more recruitment than did small companies.

With the exception of certain skilled operations advertising for both twilight workers and homeworkers was rarely necessary (see Table 7.1) since there was an excess supply. Consequently, there were no responses for these groups. Table 5.2 summarizes the answers which referred to all applicants and not just 'suitable' labour as discussed in 9.3.1. Although these statistics are inadequate for quantifying excesses and shortages, they complement the findings of sub-section 5.2.1 by indicating a greater supply of potential part-time than full-time females despite their smaller catchment area. The general practice of not advertising for twilight and homeworkers suggested an even greater over-supply of these groups than had been indicated by respondent evaluations.

5.2.3 Number of Unsolicited Applications per Week

This topic was easier to answer than that dealing with applicants per advertised vacancy. Statistics in Table 5.3 again refer to all applicants rather than to suitable labour, and most respondents commented that many of these unsolicited applications were from unsuitable personnel. Unsolicited applications from potential twilight workers were so infrequent that no statistics could be quoted. This was surprising particularly in view of the fact that all had been recruited via the informal channel, but it was probable that since so few jobs existed in the LLM there was little to be gained by a potential twilight worker approaching a company unless she knew that it was currently operating a twilight shift or recruiting for one. As a respondent for a company in a small settlement said;

"I only have to let it be known (i.e., to the existing daytime workers) that I'm going to introduce a twilight shift and by that evening I have as many women as I want".

The application rate for homeworking jobs averaged one per week, but very few of these were appointed. Again this was a lower rate than had been expected following the preliminary literature survey, but perhaps potential homeworkers were discouraged by constant rebuffs and ceased to approach companies other than those known to be recruiting. These findings complement the stated supply of full- and part-time females by showing that there were 3 times more unsolicited applications from part-timers than from full-timers, but the low number of applications for twilight worker and homeworker jobs neither confirmed nor denied the much larger potential supply of these workers.
Thus, although the attempts to quantify levels of supply were somewhat inconclusive they tended to confirm the stated supply levels reported in sub-section 5.2.1 which indicated that full-time females were in short supply while all other female groups were in excess.

5.2.4 Job Competition for Suitable Applicants
This section 5.2 has revealed a picture in which male supply levels were generally adequate although they varied slightly according to locations and characteristics of employers. There was a shortage of female full-timers while all other female groups were in excess. Since the corollary of employer supply is employee job competition these findings indicate that, under normal situations prior to the recession, males faced some competition in certain locations, but that full-time females had little competition for jobs. In contrast, there was considerable competition for part-time jobs, and data suggest that it was fierce for homeworking jobs, and fiercer still for twilight jobs, partly because there were few of them to be obtained.

5.3 PROVIDION OF TRANSPORT FACILITIES
It was postulated in sub-section 1.10.1 that an employer could extend the boundaries of his ELLM by providing transport assistance, but that this would only be adopted for 'preferred labour'. In order to investigate this, the transport assistance provided by sample companies was questioned.

5.3.1 Variety and Coverage of Transport Assistance
From the 25 interviewed establishments only 4 offered transport assistance to a few employees, because in these isolated instances, managements had perceived public transport facilities to be both infrequent and costly. Table 5.4 details the types of assistance given, the number of in-factory workers, and the average female earnings for each establishment. In view of the small sample size, no firm conclusions can be drawn except that transport provision was not a widespread strategy.

5.3.1(a) Free Private Bus Schemes
Three establishments each situated near the outskirts of a small settlement operated free bus schemes. Two were large factories (140 and 130 employees each), the other was a segregated 'female' establishment (58 women) with no competitors in its vicinity. The private bus schemes aimed to attract full-time females, and only 3 part-timers from all these
companies indirectly benefited by a 1-directional journey per day. No transport assistance was provided by these establishments for their males who worked shifts, nor for twilight workers.

5.3.1(b) Subsidized Transport

The smallest establishment to provide assistance had 50 employees and paid slightly below average wages. Like the companies mentioned in (a) above, it was situated in a small settlement served by poor public transport. Car expenses at the rate of 3 pence per mile were offered to full-time employees travelling more than 3 miles in each direction, and the scheme was intended to attract and retain relatively larger numbers of male knitters (i.e. 19 as opposed to 4 in comparable companies) to work full-time days plus overtime. It did not apply to part-time or twilight workers, and it appeared that no full-time females benefited from it.

The wage statistics provided by these 4 factories were either for skilled or semi-skilled labour and so they only indicate whether a company was an above or below average wage employer for that skill level. No meaningful conclusions can be drawn regarding the effect of wages on the need to provide transport, since two were above and two were below average employers. Transport assistance would therefore seem to be provided either to attract full-time females (in short supply) to large establishments in outlying areas, or to obtain knitters for full-time day operation (an apparently unpopular work pattern when it led to low earnings).

5.3.2 Effects of Transport Assistance

In order to assess whether an assisted transport strategy was effective in attracting full-time females, the composition of the female daytime workforces and distances travelled were examined as in Table 5.5. The establishment offering a mileage allowance was omitted from Sample A in Tables 5.5 and 5.6 because its stated aim was to attract male full-time day knitters and thus was irrelevant to the ability to attract females.

5.3.2(a) Ability to Attract Full-time Females

As seen from Table 5.5 the 3 establishments (Sample A) providing free transport were able to attract proportionately more full-time females (61%) into their daytime workforces than all other establishments (Sample B) that did not provide assistance (52%). However, a fairer comparison would be with only those establishments of similar size to those of Sample A; these are shown as Sample C in which full-timers comprised 57% of the daytime
workforce. Thus it appears that the provision of transport had only a slight effect on the ability to recruit short supply full-timers, but that larger establishments tended to attract proportionately more of them irrespective of the provision of transport facilities. This finding is consistent with that of Bosworth & Dawkins\textsuperscript{259} who found that large companies were less likely than the small firms to modify working hours to meet the needs of workers.

5.3.2(b) Ability to Expand External Market Boundaries

Table 5.6 shows travelling distances of full-time females in relation to the provision of a free private bus. These are plotted as cumulative percentages in Figure 5:3 to reveal that establishments providing transport (Sample A) were only able to persuade slightly more full-timers to travel from the outer distance bands than were similarly sized establishments in Sample C not providing such assistance. It would be unwise to draw firm conclusions from this small sample, except that these factories did not significantly expand the outer limits of their ELLMs. However, it is likely that as large factories in small settlements they were placed at actual disadvantage; if so, their policies of transport assistance might have been intended to place them on more-or-less equal terms with other similar establishments, but with limited success since two continued to experience shortages of full-time labour.

5.4 Use of Recruitment Techniques to Tap the Outer Distance Bands

In sub-section 1.10.1 it was postulated that an employer faced with labour shortages might indulge in costly wide-ranging recruitment techniques in attempting to extend the boundaries of his catchment areas, but that this strategy would be adopted for preferred labour only.

Relationships could exist between the proportions of particular groups recruited by the formal channel (Table 7.1), the distances they travelled (Table 5.1 and Figure 5:1), their supply levels (Figure 5:2) and preference ranking (Table 9.5 and sections 9.3.2(a) and 9.3.3). For example 51\% of males, who were the unchallenged preference for knitting operations, had been recruited by formal methods and were more heavily drawn from the outer distance bands than the other in-factory groups. Associations between recruitment channels, supply and travelling distance are further substantiated when male recruitment is examined more closely; of the 124 recruited informally from the EILM by 'word of mouth' methods, 110 were employed in the settlement where an excess of men had been reported and a
preference for working close to home had been expressed, see 5.2.1 (a). It is likely that many men would reside close to the large employer that recruited informally, and consequently, virtually all males from the outer distance bands would have been recruited formally.

Of the preferred full-time females who were in short supply, 75% had been recruited by the formal channel and their catchment area was the largest of the in-factory female groups. The relationship between recruitment and supply was masked for the part-time females due to the stated practice of initially advertising for full-time females (see 9.3.2 (a)), but on failing to attract them, appointing less-preferred part-timers from the many who replied to advertisements. This practice had resulted in a 44% formal recruitment level of part-timers. Nevertheless, their lower formal recruitment was accompanied by their having a smaller catchment area, with only 3 part-timers residing beyond the 5 mile distance band. The relationship is clearly shown for twilight workers, none of whom had been recruited formally. They were in large excess and were generally the least preferred group; only one twilight worker resided more than 1 mile from her factory. Of the homeworker group 12% had been recruited formally, but these were women who generally possessed short-supply skills. A further 12% were ex-employees (i.e. ex-full-timers who had left, usually for maternity). Absence of data for individuals prevented detailed analysis to determine whether the workers who resided furthest from the factories were those recruited formally, but it reasonable to assume that they were, and that the shortage of workers with particular skills was responsible for the relatively large catchment area for homeworkers.

It is concluded therefore, that employers adopted formal recruitment methods to reach outside their immediate localities when shortages of 'suitable' labour existed. Evidence suggests that those recruited formally were from outer distance bands, but precise inter-relationships between distance, earnings and recruitment could not be tested by the grouped data available. As males were drawn proportionately from further afield this might imply that earnings had the greatest effect on travelling distances.

5.5 RELAXATION OF THE 40-HOURS-PER-WEEK FACTORY SERVICE STIPULATION

Figure 5:4 is intended to illustrate the effects of relaxations of hiring standards on female labour supply within specified catchment areas. Graph AA shows the differences (positive or negative) between the numbers of part-timers and full-timers within the various distance bands, and Graph
BB shows the differences in numbers between full-timers and all the less-than-full-time workers. Graph AA shows that when only the hours stipulation was relaxed (Instrument U, Figure 13:1) there were numerically more part-timers than full-timers actually employed within a 4.3 mile radius of the factories despite their lower stated preference ranking in Table 9.5. Part-time numbers should be regarded as a minimum; had there been any full-timers seeking work they would have been appointed, but more part-timers could always have been recruited by all employers whereupon the excess would have been considerably greater than that shown. If, as postulated in sub-section 1.10.1, and evidenced by Section 5.1, part-timers did not travel as far as full-timers because their lower earnings and the opportunity costs of travel made it costly, then it can be assumed that beyond the 4.3 mile catchment area there would be similar excesses of potential part-timers over full-timers who wished to be active but who were unable to gain employment due to insufficient local opportunities. A large 'hidden' pool of part-time female unemployment is thereby suggested.

Graph BB of Figure 5:4 shows that, when 'daily work times' (Instrument V, Figure 13:1) and 'place of work' (Instrument W) stipulations were also relaxed, there was a majority of less-than-full-time workers in every distance band. In general, this numerical difference increased with the size of catchment area and the second steep rise of Graph BB was produced by homeworkers being the largest group in the 5 - 7 mile distance band.

5.6 INFERENCE TO BE DRAWN REGARDING INFLUENCES ON WORKGROUP SUPPLY

Although only the second-best choice (see 9.3.2(a)), the high number of part-time females employed (Figure 4:5) suggests that the relaxation of the 40 hours per week service requirement dramatically increased the female activity rate and had a greater influence on increasing female labour supply than did attempts to increase the size of the catchment area for full-timers.

It should be noted that two large establishments were missing from the sample because records necessary to provide reliable answers were not made available. Had these workers been included in the graphs of Figure 5:4 it would have resulted in 53 more full-timers than less-than-full-time workers being plotted, and this might have eroded some of the excess of part-timers over full-timers in the 4.3 mile catchment area of Graph AA. However, it was unlikely to have done so since discussions had revealed that both of these establishments were in the same neighbourhood which was well served by public bus services and that many of the full-timers used a particularly
good bus service to travel from settlements between 6 and 10 miles distant. To have added these workers therefore would merely have removed the second rise of Graph BB and might even have caused it to fall somewhat. Their inclusion might also have eroded the slightly beneficial impacts that transport facilities and formal recruitment methods appeared to have furnished, but these strategies were insignificant since so few employers adopted them.

Predictions of differently sized ELLMs were proved correct insofar as employers were able to recruit proportionately more workers from further afield in relation to higher earnings, but with the data available it has not been possible to distinguish between the different influences on distance travelled. However, the apparently large increase in labour supply provided by relaxations of the stipulations relating to hours, place and time of work suggest that the domestic role imposed severe restrictions on many females' ability to work full-time; hence full-timers were in short supply despite their larger catchment area relative to the other female groups, and despite the limited transport and substantial formal recruitment strategies adopted. This implies that the female less-than-full-time workgroups were formed largely as a result of supply side constraints rather than as deliberately intended policies of employers. Thus, employers had apparently adopted the most effective method of increasing labour supply since part-timers comprised substantial proportions of female segments.

Clearly, an employer's supply of potential workers will be affected by the levels of competition for those same workers. Although men were drawn from a relatively large LLM their supply was judged to be only adequate, and a virtual absence of less-than-full-time groups suggests that males were not subject to domestic role constraints. However, men had a wide selection of blue-collar employments to choose from whereas females were largely confined to H&K, footwear and box-making industries for manual jobs in the selected LLM, see section 2.4. It was probable therefore, that men's discernment, as highlighted by case studies in 5.2.1(a), deterred them from entering H&K industries due to fluctuating employment and earnings caused by the seasonal and cyclical variations in activity, see Chapter 15. Certainly, these findings highlight the need for employers to maintain a good reputation for even where there are potential excesses in the ELLM, a poor reputation can result in labour shortages.
CHAPTER SIX - CHARACTERISTICS OF THE FEMALE WORKFORCE GROUPS

Another essential preliminary was to establish who the workers were, given that workgroup differences existed with respect to home-to-factory distances. This chapter examines the female workgroups with the objective of identifying characteristic differences and addressing the suggestion of migrations of individuals among the groups in ways that could be associated with their life-cycles. Sub-section 1.5.3 suggested that the woman's life-cycle could be the motive force behind the formation of the less-than-full-time female workgroups. Should this be the case, then childless women, and older women whose families had grown independent, would find working full-time hours to be easier than women with dependent minors, and would thus dominate the full-time group. Women with dependents having claims on their time would comprise the part-time, twilight and homeworker groups. To assess this hypothesis, age and family commitments are considered in sections 6.1 and 6.2 respectively. Attention has been drawn to the presence of racial minorities in the homeworker group\textsuperscript{133}, and this could imply that employers demanded them due to their weak market position. Therefore, the racial composition of the workgroups is examined in section 6.3. Section 6.4 analyses the types and locations of residences for the following reasons: (i) to indicate the home background of homeworkers in order to assess the proposition that women are motivated into becoming homeworkers because they live in isolated locations\textsuperscript{275}; (ii) to provide evidence of mortgage commitments that could support a proposition of financial need following the debate on homeworker motivation; and (iii) to give an indication of the location of homeworkers' homes should a subsequent labour supply study be undertaken in this LLM. Section 6.5 investigates the level of 'moonlighting' (i.e., the multiple holding of jobs) thought to be practiced particularly by twilight workers and homeworkers, and section 6.6 draws conclusions regarding the life-cycle hypothesis of supply and the female workgroup composition.

Two respondents from large establishments were unable to give immediate answers regarding the number of employees in each sub-group, and time did not permit, nor was permission given, to consult records. However, they were willing to discuss worker characteristics in general terms, but chose not to answer specifically rather than mislead by answering incorrectly. Therefore, the total worker numbers to which
statistics in this Chapter relate were reduced by the numbers employed by these two establishments. There was no evidence to suggest that the characteristics of workers from these establishments differed from those for whom statistics were obtained; rather, extemporary explanations and remarks tended to indicate strong similarities.

Certain employers exhibited low levels of awareness about the personal details of employees, particularly those having hierarchical managerial structures that were relatively 'distant' from their employees. Most respondents were generally unconcerned about the 'outside' commitments of their workers and thereby demonstrated their 'production' rather than their 'person' orientations to the work situation. However, all respondents in the sub-sample could assess employee ages given the 10-year spans, although fewer of them had knowledge of family commitments, type and location of residence and moonlighting for which there were lower levels of response. Therefore, both relative percentage (i.e. the proportion of the full sub-sample reported in this chapter, including missing values) and adjusted percentage (i.e. the proportion of 'known' cases, omitting missing values) have been provided. Quoted percentages are always adjusted values unless otherwise stated.

6.1 AGE DISTRIBUTION

Table 6.1 details the age distribution for all female groups. It had originally been intended to classify into 5 year ranges, but pilot studies demonstrated that such detail was too difficult and time-consuming, so 10-year spans were adopted as a compromise. Figure 6:1 depicts for each female group a histogram showing the workers' age profiles. There were clear differences between the full-time workers' profile and those of the other groups, i.e. the 30 to under 40 year age span had fewer full-timers whereas it was dominant in all other groups. Another clear distinction of the full-time group was in the 16 to under 20 age span: there were 98 full-time females (24% of the group), the largest number in any span even though it covered only the 4 years between leaving school and age 20. A pro rata equivalent for a 10 year period would have been 245 workers. In contrast, there were no teenagers in either the part-time or twilight groups. The homeworker group possessed 3 teenagers (3%): 2 were still school children who had taken school day-release to gain practical factory training and had subsequently undertaken work at home as a preliminary to entering the factory full-time; the other was an unmarried mother working at home to care for her child.
The full-time age profile showed a slight drop in the 20 to under 30 span whereas all other groups showed increases; the 10-year spans probably concealed some crowding towards the lower age limit in the full-time group and the upper limits in the others, since these trends were emphasized in the 30 to 40 age range. Indeed, the 30 to under 40 full-time cohort displayed a large fall from 93 (23%) to 57 (14%) in contrast to the part-time group that displayed a spectacular threefold increase from 39 (11%) to 123 (35%). Twilight numbers also increased in the 30 to under 40 range, whereas homeworkers remained constant at 31 workers (28%).

The trend of loss from the full-time group was reversed in the 40 to under 50 span. Numbers in the full-time group increased from 57 (14%) to 67 (17%), whilst the other groups decreased: the part-time group falling largest from 123 (35%) to 91 (26%), the twilight group from 6 to 4 workers and homeworkers from 31 (28%) to 25 (22%). These reversed trends then continued into the 50 to under 60 age spans. All groups naturally showed a reduction in numbers after the state retirement age of 60, but it is noteworthy that 34 (10%) part-timers were still employed after that age compared to only 11 (3%) full-timers. It seems possible that senior citizens found the 8-hour factory day too demanding and responded by joining the part-time group, or it could have been a strategy for reducing earnings to below pension/taxation thresholds. The concentration of senior citizens in the part-time group could have implications for the impact of redundancies as is considered in 9.4.2 and 11.4.1.

These group losses and gains during the normal child-bearing and early rearing phases were to be expected from the life-cycle hypothesis, and the reversal of the downward trend in full-time numbers during the 40 to under 50 age span supports the notion of a migration through the groups as children matured and mothers were able to revert from part-time, twilight and homework employment to work more hours as full-timers. Figure 6:1 also indicates mean values that have been calculated by standard formulae The arithmetic mean, modal and median ages are given in Table 6.5; discussion of their significance is deferred to sub-section 6.6.1.

6.2 FAMILY COMMITMENTS

Pilot studies showed employers to have little knowledge of the ages and numbers of their workers' children so it was inappropriate to ask these questions. Nevertheless, many could differentiate between workers who had 'dependent' families who needed regular minding, and those either without families, or whose children were sufficiently grown-up to be left
unattended (herein defined as 'non-dependent'). Respondents were generally unconcerned about the 'outside' commitments of their workers but were nevertheless aware of family responsibilities, often grudgingly, due to requests for 'time off'.

Table 6.2 indicates that while the majority (69%) of the full-time female group had less intensive family commitments (i.e. 47% without children and 22% with older non-dependent families) a significant minority (31%) had responsibilities for young dependents. Respondents did not know what arrangements these full-timers made to reconcile the domestic and factory demands placed on their time, but several remarked on the comparative ease with which young Asian mothers could work the full-time work pattern, apparently due to their coherent extended family background traditions which enabled kin to mind dependent minors. The substantial minority of full-time women with dependent children could also be a reflection of the varied patterns of modern family life and responsibilities.

In contrast, the cohorts of working mothers with young dependent children were majorities in the 3 other groups (Pw=56%, Tw=100%, Hw=68%). Part-time and homeworker groups also had substantial minorities (35% and 28% respectively) of workers with non-dependent families, an indication perhaps that middle-aged women found the dual tasks of domestic role and 8 hour factory day too exacting and opted for less intense activity (or no market work at all). An examination of family commitments lends support to assumptions and speculations that the majority of homeworkers have young children69, 226, 262, 275; all had children except the two school girls previously mentioned and one with an ailing husband who worked from home to attend to his needs.

The strong attachment of women to the LM is underlined by the fact that nearly half of the female segment of this sub-sample (49%) had dependent families. It can therefore be concluded that the findings of this section are strongly consistent with the life-cycle hypothesis.

6.3 ETHNIC ORIGIN

The terms used by employer respondents in the pilot studies informed the main survey. The replies were as patterned in Table 6.3 which indicates the categories to which employers allocated workers. This shows that all the workgroups studied were very largely composed of women whose ethnic origin was defined by employers as "British", which to them meant ethnically originating in the UK. Thus the implication that those
workers whose ethnic origins were outside the UK formed a substantial proportion of the homework labour force (see Section 3.2 and 133,134) is refuted for this particular LLM because this sample of employers did not select such workers for either the twilight or homeworker workgroups.

6.4 RESIDENCE CHARACTERISTICS

6.4.1 Types of Residence

It has been assumed that manual workers who were owner/occupiers would have mortgage commitments and that the repayments of these could comprise substantial outgoings from family budgets. To gain insights into whether the twilight and homeworker groups of the study might have had pressing financial motives pushing them to undertake market work, a persistent theme in homeworking literature, attempts were made to collect information on their owner/occupier status. The taking of home ownership as an indicator of financial motivation was not intended to imply that those residing in LA housing or other rented accommodation did not find raising a family to be a financial burden and thus did not have similar motives; it was chosen as the only available measure given the source of data. It was expected that employee records would specify addresses and that this would indicate residential status because it was thought that employers would have full knowledge of the localities from which they drew their labour. Unfortunately, there was a low response rate on this topic which again reinforced the strong impression that employers involved themselves very little with the outside circumstances of their employees. No detailed knowledge was available for twilight workers, and this reflects their low level of integration into the factory labour force.

Table 6.4 shows group composition according to residential status. There were higher proportions of owner/occupier homeworkers (83%) and part-timers (67%) than full-timers (53%), but this could have been expected given the age distributions. It was likely that many of the full-timers who lived in rented accommodation would also be the younger workers in the two spans from school leaving to less than 30 age ranges, many of whom would be unmarried and living in parental homes. This same cohort would probably also closely coincide with the 47% without children, see Tables 6.1, 6.2 and 6.3. Neither would the young workers have had the heavy financial commitments that arose from home ownership and dependent families. Of the 53% of full-timers who were owner/occupiers there could have been a sizable overlap onto the 31% who had dependent children.

Thus, although individual worker statistics were unattainable there is
evidence on the basis of aggregate age, family commitments and residential status data to suggest that substantial proportions in each group, but particularly in part-time and homeworker groups, did have considerable financial and family responsibilities and therefore could have had strong financial motives pushing them into paid employment. These data suggest that there was a substantial minority of young full-timers without these financial and family constraints. Lack of twilight worker data is unfortunate because some respondents commented, in response to other topics (9.6.1), that twilight workers displayed the greatest financial incentives of all workers.

6.4.2 Location of Residence

No respondent was aware of any employee or homeworker who lived in a truly isolated situation. All lived within or on the outskirts of established settlements although some resided in small country villages having no industry. However, many of these settlements suffered from infrequent or relatively costly bus services, so that indications in the literature that homeworkers undertook work at home because of inadequate public or private transport were neither confirmed nor refuted.

6.5 MOONLIGHTING

The issue of moonlighting was explored because the IDS reports 142,143 had shown some twilight workers also to have daytime jobs and this had been confirmed by the pre-pilot study, see below. Several respondents were unaware of any multiple job holding among their workers as this information was seldom divulged. Thus, there were no known multiple job holders among the twilight workers. However, most respondents suggested that males in their late 20s with family and mortgage responsibilities more frequently held additional jobs than did older men or factory women. Two such young men were known to serve in local bars and others were suspected of having second jobs; similar evidence had been furnished by the pilot study. In the female groups, one young full-timer was known to work as an evening waitress and one part-timer also acted as a homeworker for the same employer.

Three homeworkers worked for more than one manufacturer; indeed one employer had employed 6 such multiple-job holding homeworkers during the previous 7 years, but indicated that he had no strong objections. In contrast, the pre-pilot respondent had revealed annoyance when this topic was raised, admitting that, "it sometimes did occur", and indicating that,
"those homeworkers responsible would be terminated if discovered... permitting homeworkers to use the company's machine for other work was assisting competitors". Consequently, this practice was likely to remain a closely guarded secret, particularly when the employer was perceived as antagonistic, so although 9 (6%) homeworkers could be identified out a grand total of 136, this figure was likely to be an underestimate.

In short, moonlighting did not appear to be a widespread practice and the limited amount that did occur was most prevalent among young males and homeworkers. In the light of the redundancy, allocation of work (9.4) and earnings data (8.3.3), the practice of homeworkers' multiple job holding was probably a strategy for overcoming variable work supply in an attempt to ensure continuity of earnings, and/or to increase weekly income. If so, it provided further evidence to support the view that homeworkers had real need of their incomes.

6.6 CONCLUSIONS ON WORKGROUP CHARACTERISTICS

In this LLM the claim (section 3.2) that racial minorities were heavily represented in the homeworker group has proved to be incorrect. Data on family status, home ownership and moonlighting support the often articulated contention that homeworkers need the money earned from homeworking to supplement family budgets. The suggestion that many homeworkers had no choice but to work from home due to isolated circumstance or poor transport facilities could be neither supported nor refuted. Thus, the general picture to emerge from this demand-side generated supply data is consistent with supply-side research findings in that child-rearing was an important influence on the search for less-than-full-time jobs. Furthermore, these data have revealed additional reasons for undertaking homework, such as care of the sick, and single-parenthood, see also Jordan275 and Allen69.

6.6.1 The Life-cycle Hypothesis of Female Labour Supply

Referring again to Figure 6:1, the full-time group was characterized by a bi-modal age profile which had its first mode at age 19.8 years before the normal childbearing phase began, and its second mode at age 51.2 years after the normal childrearing phase had ended, see Table 6.5 for mean statistics. Its low point, at 37.8 years, almost exactly coincided with the modes of all other groups. The part-time workers' age profile was a positively skewed distribution with a modal age of 37.2 years and that of twilight workers was 37.1 years which supports the suggestion that twilight
working was an outlet for women who could not meet the demands of daytime factory employment. Homeworkers' modal age was 36.5 years, but nevertheless, 59% of the group were younger than age 40 as opposed to only 46% of the part-time group. The comparatively high percentage of homeworkers in the 20 to 30 age range, and lack of increase in the 30 to 40 span, when part-timers showed correspondingly large increase, lends weight to the speculation that they might transfer to the part-time group.

Thus, the profiles provide evidence to support the life-cycle hypothesis of a migration from the full- to the less-than-full-time groups during the child bearing and rearing years and then a reversal of this trend after families had become independent. Expenses occasioned by home ownership and growing families could have furnished pressures encouraging substantial numbers of part-timers, twilighters and homeworkers to undertake productive market work. It is concluded therefore that supply side constraints were important influences on female workgroup formation.

While differences in the shape of the female age profiles and other issues considered in this chapter suggest that mobility occurred between the groups, respondents indicated that this mobility did not directly occur within establishments, see sections 8.2.2(b) and 8.2.5 which examine inter-group mobility.
CHAPTER SEVEN - KNOWLEDGE, RECRUITMENT AND THE INTERNAL MARKET

Classical and Neo-classical price/auction theories of LM functioning generally presume that both employers and employees have access to information about possible opportunities and freedom to exercise choice among them; the mobility prompted by this knowledge tending to equalize rewards. Empirical studies have examined LLMs and revealed that often information, knowledge or choice can be very limited; for example, Blackburn & Mann\textsuperscript{9} concluded that there were few opportunities or incentives for the exercising of choice by male manual workers in Peterborough. If LMs are structured into non-competing groups as predicted by SLM theorists, then virtually no mobility between LM segments will be expected in order to sustain persistent differences between them. Both information and knowledge are pre-requisites of mobility, so lack of these is consistent with SLM theory, although not necessarily a condition of lack of mobility. Recruitment processes that tap the internal, external and extended internal markets are therefore relevant to the issue of market structure since ILMs are held to be influential in creating and sustaining market segments, see section 2.1.

This chapter examines recruitment practices and levels of knowledge in order to assess the relevance of different theories of market structure. Section 7.1 examines and assesses methods of recruitment, and sections 7.2 and 7.3 consider the levels of information and knowledge pertaining in the LLM. Section 7.4 evaluates the merits of formal and informal recruitment channels within the context of identified obstacles to reliable information, and then examines the relative importance of these channels for workgroup recruitment. Section 7.5 considers implications of the findings for labour market theories.

7.1 CHANNELS OF RECRUITMENT

Table 7.1 shows that 6 different methods had been used to recruit the workgroups. These methods have been classified into formal and informal channels of recruitment. Employers using the formal channel tapped directly into the ELM whereas recruitment via the informal channel often relied on the intermediary services of existing workers and tapped the EILM as described by Manwaring\textsuperscript{18}. Table 7.1 shows that internal recruitment was absent. This arose because upgrading opportunities were rare and promotion extremely limited or even unwanted (section 8.2.2(a)) so supervisors were
usually recruited from the ELM by newspaper advertisements. Hence, Table 7.1 indicates that the ELM and EILM routes were well developed but that the ILM was undeveloped, there being entry ports for every job. The absence of an internal market indicates that one of the support mechanisms for a segmented structure was absent.

7.1.1 Employers' Uses and Perceptions of Formal Recruitment Methods

The formal channel comprised both Public and Private Employment Services and the employer's own advertising initiatives. The informal channel was composed of 'word-of-mouth' contacts via established worker referrals, the contacting of ex-employees, the use of waiting lists and unprompted "door-callers." Neither internal advertisements nor sponsored promotions were used. There are 73 values for males missing from Table 7.1, but discussions relating to these indicated that data presented resembled practices in missing establishments. Most of the points made relate to women finishing operatives as the primary focus of the study, but many of these are equally applicable to men.

Table 7.1 reveals that establishments recruited very low proportions of their full-time (6%) and part-time (1%) females from the Public Agencies (i.e. DE Job Centres and Careers Services) and that there was general dissatisfaction with the Job Centre's achievements, for as respondents explained, applicants were "mostly unsuitable", see section 9.3.1 for a discussion of suitability. However, the Job Centre had the merit of offering free services which were appreciated by many employers.

Job Centre efficiency was perceived as depending heavily on rapport and understanding between establishments and individual DE Officers, but it was impracticable for the DE Officers to pre-screen and reject those applicants without the required skills, since people often untruthfully claimed experience, see section 7.4 for the association of selection criteria and Job Centre unpopularity. More satisfaction was expressed with the Careers Service which directed school leavers into the industry since no prior experience was expected; 22 of the 34 full-timers appointed via the Public Agencies having been recruited by this route (Table 7.1).

Only one establishment had recruited daytime workers via a Private Agency, but as with Job Centres, it was inadequate in filtering unsuitable personnel. All other respondents considered Private Agencies to be extremely costly, and deliberately avoided them.

Majorities of males (51%) and full-time females (60%) had been recruited via local newspaper advertisements as had a substantial minority
(39%) of part-timers. A minority of homeworkers (11%), who possessed short supply specific skills had also been recruited by this method, but it was generally very unpopular for unskilled homeworkers since respondents were inundated by applicants and resented the time spent in screening procedures. Privately placed newspaper advertisements had the advantage of making applicants personally responsible for approaching that employer, unlike an approach from the DE. Apparently fewer false claims regarding acquired skills were made because better quality recruits resulted and less time was wasted on unsuitable applicants. This made the employers' own advertising initiatives the most successful and popular formal method of recruitment.

7.1.2 Employers' Uses and Perceptions of Informal Recruitment Methods

Majorities of the part-time, twilight and homeworker groups (52%, 93% and 76% respectively) had been recruited via the informal communications networks existing within the LLM. These, employers called the "word of mouth" methods because most functioned by the verbal passing of information between the employer, his employees and their families, friends and neighbours. Employers often deliberately took the initiative and asked for recommendations, but employees frequently had prior knowledge of job vacancies for they were aware of the pressures of work. Thus, employers were sometimes confronted by applicants before they had made it known they wished to recruit. The steady stream of letters and door-callers who arrived as a result of this "inside information", augmented by those who "just called in on spec", presented a cheap supply of applicants to be tapped, but few unprompted enquirers possessed short supply skills, and most were regarded as unsuitable. Other strategies were to post 'situations vacant' notices on front doors, or in nearby shop windows, but these were still regarded as 'word of mouth' referrals since information was usually transmitted verbally within the locality.

Word of mouth methods were perceived as helping the employer to overcome information obstacles (section 7.2) and assisting in the more accurate assessment of applicants. For instance, existing employees could often provide information that was otherwise unavailable, such as past work habits, the applicant's general performance relative to their own, qualitative assessments of commitment to work, ability to integrate into the workplace, and reliability for working unsupervised. Furthermore, informally recruited applicants often resided close to the factory and this was perceived as an advantage. Existing employees already appreciated the
employer's requirements and preferences, so they acted as pre-screening devices by which applicants with unsuitable characteristics were filtered out. Employees were seen as unlikely to risk their own reputations by recommending people with poor workmanship or unpleasant personalities. The maintenance of a pleasant factory atmosphere was important and (see 9.3.1 and 10.1) employee referrals were seen as helping to achieve this since employees did not recommend those with whom they could not work. Generally, employers perceived such recruits to be less likely to quit at an early stage than persons attracted from afar with no prior means of obtaining qualitative information, see below. However there were risks associated with EILM recruitment and great care had to be exercised during selection to ensure that "cliques of families and friends" did not accumulate to create factions that vied with each other.

From a supply viewpoint, applicants from the EILM could obtain some information from their contacts about the relative level of and variability in earnings, the quality of personal relations, the complexity of the product and the factory's physical environment: all shown to be areas of uncertainty in section 7.3.

Waiting lists were not widely resorted to, but where they were, they usually consisted of names of well-liked unprompted applicants with either specific short-supply skills, or of individuals with the 'right' personal attributes for whom no opening was available at the time of call. Waiting lists usually accumulated for groups in excess supply. Applicants who took the initiative in seeking their own employment opportunities commended themselves to employers who generally frowned on individuals relying on job openings from the Public or Private Agencies.

Of the homeworkers, 12% had been recruited from among ex-employees, in contrast to less than 2% of other groups. This was widely regarded as "the most satisfactory recruitment method for a homeworker" because productivity, skill level, quality of workmanship and the personal attributes of reliability and commitment to work were well-known, and a good understanding between employer and homeworker was already established. Without these the ex-employee would not be approached or appointed if she applied for a homeworking job. Since homeworkers had to work unsupervised it was crucial to employers that these qualities were satisfactorily met.
7.2 OBSTACLES TO RELIABLE KNOWLEDGE ON THE DEMAND SIDE OF THE LABOUR MARKET

On the demand side of the LLM employers faced important obstacles to reliable information about the quality of potential employees. Throughput of work was of prime importance since production was their 'raison d'être', see 10.1. Hence, of great concern to all employers was productivity which varied greatly among individuals, see 9.6.1. Most employers perceived this variation to arise from two cumulative influences: (a) inherent aptitude, and (b) commitment to work.

No employer had any satisfactory means of determining the inherent aptitude of an applicant, particularly that of an unknown recruit from the ELM. It was asserted that operatives' natural abilities presented surprises even after many years of management experience in the industry. To overcome this obstacle to reliable information, two strategies were adopted either singly or in combination. Applicants were first tested for manual dexterity during the selection interview, particularly for skilled machining jobs, and then appointees were introduced on a temporary basis for them to be assessed during a trial period of 4 - 6 weeks.

Employers attempted to assess commitment to work from general appearance, bearing, good employment record, age, marital status, presence of children and financial need which in turn was assessed from comments, background and family composition. For example: a neat appearance might indicate a tidy approach to work; an applicant's bearing indicating whether she would chatter or be argumentative and thereby loose production; a bad employment record would always be taken to indicate unreliability and an early quit. Responsibilities for children taken to indicate paramount personal commitments which might lead to absenteeism and unpunctuality. Financial need was seen as an advantage to the employer because it suggested high productivity on piece-work jobs, but this had dangers in that it could also result in low quality workmanship if rushing occurred, and so an applicants' assessed reliability was an important consideration.

Each employer therefore had his own 'rule of thumb' devices for anticipating an applicant's performance and attachment to the company, but these methods rarely made allowances for individual variation. However, the adopted strategies were only partially successful in predicting the quality of appointees, for wide productivity variations among employees became apparent even after the trial employment period had been successfully completed.
CHAPTER 7 KNOWLEDGE, RECRUITMENT AND THE INTERNAL MARKET

7.3 OBSTACLES TO RELIABLE KNOWLEDGE ON THE SUPPLY SIDE OF THE LABOUR MARKET

Many prospective employees were generally not deprived of information about job opportunities as is evidenced by the widespread use of informal recruitment methods, although particular individuals could lack knowledge of specific openings when vacancies were filled before information disseminated. However, lack of relevant information about terms and conditions of employment existed to complicate a comparison of prospective employers, this being the obverse of employers' inability to assess applicant productivity. Uncertainty stemmed from variations within and among establishments, but the major obstacle was the piece-rate method of payment which caused uncertainty about future earnings, the majority of workers (84%) being paid by piece rates (Table 4.5). Even very experienced applicants had problems in predicting from quoted piece prices what weekly earnings would be, average earnings were similarly unhelpful as applicants were unaware of how their own productivity compared with that of other workers, see section 7.2. Furthermore, being fashion industries, company products were unique, jobs varied by company, by product, by style and in complexity. Quoted piece rates therefore meant little until experience had been gained of the work's complexity. In addition, manufacturing materials could present machine and handling difficulties and these reduced normal productivity causing further uncertainty. Thus, for a variety of reasons, an employee's earnings could vary considerably even when identical effort was applied, and this had led to both wage drift (see, 8.8.1) and to relatively high union involvement in wage disputes (see 11.2.2).

Further obstacles to accurate earnings information arose from variations in the divisions of labour, large firms being characterized by more divisions than smaller ones, see section 4.4.2(a). For instance, an applicant might in her previous job have performed operations that in the new factory were divided into several tasks undertaken by different people, or vice versa, and so quoted prices meant little when different jobs were being compared. Faced with all these complications, even the experienced had few bench-marks by which to pre-judge potential earnings, while inexperienced recruits had additionally the uncertainty of their own aptitude while recruits from the ELM also faced uncertainty about interpersonal relationships and could have doubt whether they would find a happy working atmosphere.

The above obstacles were particularly acute for female groups whose productivity, in the prevailing state of job segregation, was determined by
manual dexterity. Male knitters were slightly less affected by uncertainty since their machines, being largely automatic, made assessment of output more reliable. Nevertheless, the age and maintenance of machinery could affect ‘break-down’ time, machinery could be of a different type or model to that previously used, there could be a different number of machines to mind and the product range would be different.

Further obstacles arose because not only were earnings affected by piece rates, product styles, complexity of operations and the divisions of labour, but also varied long-term due to fluctuations in the factory activity. Employees concerned with annual earnings would need to know the factory's regularity of orders; information that was not readily available to recruits from the ELM, but in any case, past regularity of orders did not guarantee it in the future. Therefore, neither short- nor long-term earnings could be accurately predicted.

7.4 CONCLUSIONS ON THE MERITS AND RELATIVE USES OF CHANNELS FOR GROUP RECRUITMENT

From a demand viewpoint, the formal channel had the merit that information was transmitted to a wider locality and was thus likely to reach a wider audience than that achieved by disseminating information informally through the EILM. This could have had the effect, ceteris paribus, of drawing on a larger geographical area than was tapped by local communications networks, see 5.1. Such an enlargement would be particularly desirable for augmenting workgroups for which there were shortages of suitable potential workers (i.e. full-timers), but labour drawn from relatively far afield rarely had prior connections with the company, and thus the obstacles to reliable knowledge were manifest.

The informal channel had the double merit of providing more qualitative and better quantitative information than the formal channel for both employer and employee. This assisted each to partially overcome the obstacles to reliable knowledge before appointment which apparently helped to reduce voluntary turnover, see below. However, the EILM was inappropriate when there were insufficient people with access to the local communication networks to satisfy demands.

The merits and de-merits of the channels suggested that formal methods would be used when there were shortages of labour in order to extend the geographical area tapped; the informal channel would be used for all groups for which plentiful potential supplies of suitable labour existed, because informal methods were inexpensive (9.2.2) and provided more
reliable prior knowledge. Figure 7:1 depicts the relative importance to
group recruitment of the formal and informal channels and supports this
hypothesis. It shows that the formal channel was important for males who
were generally only adequate for requirements and particularly important
for full-time females who were in short supply. The practice of advertising
only for specific short supply homeworkers is further evidence for the
association. The informal channel was the most important for all other
female groups for which there were excess supplies. For a fuller
discussion of the supply/recruitment relationships see section 5.4 which
provides evidence to support the short supply/formal channel link.

Selection criteria also have important associations with recruitment
methods. For example, previous experience was the most important
requirement for daytime females (Tables 9.3, 9.4), and this gives an
insight into the unpopularity of both the Job Centres and Private
Employment Agencies that were unable to verify the previous experience and
skill claims of applicants. Possession of the 'right' personal attributes
was a more important factor for twilight workers and homeworkers who had to
work unsupervised (Tables 9.2, 9.3), and so informal methods that furnished
qualitative information were particularly appropriate for them.

Comparisons between recruitment and voluntary turnover data (see 9.6.6
and Tables 9.28 and 9.29) suggest that a negative association generally
existed between the informal channel and voluntary turnover. Twilight
workers were an exception to this relationship, but there were few and
conflicting turnover results for this group. Moreover, several respondents
claimed that twilight workers soon became, "disillusioned with working in
the evenings", and "they don't always realize what they have taken on",
because given their family commitments, they also needed child-minding
assistance from others. Twilight workers appeared to give up their jobs
more readily than members of other groups, see 9.6.6(b), and could have
been a special case. Most full-timers had been recruited formally
(74.5%) and they had high relative turnover, whereas part-timers and
homeworkers, who were more heavily recruited by informal methods (see
comment on part-time recruitment, section 5.4), displayed lower
turnover. The lower turnover/informal recruitment association probably
occurred because employers and employees were better matched by informal
methods by virtue of improved prior knowledge. The smaller geographical
area drawn on for part-timers (Figure 5:1) meant that travelling time was
reduced which could have been an important element. Caution should be
exercised with the 'better matching' hypothesis however, because the
relationship could have stemmed from excess supply which influenced employees to retain their jobs even when dissatisfied because they perceived difficulties in obtaining alternative employment.

Recruitment channels also provide confirmation for the preference ranking implied by actions (Table 9.20). Employer advertisements, being an expensive recruitment method, were used more heavily for the preferred full-timers.

It is concluded therefore, that complex inter-relationships existed between the levels of supply, the importance of selection criteria, recruitment methods, recruitment costs and voluntary turnover. For example, when levels of potential supply permitted skill requirements to be satisfied, then personal characteristics became the most important selection criteria (section 9.3.1(b)), and thus the informal channel became the most appropriate by being able to furnish better personal attribute information. Further, the informal methods were inexpensive which appealed to cost-minimisers. It is further concluded that the formal channel was inferior to the informal channel which provided more reliable prior knowledge for both employer and employee, and that consequently, employers used informal methods until the available supplies of suitable labour was exhausted, after which they resorted to the more costly formal methods.

7.5 IMPLICATIONS OF THE LEVEL OF KNOWLEDGE FOR MARKET STRUCTURE

Table 7.1 shows that almost half of the worker sample (46%) had been recruited via the informal channel from the extended internal labour market and had therefore obtained access to both quantitative and qualitative information about job opportunities prior to selection, even though a considerable uncertainty about terms and conditions of service could have persisted. Open approaches to the external labour market via formal recruitment methods were also well developed for particular workgroups, but internal transfer was very limited and so H&K companies were without internal labour markets that functioned to provide labour.

Clearly, in this industrial LLM well established communications networks for disseminating job opportunity information were operating and it can therefore be concluded that the low levels of direct mobility (see 8.2.2) between the segments and workgroups were not caused by a widespread lack of information. This situation suggests that obstacles other than lack of reliable information were preventing workgroup mobility and the elimination of job segregation by sex. Divide and conquer\textsuperscript{67}, or rather divide and prosper, tactics could be indicated.
CHAPTER EIGHT - MARKET STRUCTURE

8.1 THE SIGNIFICANCE OF MOBILITY AND STRATIFICATION FOR MARKET STRUCTURE

Neoclassical theorists, whilst believing that competition for jobs is a leveller, accept that a range of wages can arise from differences in acquired human capital and from the advantages and disadvantages associated with jobs; the balance of these job-associated advantages and disadvantages was termed 'net advantages' by Adam Smith. After allowing for skill/education etc., jobs with low wages should have compensatory net advantages, and vice versa, if the neo-classical price/auction model of market operation is valid. Thus a stratification of net advantages should counterbalance those parts of the stratified earnings structure which cannot be explained by skill differences.

In the SLM model, a stratified structure of earnings is a necessary though insufficient condition; non-competing worker segments should exist and be accompanied by insufficient mobility across segment boundaries to erode earnings and conditions of service differentials. If mobility occurs then boundaries can be eroded by competition as in the neo-classical model and the market will not be permanently segmented. Thus, mobility, or the lack of it, and the structure of earnings and net advantages are important indicators of market operations and the appropriateness of LM theories.

Mobility can be influenced by both pull and push factors. It may arise because:

(a) employees perceive a demand for their services and have opportunity to exercise choice of employment; this is a pull factor; or
(b) employees are dissatisfied with their present employment and desire a change; this is a push factor.

Mobility can take two basic forms. It can be:

(c) mobility within the labour market, i.e., both intra-firm or inter-firm, the latter being between firms in either the same or different industries and/or regions; or
(d) mobility into and out of the labour market by variations in activity.

In order to determine the structure of this industrial LLM, these various dimensions of mobility are considered in Section 8.2. Earnings are examined in Section 8.3 to: (a) discover the earnings structure; (b) reveal what factors influence their levels; and (c) investigate the possibility of segmentation. Male knitters are taken as the frame of reference for
comparison with the women. Terms and conditions of service are examined in 8.4 to discover whether stratification of net advantages occurs. Section 8.5 draws conclusions on market structure.

8.2 MOBILITIES

8.2.1 Job Mobility
This section in addressing job discrimination attempts to establish whether particular workgroups, or categories of worker were permanently denied access to certain jobs.

8.2.1(a) Job Segregation on the basis of Gender
All establishments had clear-cut sex-typing of jobs. Men operated the large, automatic, motorised knitting machines which were always implicitly, and often expressly, regarded as a male preserve. The variety of dextrous, often manual, finishing operations were considered to be female jobs. Table 8.1 shows that of the 1532 direct production workers only 29 (i.e. 9≈2% of males and 20≈1% of females) had managed to break into the other sex's traditional domain.

Female knitter data requires explanation since it appears that they were more successful in crossing segment boundaries. Whereas men used highly productive, automatic machinery which permitted simultaneous minding of several machines or knitting heads, 16 of the 19 women knitters (i.e, 9 full-timers, 7 homeworkers) used unmotorised hand-operated machines of the Griswold (small circular) and 'hand-flat' domestic types capable only of very low productivity rates. It had proved difficult to retain men on the hand-flat machines inside the factory, the particular respondent, who had resorted to women knitters for such low productivity work, considering these machines to be inferior to the more usual automatic powered type. Only 3 women full-timers operated motorised, circular, interlock machines used for underwear manufacture in a company specializing in heavier gauge fashion outerwear, while one part-timer worked as a semi-skilled warehouseperson.

Proportionately, men had been slightly more successful than women in breaking into the other's job market. Running-on and pressing were dexterously skilled women's jobs performed by one male Asian full-timer and one male British part-timer. Pairing, folding, box-assembly and inspection were relatively semi-skilled operations performed by 4 full-time males for whom no personal details were known, and 3 part-time men believed to be over state-retirement age. Additional qualitative material revealed that
a further company (not shown in Table 8.1) had employed 2 youths for a short period in the past on lace-attaching, and another sometimes used male part-time students during vacations for folding and packing operations.

These data indicate that males performing female operations tended to be minority group workers from retirement age or student categories. Most women 'male' job-holders were doing jobs seen as "inferior". With respect to mobility between male and female jobs therefore, it is concluded that job segregation by gender was almost total.

8.2.1(b) Job Segregation on the basis of Race and Age

No clear-cut evidence emerged to indicate deliberate race or age job-segregation, although among the few men who performed 'female' jobs there was some indication of bias towards age minorities (8.2.1(e)). In 1972 a Committee of Inquiry into a dispute between employees of the Mansfield Hosiery Mills Limited, Loughborough and their employer reported that Asian bar-loaders had been denied opportunity to enter knitting jobs. This Inquiry may have discouraged discriminatory practices on the basis of race.

8.2.1(c) Job Segregation on the Basis of Workgroup

Table 8.2 depicts an 'either/or' situation in which employers opted either for a shift or for a full-time day pattern for their knitting processes according to their personal preferences and the state of order books. All shift workers (including bar-loaders, see 4.2.1(b)) were linked to knitting, and in addition, 48 full-time men performed knitting on an 'extended day' pattern whereby they worked an 8-hour day with additional, often substantial, amounts of regular overtime. Within all establishments male workgroups were segregated by task and were therefore not substitutes for each other. Most men full-timers in companies having shift systems were dyehouse and distribution personnel who were thereby linked to the finishing stage and thus to the women's daytime work pattern.

Conversely, each female workgroup was substitutable for the others since all were used for the range of finishing operations. Viewed across establishments, job segregation was absent, but it did occur within establishments by certain jobs being allocated to specific workgroups. Table 8.3 shows that job segregation was very low for the indoor component, hand-machine knitting in one company (see 5.2.1(a) and 8.2.1(a)) being the one operation performed only by full-timers. In no other establishments were full-timers, part-timers or twilighters deliberately excluded from any job. In sharp contrast, 10 (40%) establishments used only homeworkers (75 =

8 - 3
59%) for certain, largely semi- or un-skilled, operations: 7 companies did all their semi-skilled hand-finishing work on an outwork basis; two undertook the highly skilled linking operations externally, and one manufactured high quality, distinctively styled socks on unmotorised small-circular knitting machines. Two of the 3 companies offering skilled work claimed not to have deliberately sought exclusivity, but of having failed to attract internal recruits; however for exclusive homeworkers (see Appendix II) there was no adequate frame of reference for comparison of earnings, see 8.3.3.

8.2.1(d) Conclusions on Job Segregation

Certainly, job segregation was widely practised on the basis of gender, and some segregation also occurred within the male and female segments. When the male segment is viewed in aggregate, both shift and full-time day workers performed knitting operations, but within establishments having both shift and daytime men, the shift workers were the knitters while the daytime workers performed other work. Within the female segment, segregation did not occur with respect to race, age or indoor workgroups, but in sharp contrast, a majority of homeworkers performed mainly semi-skilled jobs not undertaken inside their factories. To ascertain whether these varying types of job segregation derived from job discrimination or merely from lack of opportunity to recruit otherwise, employers' choice possibilities were assessed.

8.2.1(e) Employers' Choice Possibilities

With respect to selection of women for men's jobs, it is probable that of the 565 women working full-time some could have reliably undertaken regular overtime or shift work to achieve the higher earnings associated with knitting processes. Indeed a few young full-timers were "as anxious as the men to work overtime", (9.6.8(b)). It would thus seem feasible to have selected women for knitting jobs, although training would have been needed. An element of job discrimination is therefore implied.

Regarding the selection of men for women's jobs, the consensus of employer opinion was that males were generally able to obtain higher earnings elsewhere and would have had little incentive to break into the women's sector of the market. This argument raises speculations as to why those men doing women's jobs were from race and age minority groups, and implies that they were excluded from better jobs, but insufficient data are available to pursue this topic further. Selection of homeworkers for
skilled operations was clearly possible since several establishments had done so. Nevertheless, in a substantial minority of cases they were deliberately confined to low-skill jobs. This suggests that considerable job discrimination on the basis of skill operated against them. That shortage of appropriate indoor workers was given as the reason for certain skilled operations being performed by homeworkers provides further evidence to support this conclusion.

8.2.1(f) Job Discrimination

Employers characterized women as being "unwilling to", "unable to" or "prohibited from" working shifts. The former explanations were exemplified by pointing to the number of part-time women who were "unable to work even normal full-time hours". When knitting was a daytime activity it was asserted that:

"the setting of machines is too heavy for women...there are large gear wheels that have to be lifted about".

"Women are not mechanically minded..."

The same heaviness argument was also used to explain why women were not used for distribution duties, while "unpleasant working conditions" was used to explain their absence from dyehouse work. These arguments illustrate how the ground shifted as circumstances changed. However, women in other occupations (e.g. police and nursing) work shifts and the author has since visited a bakery in a nearby city that found it easy to recruit women for permanent night work. In H&K industries exemption orders are generally easy to obtain, and many women work extended days (including some homeworkers), while many (e.g. cleaners) do heavy work. Thus, statistical job discrimination based on some part-timer's work characteristics is indicated against those women who could have performed knitting on shift or extended day patterns. Respondents claimed:

"We've not had any applications from women for men's jobs";
"men would be embarrassed in women's departments";
"men would feel effeminate using sewing machines".

H&K industries have had long histories of men associated with knitting while wives made up garments and tradition dies hard as is evidenced by the archaic method of counting output in dozens, see 4.2.1(c). Complacency arising from entrenched employer/employee attitudes, and deliberate job segregation, are the most likely explanations for a lack of applicants of the wrong sex, and this reflects the self-perpetuating processes of past discrimination. Homeworkers cannot be regarded as having
been discriminated against with respect to the knitting operation since the automatic knitting machines are too large for domestic premises.

8.2.2 Intra-Establishment Mobility - The Internal Labour Market

Mobility within firms can take two basic forms in that employees can: (a) change jobs within the same workgroup; or (b) switch between workgroups. In the former, which has received more attention from ILM theorists, the employee's status and circumstance can be improved by promotion or upgrading, worsened by demotion, or remain unchanged after horizontal transfers. The skills attached to jobs can vary considerably since they serve different functions and arise from varying divisions of labour. This form of mobility can therefore be regarded as skill mobility. The second form of intra-firm mobility, i.e. workgroup switching in which personnel perform the same task but in a different workgroup, has received less attention. The two forms of mobility can overlap such that a workgroup switch can also involve a skill switch.

8.2.2(a) Mobility Within the Same Workgroup

(i) Skill Mobility

The pilot study showed that standardization of skill was sufficiently complex to merit separate research since there was a wide diversity in tasks, divisions of labour and product styles. Such a study was impracticable in this project, but, since there were clear understandings in the industry of the skill level associated with each operation, respondents' classifications were accepted. This decision prevented an objective analysis of whether skill grades varied by gender, workgroup and race, but nevertheless subjective judgements based on observations are offered.

It is the author's opinion that the skill demanded to perform many stitching operations was greater than that required to operate automatic knitting machines, even though the latter needed regular checking for accuracy and occasional resetting to different gauges. (Dex\textsuperscript{281} cites other contemporary writers\textsuperscript{282,283} who reached similar conclusions, see page 235.) Moreover, since many stitching machines were hand-fed, women were immobile at work stations whereas knitting operatives could move freely among the machinery minded. Knitting has traditionally been regarded as the most highly skilled manual operation in the industry, but this belief could have devolved from the value of equipment since very costly damage can result from carelessness; knitting machines are much more expensive than sewing machines, see 4.2.1(a)\&(b). In the absence of objective measures,
skill levels shown in Table 8.4 were those identified by respondents, and they relate to the requirements of jobs not to the dexterity of operatives. Table 8.4 indicates that for men, knitting, and thus shift work, was classed as a skilled operation, only bar-loading being semi-skilled. Of male full-time jobs, 69% were classed as skilled compared to only 33% of male part-time jobs. In the female segment, the skill levels of jobs held by full-timers (73%), part-timers (71%) and twilighters (71%) were roughly equivalent, whereas only 52% of homeworker jobs were skilled. Robinson & Wallace\textsuperscript{257,258} found that part-timers were frequently placed in low skill, low grade work, and concluded that this was a major reason for pay differentials. However, in the pilot study of the footwear industry (see 3.6), part-timers were disproportionately in high-skill work, perhaps indicating that a major reason for their recruitment had been shortage of full-time workers as Bosworth & Dawkins\textsuperscript{259} had also found, see 2.3. Across companies, skill segregation was not practiced against any workgroup, but within certain companies, homeworkers were deliberately selected for low-skill work (see 4.2.1(d)), and data also suggest that similar practices operated against male part-timers.

Deskilling, as postulated by labour process theorists, has certainly taken place in both the knitting and finishing sections of the industry. For instance, knitting machines are now more automatic than formerly and as one factory manager commented:

"knitting is not a skilled job any more, we should really call them machine minders, but the machines are so expensive we claim there's a two year training period because they have to mature before they can have full responsibility for such costly equipment."

On the finishing side, there is now limited use of the linking process which is viewed as a high-skill, labour-intensive job, but more costly equipment incorporating various stitching devices is the alternative for these closing processes. Deskilling of the linking operation has occurred with the invention of machines for random linking, i.e. where 'point-for-point, loop-for-loop' matching is sacrificed in favour of a modified sewing process in which several loops are randomly bodged together in a 'belts-and-braces' approach. Although an inferior linked garment ensues, the employer benefits by employing fewer women on these much speedier, but more costly machines which require less skill. Typical random linking machines have been produced by Rosso, Exacta, Mathbirk, Boehringer and Arndt\textsuperscript{276}. Further deskilling of knitwear operations has occurred with the invention of 'rib-to-plain' fully-fashioned machines and automatic rib transfer vee-
The resultant shortened processing obviates skilled female labour for the running-on of ribs and semi-skilled male labour for the bar-loading of ribs onto fully-fashioned knitting machines; such machines also completely dispense with drawthreading, a un-skilled woman's job usually put-out to homeworkers. In each case more automation results, and this is accompanied by rises in the purchase price and consequently in the non-utilization costs. Inevitably this places operatives in more influential positions by making stoppage time correspondingly more costly. The H&K industry's experience has thus resulted in lay-offs rather than a total degradation of labour; indeed, both status and influence can be enhanced by operating costly equipment which is further confirmation that capital cannot completely dominate labour.

(ii) Promotion, Demotion and Up-grading

Based on ILM theory, it was expected that internal mobility would result from promotion to supervisory levels or by up-grading to more highly skilled and better paid manual operations within job clusters. However, there were virtually no job clusters for the women, and few for men who had limited opportunity for promotions and up-grading to better jobs; in only one establishment, was up-grading to a high-skill job regarded as feasible. Neither did horizontal transfer occur other than on a temporary basis. The reason given was because payment was by piecerates which allowed earnings to rise with long practice and acquired dexterity. It was claimed that operatives resisted job-switching due to lower earnings deriving from the learning curve. To introduce job relocation, resort had to be made to compensatory payment methods, see (iii) below. Table 8.5 indicates that female opportunities were generally slight. This could be partially due to some or all of their supervisors being men in 13 establishments. Full-timers had better promotion opportunities than part-timers, but even so there were no opportunities in 14 (64%) establishments. Only 6% of the supervisor sample were part-timers. On average, 18 operatives were controlled by one supervisor. No opportunities were available for twilight workers who were either left unsupervised, or were supervised by shift workers or by daytime supervisors who had time off in lieu. Respondents said that of good operatives, few wanted promotion owing to lost piecwork earnings; indeed, 5 respondents (20%) stated that, across the industry, supervisor's earnings were lower than those obtained by good operatives and that this had caused dilemmas and made promotion difficult. For instance, should the employer promote his best operative and lose output, or choose
someone less competent? Consequently there were no formalized, structured procedures for promotion, demotion or job transfer, and two companies responded by using good “all rounders” who would switch to any job.

The ILMs of the H&K industry can therefore be described as entirely open with entry ports at every job and no clusters through which to climb.

(iii) Payment Method Mobility

In small integrated establishments with no back-up personnel additional duties were periodically required of the knitters such as unloading yarn deliveries, machine maintenance, storeroom work and cleaning the machinery and work area. Such breaks in continuity could not be expected from piece-rate workers since earnings were correspondingly reduced. Thus, jointly agreed, individualistic, complex time rates were negotiated which included compensation for normal productivity, shift and overtime premia. These pre-arranged time rates were introduced by agreement when additional tasks were needed. There were similar arrangements for women who temporarily switched jobs to ease short-term bottlenecks or to occupy individuals who were under-employed. Thus, payment method switching was a peculiar form of flexibility which facilitated internal mobility and was relevant to the establishment’s labour adjustment mechanism, see Section 13.2.

8.2.2 (b) Inter-group Mobility

Table 8.6 shows the levels of internal female inter-group mobility. Without exception respondents described the levels as either “non-existent” or “very low”, but no accurate records were kept. Only 24 women (2%) could be identified as having permanently switched groups internally and these were mainly from the full-time to the part-time or homeworker groups. Four companies with zero mobility claimed to have achieved this by refusing requests for transfer. Mobility between the daytime and homeworker groups usually arose from pregnancy (transfer being from the full-time group), or for retirement (often from the part-time group). Two companies kept waiting lists of good employees who wanted to switch to the homeworker group thereby indicating a positive demand for homework jobs. Respondents indicated that indirect inter-group mobility occurred after periods of LM inactivity and that the part-time group was the most usual to re-enter; nevertheless, inter-group mobility was rare.

These data show that homeworker numbers were deliberately restricted and that the working lives of female H&K workers were characterized by
intermittency. A cycle of migration through the workgroups did exist but it was discontinuous: it occurred either in conjunction with inter-firm mobility or after periods of LM inactivity. Indirect mobility was additionally evidenced by employers being able to recruit trained and experienced part-timers, twilighters and homeworkers even though levels of training for these groups were relatively low (9.4.1(b)).

8.2.3 Inter-Establishment Mobility

Although questions on inter-establishment mobility were deliberately omitted after the pre-pilot study because it had indicated such records to be unavailable, its existence can be presumed from evidence contained elsewhere. Sub-section 5.2.4 concludes that men faced only limited job competition, and that full-time females also faced very little. In these market conditions, and with several firms the same locality, men and full-time women would have alternative employment opportunities. It is thus likely that considerable inter-firm mobility occurred. Indeed, the normal practice of always seeking experienced workers indicated this to be so as did the relatively high levels of voluntary turnover among women. However, the "don't know" responses relating to male supply (see Figure 5:1) suggests that mobility was lower for men than women. There was considerable competition for part-time work, and fierce competition for twilight and homeworking jobs. Members of these work groups had therefore substantially less chance of switching jobs. Moreover, since findings (Figure 5:1) indicate that part-timers and twilight workers did not, on average, travel as far to work as full-timers it can be speculated that these groups had lower inter-firm mobility, partially because there were fewer firms within the distance bands travelled. In the absence of fuller statistics further discussion is precluded.

8.2.4 Mobility Into And Out Of The Labour Market

Although choice of employment was very limited due to high job competition, twilight workers had the highest relative turnover level. Several respondents perceived intense employee dissatisfaction with twilight working jobs, for instance:

"they don't know what they are letting themselves in for. They have to work hard and then the husband starts nagging that they never get to see each other, so they give up, or take time off".

Sub-section 9.6.6(a) reports a high early drop-out rate of homeworkers which, when put into context by the "take it or leave it" attitude of
employers, and the scarcity of 'good' homeworking jobs, suggests that many homeworkers had little alternative but to voluntarily leave the LM. Moreover, temporary employment (9.4.2(a&b)) was imposed on twilight workers and homeworkers and this forced intermittent employment patterns whether they wished it or not, such that mobility was shown to be a characteristic of twilight and homework employment. The discontinuous nature of inter-group mobility (see 8.2.2(b)) indicates that daytime workers are also mobile into and out of the LM at critical life stages, such as childbirth, the child's entry to school or nursery, and retirement. Less discontinuity in middle life was indicated by several respondents who encouraged moves into the full-time from the part-time and secondary workgroups while limiting moves in the opposite direction.

8.2.5 Summary of Conclusions on Mobility

By most dimensions, mobility was very low for all workgroups. There was virtually total job segregation by gender and substantial skill segregation was practiced against the homeworker group and possibly the male part-timers, race and age minorities. Very little promotion or upgrading of skills or direct inter-group mobility occurred although discontinuous mobility between the female groups did occur and was associated with life-cycle influences. An examination of the female age profiles (6.1) also provides evidence for women's inter-group mobility, it being characterized by a flow of females out of the full-time group coinciding with flows of entrants into the part-time, twilight and homeworker groups. An over-supply of job competitors (see 5.2.1(c) to (e)) for the less-than-full-time groups permitted the retention of different conditions of service, benefits and earnings levels (see below and chapter 9) while the lack of internal mobility, except on a temporary basis, demonstrated the absence of internal labour markets. Reported turnover rates and recruitment of experienced personnel suggests that inter-firm mobility was high, particularly among full-time females. However, twilight workers and homeworkers had high levels of mobility into and out of the LM, much of which was involuntary, and for homeworkers, often of a short duration, see 8.2.4 & 9.4.2.

8.3 THE EARNINGS STRUCTURE

8.3.1 Earnings Levels

The comparative earnings reported in this section have been derived from stated gross average weekly and/or average hourly earnings. Where
both measures were provided the stated values were first cross-checked and then averaged across establishments.

8.3.1 (a) Male/Female Earnings Levels
Table 8.7 shows that males earned more than females. Even those males whom employers had classed as "semi-skilled", and who were directly comparable with the females insofar as they worked the same basic weekly hours with no overtime nor shift premia, earned more than the women classed as "skilled" by the same employers. Knitters, working 40 hours weekly on shifts, earned 54% more than skilled females, 66% more with overtime payments. Hence a distinctly stratified earnings structure prevailed between men and women in the H&K LM.

8.3.1 (b) Workgroup Earnings Levels
Shift workers averaged 22% more pay than the full-time day males who were similarly performing knitting operations, but full-time day males averaged more overtime than the shift workers thus narrowing the earnings gap. Table 8.7 does not detail the earnings of female workgroups separately because all in-factory groups received identical pay rates. Consequently, part-time and twilight earnings were pro-rata to their hours. Homeworker pay is considered in 8.3.3.

8.3.2 The Human Capital Effect on the Earnings Structure
Human capital theorists claim that wage differentials will arise as a compensation for the costs of acquiring skills. Classification of skill is a complex issue which encompasses dexterity, knowledge and authority; comparisons of different jobs are thus fraught with difficulties. Various measures and techniques have been devised, but no interviewed establishment reported using job evaluation when setting male/female rate differentials. In the absence of job evaluation, skills can be incorrectly assessed and thus can result in over-grading some jobs while under-grading others. Hence, an element of discrimination can arise from the skill classifications used for job-grading and it is the author's opinion that an under-estimation of machining skills required in finishing operations had occurred. Differentials between knitters and the various sewing machinists thereby overstressed the actual skill differences between these jobs. A comparison with full-time day knitters to exclude shift and overtime premia reveals that the men received on average £17 per week (27%) more than the women. Furthermore, differentials between the full-time skilled and semi-
skilled was smaller for males than for females: skilled full-time men averaged 5% more than their semi-skilled counterparts whereas the women's skilled/semi-skilled differential averaged 18%, which underlines the inferior position of semi-skilled women. Without employee-specific data on the precise operations performed by semi-skilled men and women it is impossible to say whether the female skill differential was badly undervalued, but there appears to be a prima facie case to indicate that it arose because women generally performed operations requiring high levels of dexterity, whereas men performed warehousing and distribution duties largely requiring strength.

The incentive method of payment automatically compensated for the human capital effects deriving from experience and inherent ability and respondents said that the range of wages yielded by differing abilities was considerable (see 9.6.1 and 10.4). Individual time-rate equivalent incentive earnings ranged from £0.90 to £1.75 per hour in the one factory where full and accurate hourly rates were disclosed for all employees. One operative regularly earned £7 per week more than her peer while attending for the same weekly hours and sharing the same work. Diversity of ability and application yielded a wages structure in which no two individuals received the same weekly earnings, but this particular structure can not be regarded as evidence of segmentation since it derived entirely from human capital influences. Thus, the values given in Table 8.7 reflect ability and experience but are the average levels of the ranges earned.

To summarize, wage-rate differentials based on skill classifications were probably discriminatory against women and were thus segmentalist, but although human capital effects yielded a range of wages, these were from identical piecerates and were therefore not segmentalist.

8.3.3 Discriminatory Wage Levels

A discriminatory wage is here defined as being a wage that is lower than that paid to other workers for identical work of the same quality. Although additional costs could be attached to employing each workgroup (other than national insurance contributions and homeworker delivery costs, see 9.2), as cost-minimizing IC theory recognises, wage rates must be seen to be equitable for a reputation as a good employer to be achieved.

Although indoor groups were receiving the same pay rates, this had not always been so for part-timers who, in two establishments, had previously been paid 6% below full-time piece rates. In one factory this ruling still stood but was not put into effect; in the other, the trade union had
intervened 6 months previously and negotiated an end to the practice. Thus, at the time of interview no discriminatory wage levels actually operated for the indoor component.

Estimation of homeworkers’ hourly earnings usually present difficulties for researchers because productive time is rarely accurately recorded by either worker or employer, see Section 2.3. Researchers have often found very low hourly earnings and, considering productivity to be average or higher, have claimed that discriminatory pay rates applied to homeworkers. Merely to consider the average weekly earnings of a homeworker is unhelpful for comparison purposes since the level of skill required by the job, inherent ability, hours worked and the level of productivity deriving from dexterity and experience all affect the value. A more revealing measure for determining discriminatory practices is to compare the pay received by in-factory and outworkers performing the same work for the same employer; such information is given in Table 8.8. It is acknowledged that some respondents might have tried to conceal discriminatory rates, but the forthrightness of respondents suggested that this was not a frequent occurrence. Nevertheless, it can be assumed that the figures presented in Table 8.8 are more likely to be under- rather than over-estimates. In addition to stating the comparative levels, 12 respondents indicated their homeworkers’ average weekly earnings and these are summarized in Table 8.9.

Table 8.8 shows that out of 139 homeworkers, 49 (35%) received the same piecerates as indoor workers, so regardless of their hourly earnings, these homeworkers were not discriminated against. However, 35 homeworkers (25%) were paid lower piece rates than their indoor colleagues doing the same work for the same employer, the percentage reduction ranging from 5% to 10% with an average of 7.5%. (Subsequent to the survey an instance of 20% reduction came to the author’s knowledge.) It is noteworthy that respondents admitting to reduced piecerates were generally from large establishments not relying heavily on homeworker output, and the practice of under-payment was usually justified by the claim that it compensated for delivery costs; these are assessed in section 9.2.2(f). Table 8.3 showed that 75 homeworkers in 10 establishments did jobs not performed inside their factories and for many of these there were no means of determining whether discriminatory rates applied. It seemed likely that rates were lower than for similar work in other factories, where it was admitted that, after complaints, investigation had shown differentials to have arisen between the rates paid inside and outside the factory for work of similar
grade, see wage drift (8.3.4(a)). Homeworkers whose hand finishing operations often did not change with style could not benefit from wage drift. Lack of employee-specific data and complexities of job variation prevented this being checked.

Homeworkers' quoted average weekly earnings varied considerably; those of skilled machinists ranged from £20 to £60 per week; semi-skilled hand workers achieved as little as £9 per week, or an estimated £0.80 per hour, but whether this derived from low piecerates or low productivity was not made explicit. A homeworker averaging £0.80 per hour could earn only £32 for 40 hours when working a prolonged schedule (see Figure 4:4) and this is 42% less than her average semi-skilled indoor counterparts who were themselves judged to be low paid. Seventy-eight homeworkers averaged approximately £21 per week (Table 8.9). If these workers also averaged the 20 hrs/wk of productive work (see 9.6.8(a)) the equivalent earnings for a basic 40 hour week would be £42, 30% less than the indoor component. It should be noted that the 20 hour estimate of homeworker hours was based on the time needed by an average indoor worker to perform the same work, so lower productivity cannot be used to explain wage differences. Respondents claimed that many homeworkers limited their earnings deliberately to keep below the tax and national insurance thresholds. This tactic appeared to have been tolerated for hand workers, but generally denied to machinists who had to agree to minimum deliveries, see 9.6.8(a).

Thus, it is contended that because at least 25% of homeworkers were paid discriminatory rates, and a further 40% could have received pay lower than similar workers in other factories, homeworkers were a form of cheap labour. Indeed the cheap labour criterion of demand could have been operative in 82% of establishments. Thus, homeworker wage rates revealed a stratified structuring of earnings for the same work.

According to the above definition, for lower rates to constitute discrimination the quality of workmanship must be the same. Sub-section 9.6.3 shows only a little difference overall between daytime and homeworkers in the quality of work produced as assessed by their employers. Indeed, if a homeworker was unsatisfactory her supply of work was stopped. It can be concluded therefore that many of the homeworkers in the LLM were discriminated against in pay.

8.3.4 The Customary Wage Structure
8.3.4 (a) The Intra-Establishment Wage Structure

Every establishment had wage differentials between segments and within
segments. The earnings differential between shift knitters and skilled full-time females ranged between 33% and 75% within establishments and averaged 45.5% (sd=13.7) across establishments.

Within the female segment, variations in the skill needed and in divisions of labour (4.2.2(a)) created various grades of job. Employees performing different jobs, but on the same grade had piece rates set to yield the same earnings to average workers. Larger establishments used between 3 and 5 basic pay grades, but smaller establishments varied from one grade for all workers to a different grade for every operation.

Table 8.10 shows that segregated factories had the largest skilled/semi-skilled differentials, and that large integrated factories had smaller skill differentials than the all company mean, while small integrated factories had approximately the same as the all company mean of 15%. Thus, semi-skilled workers in segregated establishments earned very low wages, whereas the average wages of semi-skilled workers in large integrated establishments were equivalent to the wages of skilled workers in segregated establishments.

Grade differentials were generally maintained over time. As products and styles changed, new piece rates were negotiated, the most widely adopted method being to introduce the new line, average the number of dozens completed per hour, and then set the price per dozen to yield the employees average hourly earnings. During the timing sequence employees often worked more slowly than normal, either deliberately or because they were unaccustomed to the work, so that after the price had been set, and their normal speed attained, the new rate would yield a wage increase. Hence, wage drift occurred and customary differentials became distorted when some grades drifted more than others. Erosion of customary differentials had led to internal disputes and one respondent had successfully negotiated a wage reduction immediately prior to the interview because, "one department's wages had got out of step with the others". Local press reports reveal that this was not an isolated incident.

In addition to customary indoor differentials there was a widespread recognition by all persons having contact with H&K industries that homeworkers customarily earned less than factory workers.

8.3.4 (b) The Inter-establishment Wage Structure

The range of reported wages reveals an inter-establishment wage range, and respondents were usually well aware of their company's standing in the LLM and often showed they intended to maintain it. Claims such as, "more
generous than elsewhere", and, "we pay more than at other places", proved correct when checked against actual values. Although no pattern was immediately discernible regarding low and high wage employers, a clear pattern emerged when segregated establishments were isolated and the remainder were subdivided into large and small classes as shown in Table 8.10. Large integrated establishments paid on average, above the 'all company' level as did the small integrated establishments although to a lesser extent. In contrast, the segregated establishments generally paid considerably below all company rates. It should be remembered that all segregated establishments would have been large had they remained integrated, but when segregation occurred both large and small establishments were created. Hence, these differentials offer evidence to support claims of 'divide and conquer' tactics; indeed weekly earnings of skilled and semi-skilled workers in similarly sized integrated companies averaged respectively £9 and £11 more.

8.3.5 The Institutional Impact on the Wage Structure

Much that is relevant to the institutional impact is discussed in section 11.2 which analyses the power structure emanating from collective bargaining. Pay awards in the national agreement take the form of a percentage addition to all existing piecerates, see 11.2.1(a) which all 14 unionised establishments followed. Table 11.3 shows the impact of the national pay awards on the non-unionized sector and reveals that 8 of the 11 non-unionized factories also adhered to the agreement and a further 2 followed the precedent, although sometimes paying below the agreed percentage. Hence, there was a strong institutional impact on the wage structure via activity at national level and its effect was to raise general wage levels rather than influence internal wage structures.

Local union activity affected the range, rather than the general level, of wages. Local officials' activities tended to narrow inter-establishment differentials since negotiations and recommendations were based on judgements of rates for comparable work in other factories (see 11.2.1(a) Pay). Moreover their efforts to remove the 6% mark-down of part-time rates (Section 8.3.3) had also compressed the internal wage range and counteracted the market force of over-supply.

Notwithstanding these union influences, only 49 homeworkers (35%) received the same rates as factory labour and there had been little local intervention to prevent this. The local union impact was therefore
conspicuously lower than for the indoor component. National union attempts on the NJIC were vigorously resisted by employers who managed to retain an environment in which discriminatory rates could be offered. Nevertheless, those homeworkers linked to factory rates benefitted from the annual increase, so an indirect benefit accrued irrespective of unsuccessful national union activity.

8.3.6 Summary of Conclusions on the Earnings Structure

There were wide earnings differentials between males and females that could not be explained by human capital influences. All in-factory females received the same basic rates since discriminatory wage rates were no longer operative against part-timers, although they did apply to homeworkers. Each establishment had its customary skill differentials which were influenced by internal divisions of labour and tended to be stable over time.

In addition, an earnings structure existed between establishments. Influences on this could not be investigated, but the impression was gained that this too had customary elements. Segregated establishments paid lower rates than integrated establishments suggesting that employers were taking advantage of workforce divisions. Trade union activity at national level had an impact on the general levels of earnings, whereas their local activities tended to narrow inter-establishment differentials.

Thus, numerous factors influenced the very wide range of earnings values observed and a stratification of workgroup earnings prevailed that was consistent with a SLM structure.

8.4 THE STRUCTURE OF NET ADVANTAGES

8.4.1 Holiday Arrangements

All factories completely closed for the holiday periods. The national agreement was for 27 days holiday and 17 (68%) establishments adhered to it; no company gave additional days to long-service workers; 7 firms (28%) gave 26 days and one 28 days. No special arrangements were formerly agreed with parents of young children on school vacation; at least 18 establishments reluctantly permitted individual flexibility of hours, whereas two strictly refused hours reduction and the re-timing of attendance. All the in-factory workgroups of each establishment, with the exception of twilight workers, received identical treatment for holiday pay, although rates varied slightly among establishments, see 11.2.1 (a). Holiday pay for twilight workers, who by implication were excluded from the
national holiday pay agreement (see, 11.2.1 (a) Holiday Pay), was not a live issue due to infrequent employment at holiday times, but 4 establishments giving permanent employment treated them identically with the other groups. Homeworkers rarely received holiday pay; only two small establishments which relied on them heavily gave their total of 5 homeworkers their average wages on the same basis as other workers. Factory closure gave homeworkers the same days of holiday periods although arrangements could usually be made for extra work to be delivered. Thus, a stratified structuring of holiday arrangements prevailed only insofar as homeworkers were concerned.

8.4.2 Special Sickness Benefit

No establishment had a formally agreed leave arrangement for parents of sick children; the only option being to "take time off without pay". Only one establishment had its private contributory sick pay scheme for the factory component, but in most firms sick pay schemes applied only to "staff members" (i.e., management, supervisors, mechanics, and certain office personnel) and these arrangements highlight the special, elevated status of staff workers. No stratification was discovered among workgroups who were overwhelmingly without company sickness schemes.

8.4.3 Special Maternity Arrangements

It was thought possible that a predominantly female industry would provide maternity schemes with terms and conditions supplementing those of the EPA, but no establishment had introduced any such scheme. Indeed, many respondents showed opposition to the statutory provisions. In the light of this opposition it was surprising to discover that 18 establishments had, "never needed to hold a job open". Four had held jobs (averaging 1 per 1.3 years) and a further 3 expected that they "might be called upon to do so soon". No establishment was prepared to extend this provision to homeworkers; in fact, the suggestion was generally considered to be preposterous since homeworkers were considered to have the opportunity to simultaneously mind children and carry out work. "I didn't ask them to have children" was a general response often with the rejoinder, "I have orders to get through on time". Consequently, no stratified structure existed with respect to special maternity benefit, the only benefit being under law.
8.4.4 Private Pension Schemes

Sixteen establishments were without private pension agreements, but 3 operated a scheme for staff members only. Another had a contributory scheme confined to males because, "females moved more frequently and insurance companies didn't like it". However, 4 had contributory schemes for all men and women, but part-timers did not participate in two of these although the reasons for this were unclear. In only one company with a non-contributory scheme did part-timers benefit alongside all men and full-time women. No schemes applied to twilight workers or homeworkers. Consequently, although the incidence of private pension schemes was very low, differential benefits were received: staff benefitted most, followed by males in general, then full-time females, part-time females and finally twigthers and homeworkers who were entirely without benefits.

8.4.5 Bonus Payments

Five companies (20%) had productivity based bonus schemes for staff and time-rate workers to provide parity with piece-rate workers by recompensing them for high productivity when workloads were heavy. One sock factory increased indoor workers' piece-rates after 500 dozens had been completed to encourage very high productivity. Another with "boring" work (5.2.1(a)) paid an attendance bonus to factory workers to reduce absenteeism. None of these schemes applied to either twilight or homeworkers. However, 18 (72%) establishments had no bonus schemes of any kind. Therefore, bonus schemes were relatively rare, were production oriented and were stratified insofar as they applied only to factory labour, mainly full-timers who were most likely to reach target outputs for bonuses to become operative.

8.4.6 Concessionary Goods Schemes

All factories had concessionary goods schemes which applied to every workgroup including homeworkers, although two respondents commented that homeworkers might be unaware of available items unless delivery drivers informed them, a situation that underlines their distance from the companies for which they worked. Nevertheless, the schemes were not intended to have a stratified application.

8.4.7 Miscellaneous Benefits

Seven establishments had free or subsidized Christmas dinners or dances and a further 7 gave Christmas gifts that ranged from tins of
biscuits to 2 weeks' average pay. In most companies there was general uncertainty as to whether these 'perks' were also given to twilight workers and homeworkers but one establishment specifically excluded them. Four companies presented awards for 25 years service, but it was considered highly unlikely that either twilight or homeworkers could qualify for these. No other benefit schemes were encountered. A stratified application of miscellaneous benefits to the detriment of twilight workers and homeworkers was therefore evident.

8.4.8 The Provision of Facilities

In general, companies merely offered the minimum facilities required by law. Medical provision in all companies consisted of first aid boxes and trained personnel who were not always present during twilight shifts. One company had a full canteen to serve two establishments during daytime hours; it thus applied to full- and part-timers. Shift and twilight workers were only able to obtain drinks and snacks as were all other groups in all other establishments. PAYE and national insurance contribution were submitted to the Inland Revenue for all factory groups, but no establishment submitted national insurance contributions for homeworkers, although 6 (27%) establishments deducted PAYE when necessary. Transport facilities, discussed in section 5.3, also had unequal applications. All but one establishment allowed employees to listen to the radio; in two others this was limited to 2 hour sessions during mornings and afternoons. Only 6 (24%) firms provided radio. Rest periods were of 10 or 15 minutes duration in every 4 hour stretch and twilight workers were permitted the same length of break, but did not always take these. Part-timers were refused breaks by 4 (16%) establishments if present for fewer than 3 hours per half day. Homeworkers were treated identically with factory labour in that all machinery and equipment was provided and maintained by the establishments. All factories undertook and paid for work delivery unless homeworkers lived so near that they chose to collect and deliver it themselves. In general, facilities for all groups were very limited, but those occasionally provided seldom applied to twilight workers and homeworkers even where they were appropriate. A limited stratification therefore existed.

8.4.9 The Stratification of Net Advantages

The choice of an industrial LLM controlled for the relative disadvantages of employment insofar as the exogenous influences on
companies were concerned. This meant that sample companies and factory workers were operating in very similar environments. Relative net advantages are therefore revealed by the impacts of the various dimensions of the employment relationship. In addition to the topics considered above, other relevant conditions of service have been analysed in section 9.4. Tables 9.8 to 9.19 detail this information and Table 9.20 summarizes it to show that employers generally treated the workgroups differently with respect to training, redundancy, dismissals and transport and that the inequalities had similar impacts to those of the benefits discussed above.

Table 8.11 summarizes the relative application of various conditions of service by showing, for each workgroup and topic, the number of establishments that offered provisions. Companies operating schemes only for certain categories of worker (e.g. staff) have been omitted, as have provisions that did not have stratified applications and those benefits emanating entirely from law. The rank order of net advantages shown at the foot of the table indicates a stratified structuring of conditions of service and of perks and benefits that favoured the male and female core factory groups whilst placing twilighters and homeworkers at greater disadvantage.

8.5 CONCLUSIONS RELATING TO LABOUR MARKET STRUCTURE

The foregoing sections of this chapter, and particularly Tables 8.7, 8.8 and 8.11, showed that stratification was present with respect to earnings and net advantages, and that these inequalities did not counterbalance each other as was required by the neoclassical model; rather they exaggerated the inequalities by virtue of higher earnings being accompanied by somewhat better terms and conditions of service. Thus the neoclassical model of LM functioning was rejected in favour of the SLM model.

There were substantial earnings differentials between the male and female segments. It is doubtful whether these can be explained in terms of acquired human capital as further research is required to provide objective measures of skill. In its absence, the present author concludes that both job and wage discrimination was practiced against women causing their persistent relegation to a secondary sector of the H&K LM.

In addition to this male/female segmentation, both earnings and a net advantages stratified structure prevailed within the female segment which could not be explained by human capital differences since all groups, in aggregate, were performing the same range of operations for the same
sample of employers. Female full- and part-time employees received identical pay rates and faced similar conditions of service. All had relative permanency of employment, although there was more competition for part-time jobs and possibly a greater chance of redundancy, see 9.4.2(b). Twilight workers received the same pay rates, but they faced inferior benefits and facilities and were often employed on a temporary basis (Tables 9.12, 9.14 and 9.16). Thus, their employment was secondary when compared with either of the daytime groups and this placed them in a separate segment inferior to daytime females but superior to that of homeworkers who often received lower payment for identical work. Homeworkers' conditions of service were less beneficial than those achieved by twilight workers who had the legal status of employees, see 11.2.1(a). Many homeworkers had particularly unstable workloads (9.4.3) and no security of tenure. These circumstances placed homeworkers in an even more inferior segment. Consequently, the female segment was itself segmented and the boundaries of these were not eroded over time because there were persistent over-supplies of potential workers for these secondary segments and very low levels of direct inter-group mobility (Tables 8.1 and 8.6). Although indirect, inter-group mobility existed, workers' employment options appeared to be confined to the sub-segments as a result of the critical life stage through which they were passing, and hence there was insufficient cross-boundary competition to erode segment barriers.
CHAPTER NINE - EMPLOYER PREFERENCE

9.1 PREFERENCE, AND ITS EXECUTION

This chapter addresses the topic of recruitment intentions relating to workgroups and categories of worker (i.e. preference). Worker selection is conceptualized as having two components as is illustrated by chapter 15: firstly, initial intentions, i.e. intended demand or preference; and secondly, the ability to satisfy intentions, i.e. eventual choice, effective or observed demand. If there are shortages of preferred workers then the observed outcome will be different from initial intentions because compromises will have been made, but if sufficient worker supplies are available then preference and choice will be identical. Workgroup preference is assessed from three different standpoints. Firstly, the total weekly cost of employing the average member of each workgroup is calculated to determine whether cost-minimization determines preference. Secondly, stated preference is examined, and thirdly, group preference, as implied by the employer's actions, is assessed by examining training, redundancy, work allocation, and dismissal procedures to see whether words and actions are complementary or conflicting. An additional benefit accruing from these approaches has been the careful mapping of workgroup differences, this itself being a contribution to knowledge.

9.2 THE COST OF LABOUR

The cheap labour hypothesis of homeworker demand suggests that homeworkers are demanded because they are particularly cheap to employ, but it is clear that low wages do not necessarily mean cheap labour because additional hidden costs could make low wage workgroups more expensive. Various elements of the employment relationship can generate costs for the employer and all such expenses are examined to determine the relative cost of the average member of each workgroup.

9.2.1 Cost Calculation for the Mode of Production Decision

The factory system of production has become the traditional frame of reference for organisational analysts studying manufacturing industry. Until the 1970s it had been widely assumed that the domestic mode of production had disappeared after the sweating exhibition in the early part of this century. An automatic choice of factory production is thus implicit in much microeconomic theory, but the presence of homeworkers in an
industry indicates that such a choice is not automatic in practice. A choice of mode therefore becomes a preliminary necessity, and the following suggestions could form the basis of a theory regarding this decision.

For domestic production to be a viable possibility, both the product and the manufacturing operations used must exhibit particular characteristics. The product should:

(i) be easily portable; and
(ii) use materials that are safe in domestic premises; and
(iii) have a volume appropriate to domestic premises; and
(iv) contain a large work-to-volume ratio (work being measured in time spent on each item).

The manufacturing operations should:

(v) comprise a hand operation; or
(vi) use easily portable tools and/or machinery; and
(vii) use suitable energy sources for domestic premises; and
(viii) use tools and equipment that are suitably sized for homes.

The terms, easily portable, safe, appropriately or suitably sized in the above list can be defined as follows:

- easily portable: can be carried by one un-aided person.
- safe: free from poisons, strong fumes, smells, acids, alkalies or radio-activity; having low noise levels; equipment satisfying factory inspectorate safety regulations.
- appropriately sized: can be manipulated by one unaided person through a normally sized domestic doorway.
- suitable energy source: gas and AC single-phase electricity as normally installed in homes: not requiring high voltage, 3-phase or DC electricity, compressed air or steam.

When product and operation characteristics coincide, choice of domestic production becomes a possibility and this makes the cost calculations relevant. Should these characteristics be only partially met, the employer may opt for a quasi-factory system whereby some of the manufacturing operations are performed in domestic premises.

To make a decision, cost/benefit calculations for each mode should be compared. It is contended that cost of production mode functions include:

\[
\text{Cost of the mode of production} = f(\text{cost of premises, rates on premises, administration of the production unit, equipment and labour costs})
\]
The benefit function will include an assessment of production flexibility put into context by the stability of product demand, levels of competition and expected profit margins. Certain costs (e.g. canteen and first aid facilities, etc.) that are incurred in a factory can be avoided by the use of domestic premises. These should be omitted when calculating labour costs for the entirely domestic mode, but when a quasi-factory system is chosen these costs are not 'saved' by the use of homeworkers. Therefore, the appropriateness of items to be included should be considered.

All employers included in the survey had decided to obtain factory premises, having been selected simply because they had factory labour, but 22 had additionally opted for the quasi-factory system by also using homeworkers. It should be noted that sample establishments were interviewed because they were located in the LLM; in only a minority of cases had the author any prior knowledge regarding the use of homeworkers. Research into the potential extent of domestic production in advanced economies is overdue, and the above approach is therefore offered as a starting point.

9.2.2 Calculation of the Cost of the Average Member of Each Workgroup

Having made the mode of production decision, it is argued that cost-minimizing employers will compare the costs of workgroup members to determine the cheapest manning policy. The costs of employment comprise direct and indirect sums. Direct labour costs are composed of wages, which for comparison purposes should also reflect performance. Additional costs are incurred in quality control, since poor workers will necessitate greater levels of supervision and inspection, and fringe benefits, since short supply workers could be attracted by these. Expenditure on recruitment, selection and training are investments in labour that are sometimes called sunk costs because they cannot be retained when the employee quits.

Indirect costs arise from statutory obligations and the basic workgroup differences, i.e. their number of hours, times of day and place of work constraints. Each constraint imposes peculiar costs which necessitate the inclusion of various items in the calculation if fair comparisons are to result.

In the following calculations, full-time employment at 40 hrs/wk is the chosen frame of reference. Consequently, to permit fair workgroup comparisons, each group's hourly costs have been factored to yield the equivalent of 40 hours. It is contended that the employment cost function (C) will include the following elements:

\[ C = f(W + L + B + S + K + T + P) \]
where: \( W = \) the 'effective' wage, \( L = \) legislative benefits, 
\( B = \) fringe benefits, \( S = \) sunk labour costs, 
\( K = \) capital non-utilization, \( T = \) time constraint cost, 
\( P = \) place constraint cost.

Each element is discussed and then calculated using survey data. Table 9.1 itemizes the cost of each element for each workgroup.

9.2.2(a) The Effective Wage (W)

The effective wage function, which reflects performance, is:

\[
W = f(\text{earnings}, \text{productivity}, \text{quality and lost production time by absenteeism and unpunctuality})
\]

Computed values should represent the 40-hour equivalent of average weekly earnings, these comprising basic pay, shift premia and normal regular overtime. They should also reflect productivity and performance, including quality. Productivity is allowed for by piece-rates, but costs arising from spoilage, and quality control should be added and averaged among employees. The effective wage therefore reflects the performance of the average member of each workgroup, which is important when workgroup productivity is low, absenteeism high or quality poor. Gross annual piecework earnings for each workgroup, including holiday pay and expenditure on supervision and inspection, should be divided by actual annual hours to allow for absenteeism and unpunctuality, and multiplied by 40 to give the equivalent weekly payment.

Values shown in Table 9.1 have been calculated from data presented in Table 8.7. To show male/female differences, skilled men and women full-timers have been included as well as shift workers. To overcome women's skill differentials and permit female workgroup comparisons, skill differentials have been pooled to give an averaged wage level. Lack of precision regarding homeworkers' earnings necessitated an estimate which was based on sub-section 8.3.3 and Tables 8.8 and 8.9. Because the 7.5% markdown of Table 8.8 was thought too low while the quoted 42% markdown was considered unrepresentatively high, a 15% markdown for homeworker earnings was assumed as this represented the mid range of reductions known to exist in the LLM. In practice, material spoilage costs were negligible because spoiled items were sold as sub-standards to local market traders and this usually covered costs.

It was impossible to adjust earnings for group performance differences because no actual values were provided, but overall, differences were judged to be slight, see 9.6.9. The average cost of supervision per
employee has been included for the daytime groups, but not for the twilighters and homeworkers who generally were not supervised.

9.2.2(b) Fringe Benefits (L + B)

Fringe benefits (B) can arise because the employer offers them or because they are imposed by law. Legislative benefits (L) are statutory obligations relating to health, safety and employment protection which, following the decision to manufacture in a factory, are inescapable. The legislative benefit function is:

\[ L = f(\text{national insurance contributions, holiday benefits, medical facilities, redundancy, dismissal and maternity provisions}) \]

Voluntary fringe (i.e. non-legislative) benefits (B) are those offered by the employer and are not required by law. Such benefits are escapable and could be given to selected groups in the workforce, or to specific categories of worker. Thus, the voluntary fringe benefit function could vary with job status, and might include both contributory and non-contributory items. The non-legislative benefit function could be:

\[ B = f(\text{enhanced sickness, health, and pension benefits, bonuses, long-service awards, transport, canteen and social facilities, concessionary goods schemes}) \]

To calculate the average cost of each employee when workgroups are contracted for different weekly periods, annual expenditure should be divided by the total hours worked by the benefiting group and multiplied by 40 to give the full-time weekly-equivalent. Where all workgroups benefit equally the cost should be apportioned, but it can be overlooked when the exercise is for comparison purposes since such expenditures will have a per capita impact and leave comparisons unaffected. Even when homeworkers are present, legislative benefits such as health facilities can still be ignored because these expenditures are inescapable irrespective of whether homeworkers benefit or not; no savings accrue in these respects from homeworker use. They must be included in the 'mode of production' calculations. Several benefits in the function (e.g. dismissal, redundancy, maternity, retirement and long-service schemes) might not impose costs, but they could do so and should be included. To calculate possible expenditure, it is necessary to project average past performance to obtain an average annual sum per employee over a given period, say 10 years, on the assumption that past performance is an indicator of general workgroup performance, and is a workgroup characteristic. The employer’s part of the national insurance contribution as applicable in March 1980
when the threshold for contributions was £19.50 has been included in the benefit element \((L + B)\) of Table 9.1. The appropriate amount, relative to actual earnings has been included. Medical facilities and other benefits have been calculated from generated survey data omitted due to thesis space considerations, but these generally incurred very small costs. Reference has been made to data reported in chapters 8, 9 and 11 in the calculation of group figures. Voluntary fringe benefits were less costly than statutory obligations because few were offered, see 8.4, but the annual reported costs have been apportioned to give the per capita cost for each benefiting group. Thus, the small but varying costs of group fringe benefits \((B)\) reflect both status and the low level of benefit generally available.

9.2.2(c) 'Sunk' Costs \((S)\)

Sunk costs comprise the fixed costs of employment and investment in human capital. The sunk cost function is:

\[
S = f(\text{recruitment, selection and training})
\]

Sunk costs should be calculated by summing total annual recruitment, selection and training costs, apportioning them relative to group benefit, and then computing the per capita cost, per week, per group.

Average annual replacement recruits have been calculated from turnover data to give: \(Sm=31; Fm=22; Fw=124; Pw=95; Tw=3; Hw=23\). The levels for female secondary groups make no allowance for temporary recruitment (see 9.4.2), as this stems from their manner of utilization rather than being imposed by group characteristics. Recruitment costs have been calculated by summing the 1980 advertising, estimated administrative and communication costs for all recruits to each group, and then averaging these to per capita weekly amounts. Selection, which incorporates interviewing and selection testing costs, has been evaluated using supervisory pay rates multiplied by the time taken, assuming a half-hour test period. Training has been similarly assessed from data and assumptions reported in 9.4.1 and Tables 9.8 and 9.9. Training method costs have been based on the number of group recruits, assuming skill levels to be as shown in Table 8.4. These calculations show that while the per capita costs of recruitment and selection were low, training was relatively expensive for the employer.

9.2.2(d) Capital Non-utilization Costs \((K)\)

The capital non-utilization cost function is:

\[
K = f(\text{the hourly cost of capital} \times \text{idle hours})
\]
Capital equipment can be regarded as imposing a cost per unit of time because the purchase price, plus a replacement charge to allow for improved design and inflation, should be recouped over its life-span. These costs arise whether the machinery is in use or idle, but for the purpose of inter-group comparisons, they can be conveniently treated as occurring only when idle, it being assumed that saleable output produced during use will cover this part of the capital cost. The hourly cost of capital is computed from the total outlay for its purchase and the hours in its expected life-span. Individual employers could incorporate interest payments, inflation and replacement costs in their calculations, but only the purchase price was available to the author. It is contended that this is not too serious a flaw since the purpose of the exercise was the costing of workgroups; omission would have widened differentials which are sufficiently large without depreciation to give a clear picture, see Table 9.1.

Capital non-utilization arises directly from the 'number of hours' constraint and the work-week pattern. The workgroups' different work-patterns cause equipment to stand idle for varying lengths of time, and therefore they impose different non-utilization costs. For example, a part-timer working 25-hours per week creates 15 hours more idle-time than a 40-hours per week full-timer, but shift working reduces machine idle-time. It is recognized that two part-timers working successively can be the equivalent of one full-timer and in these cases should be regarded as such and treated similarly to twilight workers below, but this was not a common practice in the H&K industry; indeed, most part-timers worked more than half-time hours. Twilight workers, who followed daytime workers on the same machines as in other shift systems, have had their working hours added to the working hours of full-timers to reflect the idle-time savings that their utilization represented. Shift workers using the same machinery continuously should similarly have their annual hours summed to reflect savings of idle-time. Hence, a 3-shift, 7-days per week, 52-weeks per year shift system imposes no idle time costs at all provided there is no absenteeism.

The average weekly non-utilization cost is found by subtracting the employee's actual annual working hours from yearly hours, the remaining non-working hours are then multiplied by the hourly cost of capital and divided by the number of working weeks. This method allows for lost production time arising from absenteeism, unpunctuality and differential holiday periods.

To compute the values shown in Table 9.1, each knitting operative's
machinery has been taken at £18,000 per machine and 7 machines per person; that of finishing operatives has been taken at £1,000 and one machine per person. Respondents assessed life spans to be 10 years for each type of machinery at current intensity of operation. Hence, the hourly costs of capital equipment were:

\[
\frac{£18,000 \times 7}{10 \times 365 \text{ days} \times 24 \text{ hours}} = £1.44 \text{ per hour per knitting operative}
\]

\[
\frac{£1,000}{10 \times 365 \text{ days} \times 24 \text{ hours}} = £0.01 \text{ per hour per finishing operative}
\]

There is clearly a large difference between the capital non-utilization costs of knitting and finishing machinery and consequently these are important influences on demands for males and females given employers' perceptions, see 10.4.1. Capital utilization is also considered in chapter 12.

9.2.2 (e) Time Constraint Costs (T)

This element of the cost calculation allows for factory operating overheads that are especially incurred by the timing of daily work. The daily time cost function is:

\[ T = f(\text{heating and lighting}) \]

Anomalies can arise, because different groups can be present in the factory at the same time, but when a standardized work-week length prevails (in this case 40 hours) it allows normal daily operating costs to be overlooked for workgroup comparison purposes since these are basic expenditures. When 8-hours of operation per day is ignored, a double-day shift imposes only 8-hours of extra operating costs daily and a 3-shift system imposes 16-hours. Twilight shifts, which are timed to take place after normal daily times, impose 4 or 5-hours additional operating costs. However, when these overheads are already occasioned at those same times of day by a permanent shift they can be ignored because no expense is incurred specifically by twilight workers unless their different work areas are separately heated and lighted. Savings of overhead expenses can be occasioned by the use of part-timers when they are the only workgroup employed, but when operating alongside full-timers, no overhead savings are made.

The time constraint cost calculation is a relatively straightforward
matter for individual employers with electricity and other data to hand, but problematical in this context since factories of different size and layout were to be included to arrive at the average figure. However, it is accurate to ignore the normal 8-hour daily operation since sample establishments used full- and part-timers alongside each other and no savings of factory overheads were made by using homeworkers, all being factory producers. Thus, for true comparability, only the 4 - 5 hours of twilight shift operation, and the 8 - 16 hours of overhead expenditure on double and treble-shift operations are missing from Table 9.1 due to difficulties in comparisons and insufficient data.

9.2.2 (f) Place Constraint Costs (P)

Transport assistance and factory overheads are the 'place of work' expenditures for factory workers, which have already been accounted for under (B) fringe benefits (transport assistance), and (I) time constraints (factory overheads). Outstanding place constraint costs are those associated with homeworking. Thus, the place constraint cost function is:

\[ P = f(\text{Work delivery, loss of product control}) \]

Inability to attend factory premises means that work must be transported between factory and home. Where homeworkers perform this service themselves no cost is incurred by the employer, but in sample establishments the employers undertook, and absorbed the cost of, deliveries. Assessments of work delivery should include the driver's time and expenditure on the vehicle. Loss of control over the product could arise from lack of supervision and could manifest itself in two important ways: i.e. late return of work and repeat errors. However the effective wage has already allowed for performance aspects, and also, section 9.6 shows there to be little overall difference in female performance levels. A notional 'employer anxiety cost' could arise from loss of control when order deadlines are looming, but estimation of this is fraught with difficulties and quantification in money terms is unrealistic. However, only one respondent considered there to be a consistent and serious loss of control over the product as a consequence of homeworking, probably because unsatisfactory persons had been used.

Delivery of work is therefore the outstanding expenditure item to be computed under the element (P). Delivery was normally by company van, typically a Ford Transit 1600. Most employers perceived deliveries to be "very expensive", yet none had exact knowledge of costs or kept accurate, regular records, probably because vans were rarely wholly engaged in this
service. Only 4 respondents were prepared to estimate the weekly cost per homeworker, and these are supplied in the extreme right column of Table 9.2. To enable the author to undertake costings, respondents were asked to state the driver's wage, the time expended on collection and delivery each week, and weekly petrol consumption costs. Vehicle depreciation charges were too complex to assess without accurate data, and so have been deliberately overlooked, but individual employers could include these in their own calculations. For companies for which the respondents did not know the petrol consumption, it has been estimated from the residential distances of homeworkers from those factories, assuming return journeys and 2 deliveries per week. Also embodied in the calculations of Table 9.2 are the following assessments:

- **Driver's wages** at £80 per 40-hour/week (the average of quoted rates);
- **Petrol** at £1.27 per gallon, a typical charge for March 1980;
- **Vehicle mileage** at 20 mpg, being the Ford Agent's assessment of a Transit's performance on short urban journeys.

Table 9.2 details the calculations for each establishment from which data was available. It is seen that the computed average weekly homeworker delivery costs was £3.71 (sd=1.61), although of course, economies could be made by fewer deliveries. Respondent estimates averaged £5.30 (sd=1.33) per homeworker. The author's own calculations for the same establishments averaged £4.91 (not shown in Table 9.2) which confirmed that the 4 respondents were 'more or less' accurate (i.e. 8% higher) in their estimates. Work deliveries could therefore demand substantial weekly outlays if numerous homeworkers were used.

### 9.2.3 Conclusions Regarding the Costs of Group Employment

The cost of labour calculation summarized in Table 9.1 represents the author's laborious attempt to compare the relative costs of widely varying workgroups when numerous cost incurring items are incorporated along with each group's performance characteristics and treatment received. Although itemized to the apparent precision of one pence, those sums are not intended to convey such accuracy but merely to show that the item under consideration imposed very small weekly per capita amounts as far as sample workers were concerned. The exercise was valuable in that it revealed the items of greatest cost, and showed how their impact created workgroup cost differentials. It indicates that the employers' national insurance contribution was an important additional cost which overwhelmed the limited fringe benefit and training costs, but the most influential element in the
costing structure was the non-utilization of expensive capital equipment. Clearly it was much more costly to employ knitters on a full-time day, rather than a shift, basis. It should be remembered that most full-time day knitters worked substantial amounts of overtime, no doubt to reduce idle-time as well as to increase earnings. Overtime earnings are reflected in the effective wage, but overtime hours have not been deducted from non-utilization hours because fair comparisons demanded a standardized 40-hour week. The cost of non-utilization is therefore somewhat overstated for full-time knitters. Capital non-utilization costs caused knitters, regardless of their work-pattern, to be more costly than finishing operatives, and this was further exaggerated by higher male pay rates.

Within the female segment, full- and part-timers were almost equally expensive to employ since they received the same pay rates; the slightly higher fringe benefits of full-timers largely offsetting the higher capital non-utilization cost of part-timers. Although twilight workers received the same pay rates they were comparatively less costly because no supervision charges were incurred and savings were made in capital non-utilization and benefit costs. However, this may be a misleading impression because their time constraint cost element (T) was missing and this understated their expense. Homeworkers were the cheapest group, because low rates were often paid, few benefits offered, and no national insurance contributions made. These savings more than offset the cost of work delivery. The exercise has therefore demonstrated that homeworkers are a form of cheap labour.

9.2.4 Conclusions Regarding Cost-minimization

Employers' choice of shift-workers for high-cost equipment provides strong evidence to support the cost-minimization assumption. Furthermore, if employers' claims were correct that most women were unable to work either shifts or regular overtime, then the exclusive use of males for knitting operations was an economically rational response, but as stated previously, the author is sceptical about this. However, confining women to the much more numerous, lower-paid, labour-intensive jobs is held to be an important cost-minimizing strategy because by doing so, different standards for setting skill grades and wage rates can be adopted and severance costs, influenced by wages, are contained. Indeed, employers are judged to be cost-minimisers with regard to other aspects of the employment relationship, such as recruitment via the EILM (7.1.2) and selection for redundancy (9.4.2).
Nevertheless, judging preference solely on the basis of workgroup costs, the rank implied was: 1 = homeworkers; 2 = twilight workers; equal 4 = full- and part-timers, which might suggest that cost-minimization was unimportant because had it been, secondary workers could have been used in larger numbers than was the case. However, it should be remembered that variables other than costs require consideration for secondary groups (e.g. order deadlines, administration, supervision and the unsuitability of operations, see 12.5) and these can explain observed patterns of usage. Thus, when taking such a wider, long-term view, cost-minimization was seen to be a major employer objective, see also 10.3.1.

9.3 STATED EMPLOYER PREFERENCE

It had been anticipated that employers would prefer to select full-timers at the expense of part-timers due to economies in capital utilization (see 1.5.4), but in some cases their first preference might be homeworkers should they prove to be cheaper. Twilight workers might be preferred to a 'proper' shift system which would disrupt the daytime work pattern. Consequently, employers were asked to declare both their employee and their group preferences.

9.3.1 Employer Preference Relating to Worker Characteristics

9.3.1 (a) Selection Criteria

In order not to 'lead' respondents, selection questions were among the few open-ended in the interview schedule. It was anticipated that due to open-endedness there might be difficulties in analysing the generated data. It was also anticipated that, because of equal opportunity law, respondents might not be frank with respect to gender in selection processes. In the event, these difficulties did not materialize as clear 'understandings' existed on the behalf of both employers and, apparently, employees regarding the 'appropriate' gender for jobs. Discriminatory choices on the basis of sex during the selection interview did not arise since only members of the 'right' sex presented themselves, see 8.2.1(a): a similar situation had been discovered in the pilot study.

Replies fell into three subject areas, these being:

(i) previous experience, or possession of a high degree of skill;
(ii) the hours of work being offered; and
(iii) personal attributes which related to the physical and temperamental characteristics of the applicant.

Table 9.3 lists all the characteristics that respondents said they
looked for in order to obtain "suitable" workers, and shows the number (percentage) of respondents who mentioned each characteristic. It shows that a heavy emphasis was placed on full-time hours, or on the need for part-timers to offer the maximum number of hours that they could. All except 2 respondents said they had initially searched for full-timers, and only later modified the 40-hour per week requirement when full-timers could not be obtained. In all other respects the selection criteria for full- and part-timers were identical and are therefore jointly indicated in Table 9.3. In stark contrast, the secondary groups were required to be flexible in their offered hours, but in a downward direction. For both groups this took the form of temporary employment (Tables 9.6, 9.16) and additionally for homeworkers, variable and intermittent workloads, see Table 9.17. Homeworkers were also expected to be flexible upwards, particularly those who were engaged on skilled operations using machinery; they were often required to produce a given volume of work when it was available (see 4.2.2 d) which meant that they too needed to offer a considerable number of hours per week, "in order to justify the retention of the machine and delivery of the work".

Previous experience (incorporating notions of high levels of skill and speed), was the most important selection criterion for daytime groups, and also for homeworkers on skilled operations. Less emphasis was generally placed on experience for selection to the secondary groups, because as explained, "operations performed are so simple that they can be learnt in a few hours and there is little likelihood of spoilage". To complement this, more emphasis was generally placed on trustworthiness, commitment, ability to work unsupervised, motivation and the maturity of workers. Many employers regarded age, marital status and financial pressure as indicators of motivation and application; chapter 10 considers the implications. The most important personal attribute for selection as a daytime factory worker was the "ability to fit in" with existing teams so as not to upset congenial relationships. This criterion was particularly prevalent in small companies where personal relations and pleasant atmospheres were considered to be of great importance to the throughput of work. Abilities to 'fit in' were also considered important for twilight workers, but not for homeworkers who had no personal contacts with establishments. Employers' assessments of existing workers' acceptance of applicants were ultimately the bases of decisions to appoint. Appearances, applicants' bearing and good employment records were commonly the foundations of this assessment, but in companies located in the small settlements, respondents
and existing personnel were frequently acquainted with applicants giving firmer grounds for judgements. Noteworthy was the practice at one small establishment where the manager, on the pretext of showing applicants the layout, conducted them around the factory in order to later eavesdrop before making the appointment decision. In small companies particularly, the selection process could be arbitrary; trained workers could be rejected in favour of the untrained. Nevertheless, these actions were motivated by a desire for productivity since shopfloor disagreements could lose output.

Willingness to switch jobs during bottlenecks or lulls in activity was a characteristic looked for by small companies particularly in relation to male knitters. By relocation (i.e. job flexibility) small companies were given production flexibility to adapt to minor fluctuations.

Regarding male selection, required characteristics were very similar to those for indoor females, although 'the number of hours' were not an issue since 98% of the male sample worked the basic weekly hours, and often more. Previous experience was emphasised as was a good employment record, by which respondents meant long periods with each employer. They wished to avoid appointing habitual job-changers, a characteristic associated with youths. Respondents commonly stated a preference for married men with families because they "tended to be more stable", "needed the money", and were "happy to work extra hours".

In summary; regardless of workgroup, employers always looked for previous experience for all operations, particularly those requiring high skill. The number of hours offered was important when selecting for the part-time group; ability to achieve a 'high' (e.g. 35 hours) lower limit being a requirement for appointment in several companies. Less emphasis was placed on twilight hours because these workers were considered to have no difficulty in meeting the low hours requirement. Homeworkers' hours were not an issue since they were unknown; provided they returned their work on time it appeared to be of no concern to employers how many hours they had worked. However, they were expected to accept flexibility at the discretion of employers in the amounts of work done, (see 9.3.2(b)) which by implication meant flexibility of hours. Most emphasis was placed on the personal attributes of twilighers and homeworkers, particularly on commitment to work, motivation to be productive, and the ability to work unsupervised. The anticipated ability to maintain harmonious relationships was a highly important selection criterion for all indoor workers.
9.3.1 (b) Order of Importance of Selection Criteria

Table 9.4 shows the relative order of importance attached to three dimensions of selection criteria. The order was derived by counting the number of respondents mentioning characteristics under each topic heading. It has been assumed that since respondents were being probed, the greater the number of different respondents referring to a characteristic the more important that characteristic was. For example, with respect to daytime females, previous experience and high levels of skill were mentioned by 79% of the respondents' sample whereas both hours and various aspects of personal attributes were cited by 75% of respondents. Although very close, previous experience has been ranked as slightly more important than hours and personal attributes for daytime females. This ranking is consistent with employers' willingness to modify demands for 40 hours in order to acquire employees with appropriate abilities, but the closeness of hours and personal attribute criteria suggest that appointed part-timers would be persuaded to offer maximum hours since these were indicators of the volume of work that could be produced, especially when supervisors could exert control over the efforts applied. It is likely that applicants without the prescribed characteristics would not be considered seriously judging from the importance attached to personal attributes.

The most important selection criteria for twilighters and homeworkers were personal attributes. This demonstrated employers' beliefs that personal characteristics indicating self-application were important determinants of productivity when workers were unsupervised. Age, maturity, financial need (see 10.5), previous associations with the firm, and even appearance were regarded as important indicators. Twilight workers had to be particularly trustworthy since it was imperative that they should not steal output nor damage expensive machinery when unsupervised. Hours were therefore of lesser importance in the selection of twilight workers.

An association appeared to prevail between the order of selection characteristics and the levels of supply (Figure 5:2). Employees in short supply were searched for more widely (Section 7.1) and their skill levels were the most important criterion; in these circumstances personal attributes had to be sacrificed in order to acquire personnel with satisfactory abilities. When applicants were sufficiently numerous to permit greater discernment, employers could select on the basis of personal attributes since skills which were more readily available became less of an issue, although not less important. This suggests that if full-timers had been in excess, their personal attributes would then have become a more
important selection criterion. This hypothesis is illustrated by the lower importance attached to the previous experience of the secondary groups, for as the training analysis shows (9.4.1), most homeworkers were already experienced when appointed.

9.3.2 Employer Preferences

9.3.2 (a) Stated Workgroup Preference

Respondents overwhelmingly indicated that they preferred full-time to part-time workers (23 out of 25), see Table 9.5. They claimed that they always searched for full-timers first, and then selected part-timers if no full-timers were attracted. Only one employer deliberately sought part-timers from preference, and the one remaining respondent had no preferences because his company and workloads were so small that he did not desire any factory females at all. However, 3 respondents stated that they occasionally wanted part-timers for operations for which there was little overall demand, but this was relatively rare.

With respect to preference between factory employees and homeworkers, the outcome was again quite decisive. All (except the one respondent without factory females) preferred indoor daytime groups to secondary groups, but there were mitigating circumstances that resulted in qualifications to this general statement. For instance, while some establishments resorted to twilight and homeworkers intermittently, others, for a variety of reasons, maintained either the twilight or the homeworker group as a permanent feature, see Table 9.6. Consequently, 'effective' demands for the twilight workers and homeworkers were more complex than a simple statement of preference could indicate. Table 9.6 shows more responses for homeworkers than respondents because contradictory answers were obtained referring to different market conditions and homeworker operations. There were a variety of influences affecting demand for the secondary groups: a detailed analysis of these is reserved until 13.5.2. Homeworkers were apparently preferred to twilight workers since 50% of respondents regarded some, or all, of their homeworkers as permanent relative to 33% who so regarded twilight workers. Furthermore, 11 (44%) establishments had never used a twilight shift in comparison to only 2 (8%) that had never used homeworkers. The stated preferred order was therefore: Fw=1; Pw=2; Hw=3; Tw=4.

9.3.2(b) Stated Preference for Work Allocation

Respondents were asked to rank the workgroups in the order of their
desire to supply work when it was in short supply, see Table 9.7. As H&K industries were subjected to seasonal fluctuations such work allocation decisions were taken in practice, but only female groups were ranked since male workgroups were complements rather than substitutes. Rankings ranged from most preferred (rank 1) to least preferred (rank 4). A least (or joint least) preferred rank has been assigned to workgroup(s) that were not used by particular establishments. The mean rank, which gives the rank order of preference with respect to work allocation, has been calculated from these stated and assigned ranks: standard deviations indicate the levels of disagreement regarding each group's ranking. Results show that full-timers were the most preferred workgroup, but were closely followed by part-timers (1.12 versus 1.16). Homeworkers were more preferable than twilight workers, but there was more disagreement with respect to the homeworker ranking. The stated preference rank for work allocation was thus: 1 = full-timers; 2 = part-timers; 3 = homeworkers; and 4 = twilight workers.

9.3.3 Conclusions on Stated Preference

The preference rank order for the allocation of work confirmed and expanded the stated group preference findings of Table 9.5 which implied that generally only full-time workers would have been employed had they been available. Supply of full-time females was lower than demand (5.2.1(b)), and hence employers resorted to part-timers as their second-best alternative. The over supply of part-timers, who were preferred to the twilight workers and homeworkers, indicated that use of these secondary groups had not resulted from an inability to satisfy preference for part-timers. Influences other than supply must therefore have encouraged the use of twilight workers and homeworkers. Further evidence for such influences was provided by patterns of temporary demand and by the downward flexibility of hours which was in sharp contrast to the permanency of employment offered to daytime groups, and by the setting of 'high' lower limits to the number of hours acceptable from part-timers. Nevertheless, the relatively low number of twilight workers and homeworkers used indicated that their numbers were deliberately limited because excesses existed which would have premitted a larger number to be recruited had employers so desired. This provided evidence to confirm the stated preference for indoor workers, and suggested that the 'cheap labour' motive was not the overriding feature of demand for either twilight workers or homeworkers.
9.4 GROUP PREFERENCE IMPLIED BY EMPLOYER'S ACTIONS

The author believes there is much truth in the statement, "actions speak louder than words". Thus, to avoid naivety it was considered important to check stated preferences against employer actions to test whether words and actions complied or conflicted. Examining conditions of service had the additional advantage of establishing relative workgroup treatment which was useful for identifying any discriminatory practices, but it was recognised that discrepancies between stated and implied preference could arise as employers were constrained in their ability to exercise preferential choices. Consequently, lack of choice has been addressed throughout the text as appropriate. It was anticipated that employers would provide training, and would hoard labour as first discussed by Oi, but that these strategies, and the provision of facilities, would be adopted only for preferred labour. Consequently, different transport provision, and training, redundancies, and workload levels would be expected. Sub-sections 9.4.1 to 9.4.6 consider these conditions of service and 9.4.7 draws conclusions regarding implied preference.

9.4.1 Training

9.4.1(a) Methods and Levels of Training

It was envisaged that to attract recruits with the preferred attributes and work patterns, employers would be willing to invest in training and it was expected that the training costs would be lower for the less preferred workers and workgroups because employers were seen as cost-minimizers who would avoid costs wherever possible and reduce training to a minimum. Absolute levels of training would therefore be affected by the supply of potential workers. If an employer was indifferent among workgroups he would select experienced workers from any group rather than provide training. Thus differential training levels could be indicators of group preference, particularly if the jobs performed required generalized transferable skill.

It was also recognised that types of training would be affected by the nature of the operation, with lower skilled operations requiring shorter periods; differential training levels could therefore indicate skill differences and for this see 8.2.2(a)(i). Employers were asked to detail their methods training (classified as methods A to D below) and the number of workers trained by these methods. Results are given in Tables 9.8 for males and 9.9 for females, while the intensiveness of training has been
CHAPTER 9

shown in Table 9.10.

**Key to Methods of Training**

**Method A** - No Training
The personnel recruited were previously experienced.

**Method B** - Demonstration Only
Short demonstrations could be used to train previously experienced personnel who needed only slight revision for proficiency, or for training inexperienced workers to be employed on simple operations. To distinguish between these two reasons for demonstration only, the former is classed as Method B1 and the latter as Method B2.

**Method B1**: experienced operatives needed only intermittent attention over a period of time, equivalent to approximately 1 day of continuous undivided attention.

**Method B2**: used for inexperienced operatives recruited to semi-skilled operations such as drawthreading, trimming of loose ends, sock turning, labelling, folding and bagging. Total training approximated to the equivalent of 2 days continuous undivided attention.

**Method C** - On-the-Job Training
Method C involved other operatives or supervisors teaching recruits over substantial periods in the production environment. This method was used for both skilled and semi-skilled jobs.

**Method D** - Factory School
Factory schools, present only in large establishment, were used as an alternative to method C to train for skilled and semi-skilled jobs.

Methods C and D were appropriate for knitting and all other male operations, and for female operations such as lockstitching, overlocking, pressing, examining, linking, toe-closing and mending. The duration of training varied according to operation, see 9.4.1(b) for assessments by type of job.

Data were missing for 62 (18%) 40-hour/week males (Sm+Fm), this being due to lack of knowledge regarding the training of long-standing employees, the exclusion of 3 self-employed proprietors who performed the knitting operations themselves and shortages of time during interviews. Shift and full-time knitters were aggregated because it was done on both work patterns, but knitters regardless of work pattern, have been shown separately from males on other operations to show the different training patterns. Table 9.9 indicates a full response rate for females and 3 respondents additionally answered for a further 4 homeworkers who, though receiving no work during the interview week, were "still on the books";

9 - 19
this increased the homeworker sample to 131.

Male operations other than knitting had functions that were largely firm-specific, since distinctive factory layouts and methods necessitated on-the-job training to become familiar with the peculiarities of each establishment. Table 9.8 therefore shows a high level of training (93%) for these male operations. Qualitative data indicated that this did not indicate a preference for male full-timers over knitters since they were not substitutes.

Comparison of Table 9.8 with 9.9 shows that a slightly higher percentage of knitters than full-time female operatives had been trained (67% versus 62%). Again this did not indicate preference since these groups were not substitutes and both were equally necessary, but higher levels of training for men could reflect less employer resistance due to the ability to retain them longer than females, see 9.6.6.

All female groups were directly comparable, and thus differential training investment could indicate a preference ranking. Full-timers were apparently preferred to part-timers and twilight workers to homeworkers. The lower level of training for part-timers relative to full-timers was influenced by their over supply which gave employers opportunity to recruit previously experienced personnel; it also supported the stated preference for full-timers because employers could have saved some training expenditure by recruiting part-timers. Nevertheless, 110 (23%) part-timers had been trained on-the-job and 77 (16%) had been trained in factory schools. These statistics are higher than could be expected for a second-best alternative and might indicate some indifference between full- and part-timers.

Qualitative data showed that the higher training of twilight workers relative to homeworkers arose because twilighter selection criteria (Table 9.3) were more heavily biased towards personal characteristics than previous experience. Trustworthiness was particularly important since twilight workers had to be trusted not to steal finished garments or damage expensive machinery while present in the factories during the absence of supervisors and other workers. Employers' willingness to train a relatively high proportion (albeit a small number) in order to obtain "the right kind of person" could be seen as economically rational given the peculiar circumstances of their employment and the opportunities they had for theft. The only training given to homeworkers was a demonstration of the operation, and this for simple operations only. Two thirds of homeworkers had been previously experienced when recruited which reflects
both mobility through the female groups and restrictive recruitment stipulations relating to skill/experience. Consequently, the rank order of preference implied by the proportion of workers trained was: 1=males; 2=Fw; 3=Tw; 4=Pw; 5=Hw.

9.4.1 (b) Training Investment per Workgroup

Total investment per group, summarized in Table 9.10, has been calculated by multiplying the number of workers trained by each method (Tables 9.8 and 9.9) by the assessed duration of each method, and by assuming that the skill composition of each sub-group was in the proportion shown in Table 8.4.

Employers stated that training for the knitting operations could take, for proficiency, between 6 months and 2 years, the longer period being either a safeguard to protect expensive machinery from damage by immature youths, or because the establishment's product demand necessitated resetting machinery for different gauge products at various times of the year which meant that a whole year was worked before the full range was encountered. It could take up to 4 months to train finishing operatives. However, in each case these periods reflected the practice required to achieve proficiency rather than learn the job, so some of the time did not require the attention of a trainer. To derive the training investment it has been assumed that on-the-job and factory school training took the same lengths of time. The following training durations for methods C and D formed the basis of the calculations of training investment and of the costs of training, and reflect the accumulated periods of organized instruction involving the undivided attention of a trainer. They do not reflect the subsequent acquisition of dexterity deriving from prolonged practice which was more appropriately regarded as the gaining of experience.

Knitters: 2 weeks continuous attention, plus 5 further weeks at 20% attention, plus further intermittent attention for 6 months, equivalent to 4 weeks continuous undivided attention.

Skilled full-time males: 2 weeks continuous attention, plus a further 5 weeks at 20%, equalling 3 weeks continuous undivided attention.

Semi-skilled males: the equivalent of 1 week of continuous attention.

Skilled females: as for males, i.e. 2 weeks continuous undivided attention plus 5 weeks at 20%, equalling 3 weeks continuous undivided attention.

Semi-skilled females: the equivalent of 1 week of continuous attention.

Table 9.10 clearly illustrates the variation in employer willingness
to invest in the training of inexperienced workers. It supplements Tables 9.8 and 9.9 by showing that almost twice the total investment had been sunk into full-time compared to part-time females, and that, per capita, training was 50% higher (Fw=1.5 weeks; Pw=1.0 week). Twilight and homeworkers received negligible total amounts, although twilight workers ranked only slightly less than full-timers in the per capita levels. Male knitters received almost twice the per capita investment of full-time females. Thus, the rank order of preference implied by levels of training investment was: 1=Sm+Fm; 2=Fw; 3=Tw; 4=Pw; and 5=Hw.

9.4.2 Redundancy Levels and Procedures

9.4.2 (a) Redundancy Levels

Redundancy figures quoted were complicated by responses received from 2 establishments which operated within larger Company Groups that manufacturing in several locations. These companies were only able to quote the Group rather than establishment statistics, but many redundancies had occurred outside the LLM. One of these had made a 50% reduction in its workforce over the previous 7 year period, mainly outside the LLM (i.e. an average of 7.14% p.a.) The other had reduced by 6% over a 10 year period (i.e. 0.6% p.a.). Establishments belonging to these Company Groups have been eliminated from Table 9.11, but had they been included it would have yielded an average percentage redundancy level of 1.97% (sd=2.31) per annum for daytime females.

No establishment was able to quote separate figures for full- and part-timers, but all claimed there to be an equal incidence. However, 3 companies stated that retirement age workers were severed first, and since the over-60s were more heavily present in the part-time group, that group would sustain a higher impact. Mean percentage redundancy levels, shown in Table 9.11, tend to conceal actual practices. Redundancies tended to occur spasmodically, and it was usual for establishments to experience no redundancies for several years and then to have a spate of them. In fact, 17 of the 24 establishments that employed daytime females (71%) had incurred no redundancies over a 10 year period. Nevertheless, the mean percentage redundancy level is intended to provide a basis for workgroup comparisons. Taking the lowest redundancy level as an indication of most preferred status (i.e. rank 1), stated group redundancy levels suggest that the rank order for redundancy was: 1 = twilight workers; 2 = homeworkers; 3 = full- and part-timers, but this ranking is in direct opposition to stated group preferences (section 9.3).
However, stated redundancy figures conceal more than they reveal. It was frequently remarked that twilight workers were "seasonal workers" and in several companies it was usual to engage them on a temporary basis (see Table 9.6). By definition therefore, they were not made redundant; their contract of employment merely expired. A definitional problem also arose with respect to homeworkers who were always regarded as self-employed; employers therefore did not regard them as 'redundant'. In this research, redundancy has been regarded as the non-availability of work, and the 'laying-off' of workers.

A more accurate reflection was obtained by asking whether establishments had employed any twilight workers or homeworkers during the previous 5 year period, and if so, how many. They were also asked the maximum number they would be willing to employ. Considerable redundancy levels were indicated by the results, see Table 9.12, but there were no such 'implied' redundancies of daytime workers who were never regarded as either temporary or self employed. If the 'implied redundancy levels for twilight and homeworkers are ranked with the stated redundancy levels of daytime workers, then the rank order of redundancies is as shown in Table 9.13, which broadly coincides with the stated preferences of 9.3.

All establishments that had previously employed either twilight workers and homeworkers had made some of these workers redundant whereas daytime females (in 17 establishments) had not been subjected to redundancies during the previous 10 years (Table 9.11). This situation clearly revealed a wide divergence in the redundancy treatment of the daytime and the secondary workgroups.

There was a clear distinction between twilight workers and homeworkers regarding the maximum number that respondents would be willing to use. No respondent was prepared to employ more than 10 twilighters simultaneously. Six was the desired maximum, while 12 establishments had no previous experience of twilight workers. Five establishments usually used 6 twilight workers, one employed 4, while 6 others normally had only 3 workers. In sharp contrast, 11 establishments had no upper limit to the number of homeworkers they would use should the throughput of work require them. One small company had employed 90 homeworkers in the post-second world war era on domestic-type, hand-knitting machines making specialized high quality socks. With respect to redundancy, it is noteworthy that at the time of interview, this number had dwindled to 10 because the fashion for such socks had largely passed. The company appeared willing to allow this output range to die, since they experienced great difficulty in
getting younger workers who would persevere to obtain the required painstaking precision for this type of manufacture. It was suspected by the author however, that another influence was that pay rates were too low to attract other than the elderly to this work; the respondent avoided revealing these particular pay rates. Despite this lack of an absolute upper limit to homeworker employment, most establishments preferred not to employ more than 30 (due to delivery problems associated with vehicle capacity); 6 aimed to keep numbers below ten. The low maximum for twilight workers, contrasted with lack of an upper limit for homeworkers further confirms the stated preference for work allocation to homeworkers (Table 9.7).

9.4.2 (b) Procedure to Determine Specific Redundancies

Redundancy could stem from a variety of causes. It could result from poor sales of a particular line of goods, or range of products, which incorporated operations that were exclusive to the product styles; in such circumstances the personnel performing these operations would be particularly pinpointed for redundancy and their group memberships would be of no significance. Alternatively, it could arise from rationalization, or from cyclical or seasonal fluctuations that caused an overall drop in product demand, and this could lead to a general shedding of labour; this section addresses itself to these general redundancy situations.

Redundancy procedures have been termed either formal or informal. When a regular routine was followed, or an agreed, or clearly understood, written or oral formula was adopted, the procedure was classed as formalized. Arbitrary choices or discretionary patterns of selection with no agreed or understood procedures were those termed informal. If, as suggested, preferred labour was hoarded, then redundancy procedures applying to preferred groups would be carefully structured while those for less preferred would be informal. Full-time females would be expected to have formal procedures while the less-than-full-time groups would face arbitrary ones.

Table 9.14 itemizes methods and data relating to redundancy procedures. Approximately 50% of the core male and female groups had formal redundancy procedures, the remaining workers facing informal procedures because, it was claimed, redundancies had not arisen in their factories. In antithesis, informal procedures were adopted for all workers in the secondary groups. Method (b) was the most highly structured formal procedure in which the selection pattern was to first remove the over-
retirement age workers and then the shorter service workers. However, replies often carried the rider that personal performances regarding absenteeism, quality of work and commitment to work were considered alongside this selection pattern. Persons over state-retirement age did not qualify for statutory redundancy payments, and neither did teenagers who were likely to be among the "last in", so such redundancy selection served cost-minimizing objectives by avoiding redundancy payments. Redundancy payment levels were dependent on age and length of service (see page 2-24) and thus the common practice of selecting "last in, first out", in addition to being a cost-minimizing strategy, was also a method of hoarding persons with most on-the-job experience and loyalty. Method (b) protected the full-time, middle-aged employees who were normally in particularly short supply by ensuring that they generally fell outside the criteria adopted. Although "last in, first out" practices disadvantaged young employees, this was further reinforced by the poor performance criteria for redundancy selection, see young person performances in 10.5. Figure 6:1 shows that over-retirement age females were more numerous in the part-time group and consequently redundancies would have a disproportionate impact on part-timers relative to other groups.

Establishments quoting methods (c) and (e) for twilight workers and homeworkers were among those claiming to provide permanent employment (Table 9.6), but 7 others claiming permanency used them only for overspill reasons and had not experienced general redundancy situations in the recent past. Method (e) cushioned the secondary workgroups more than did method (f) and therefore preferential treatment of twilight workers was implied by the greater proportion who were subject to method (e). Twilight workers have thus been ranked third in the implied preference ranking of females in Table 9.14.

This review of redundancy procedures demonstrates that twilight workers and homeworkers were used to cushion the employment of female daytime factory workers.

9.4.2 (c) Redundancy Pay

The legal framework of redundancy was established by the EPCA, and the RPA set a payment scale depending on age and length of service. Collective agreements could be exempted provided that negotiated payments were in excess of the statutory minimum. Respondents were asked whether ability to negotiate enhanced payments varied by workgroup and Table 9.15 indicates that no establishment had paid, or was willing to pay, more than the
statutory minimum payment to any worker. Thus, the core male and female
groups received only the statutory minima, but particular individuals might
not qualify for these, such as the elderly part-time men. Confusion arose
respecting twilight workers: one respondent claiming that the EPCA did not
apply, another that twilight workers did not work the qualifying periods,
while 3 were uncertain because redundancy had not arisen. All 22
respondents were fully aware that the EPCA exempted self-employed persons,
and thus their homeworkers. Technically, as self-employed, homeworkers
could not be made redundant and were thus ineligible for redundancy pay.

Differential redundancy payments were therefore determined entirely by
law, see 11.4.2.

9.4.3 Variability of Work

Workloads could vary intermittently such that employees had seasons,
weeks or days without any work. Alternatively regular work could vary in
intensity because the amounts supplied were variable.

9.4.3 (a) Intermittency of Work

The rank order of redundancies (Table 9.13) and the stated employment
patterns (Table 9.6) revealed that the work supplied to twilight workers
and homeworkers was substantially more intermittent than that given to the
other workgroups. Of the 12 establishments that had employed twilight
workers, only 5 were employing them in the interview week. The duration
of twilight shifts is shown in Table 9.16 and reveals that the average
period for which twilight workers had been employed was only 17.5 months.
Indeed, the maximum period over which a twilight shift had been in
operation was only 36 months and this included companies claiming them to
be "permanent" features. The respondent claiming permanency after only one
month had just experimentally switched from homeworkers, whom he found
unreliable, to twilight workers.

Five different establishments had a total of at least 12 regular
homeworkers who had received no work during the interview week, and it was
observed that when 3 further establishments referred to their records only
about half of those listed had received work that week. Several
respondents volunteered that twilight workers and homeworkers were
deliberately used intermittently and the terms, "casual labour", "not
permanent", "a buffer", "for bottlenecks", "an overflow", "top-up labour"
were used to describe both groups. The practice of having "a hardcore" of
favourite "good" homeworkers, who were retained and supplied with work when the "less favoured" were not, indicated that individuals employed by the same establishment could have different workload patterns.

The H&K industry is prone to short-time working situations; 8 establishments (32%) indicating that short-time working had occurred in the recent past. To alleviate its obvious disadvantages the union had negotiated an enhanced guaranteed weekly payment system, see 11.2.1(a) and short-time working was widely perceived as a strategy preferable to redundancy. Clearly, the intermittency of work supplied to the secondary workgroups protected the employment of daytime factory workers by evening-out their supplies of work. The common practice of using each of the secondary workgroups to produce the 'peak' of output helped employers to contain the number of core workers since additional recruits during gluts of work could be avoided. Such limitation of core worker numbers effectively delayed the necessity for short-time working because fewer persons needed to share the available work.

In summary, the core workgroups occasionally had intermittency in their work supplies, but the guaranteed payments scheme cushioned them from the worst effects. Employers further cushioned core workgroups by using the secondary workgroups to produce 'top of the peak' output which reduced the need for additional workers whose employment would subsequently be unstable. This strategy minimized the intermittency of work supplied to core workers and maximized its effect on twilighters and homeworkers, see also 9.4.3(b) below.

9.4.3 (b) Variability in the Amounts of Work Supplied

Employers were asked to grade the variability in the amounts of work supplied to the different workgroups in order to test the stated preference for work supply (Table 9.7) and indicate whether employers were able to exercise their preferences. If the secondary groups were utilized to cushion factory employment, then the volume of work supplied to them would be the most irregular.

Company demand varied according to the product; for instance, one establishment producing infant knitwear had no fluctuation since babies were born at all times of year, whereas the demand for fashion knitted outerwear (ladies' jumpers, cardigans and dresses etc.) exhibited high degrees of seasonability. Table 9.17 has been arranged so that the least variable pattern appears in the left hand column and most variable on the right. All establishments that varied seasonally also experienced cyclical
variations.

The workloads of full- and part-timers were identical and this contrasted with the stated desire to supply full-timers in preference to part-timers (9.3.2(b)). Identical treatment arose because full- and part-timers could not be differentiated in practice since they were interspersed along the production line. This way of organizing production (4.4 \(\text{ICC}^{169}\)) meant that employers were prevented from exercising their stated preference, but willingness to so organize it suggests preference to be slight.

Table 9.17 shows that daytime factory workers and twilight workers had very similar workload patterns. Twelve (50%) establishments provided 296 (28%) daytime females with regular workloads which suggests that the smaller companies were more easily able to adapt to changing product markets as \(\text{ICC}^{169}\) suggest. Medium sized companies 12% gave daytime women workloads that varied only annually. However, workloads varied seasonally for 620 (60%) daytime females in 9 (37.5%) establishments which suggests that larger establishments had more variable demand patterns. For none of the daytime or twilight women did workloads vary weekly. By comparison, homeworkers had very variable workloads. Weekly variations were the usual patterns for 96 (69%) homeworkers who were employed by 17 (77%) establishments, the intermittency of breaks often being of short duration. A further 14 (10%) had workloads that varied seasonally, while only 29 (21%) homeworkers, who were engaged on operations not performed inside their 3 factories, had regular amounts of work supplied to them because their output was relied upon.

These workload variation patterns suggest that the smaller establishments which employed proportionately more homeworkers (see 4.5) and provided daytime women with regular workloads were transferring the variability onto homeworkers to cushion the indoor component as suggested in 1.9. Some of the smaller employers remarked that they were "unable to carry the slack" to the same extent as larger companies due to their lower resource levels; thus they tended to under- rather than over-man and resort to the secondary workgroups which were easily laid off. These practices help to indicate why there were greater proportions of homeworkers attached to smaller companies and they had higher redundancy figures and weekly workload variations.

Regarding twilight workers, even though claimed as an "overflow workforce" because extra factory expenses were incurred by their presence, it was economically rational to keep them fully occupied whilst in use. This explains the similarity of their workload patterns to those of the
daytime females. This pattern of twilight worker usage meant that breaks in work supplied were of fairly long duration (i.e. several months or years). Consequently, homeworkers were often attached to one company for many years, whereas twilight workers were frequently lost to their employing establishments. It is concluded therefore that the rank order implied by workloads supplied was: 1 = full-timers and part-timers; 3 = twilight workers and 4 = homeworkers with rank 1 being the least variable.

Employers' stated preferences for daytime rather than secondary groups was demonstrated by the intermittency in employment and the variability of workloads. Data analysed in this section therefore confirms the preliminary hypothesis that secondary workers were used to cushion the employment of daytime factory workers.

9.4.4 Dismissal Procedures

Table 9.18 details the dismissal procedures that were in operation in sample establishments. Standard procedures were as laid down in the EPCA, but 5 establishments claimed to be prepared to give more warnings and be more lenient than was required by the Act but only with respect to core employees. Lack of formalism was apparent in several establishments this being demonstrated by 4 respondents who "did not know" what the procedures were. Of the 19 stating that the EPCA "does not apply" to homeworkers, only 2 establishments (employing 13 homeworkers) were prepared to give written warnings before dismissals; 17 merely told homeworkers that there was "no more work". The implied preference rank as assessed by dismissal procedures was as shown at the foot of Table 9.18.

9.4.5 Transport Provision

Sub-section 5.3.1 showed that all the private bus schemes were primarily aimed at attracting full-time women, and that only 3 part-timers were able to benefit by a one directional journey per day. This showed that only a few employers transmitted their stated preferences into actions, but its apparently limited success (see Figure 5:3) probably dissuaded most employers from adopting it. Twilight workers had never been offered any transport assistance by any establishment, but in contrast, all except 5 homeworkers had their work delivered and paid for by their employer, this being the equivalent of transport assistance for factory labour. This work delivery meant that a higher proportion of homeworkers than factory workers were able to benefit at the employer's
expense, and consequently homeworkers have been ranked first with respect to preference implied by transport assistance. The preference ranking was: 1 = homeworkers; 2 = full-timers; 3 = part-timers; and 4 = twilight workers.

9.4.6 Numbers Employed

Temporarily disregarding stated levels of supply, workgroup preference could also be indicated by the number of workers actually used. A rank order was implied by overall group percentages, but these gave little indication of the differences in usage by establishments. Differences were reflected by assigning a rank to each group, relative to its percentage in each establishment's workforce, and then calculating the mean and standard deviation of these assigned ranks, see Table 9.19 for both measures. Whereas the secondary groups were ranked similarly by both measures, full- and part-timers were reversed. This could indicate that some employers were unable to exercise their preferences for full-timers (which supply data tended to confirm, section 5.2), or it could indicate only a slight preference for full-timers (which analysis of employer perceptions also tended to confirm, section 10.4). It is contended therefore that both these inferences are correct and that although employers preferred full-timers, should they not get them they were not particularly daunted by selecting part-timers, especially if their choice was between young, immature full-timers and mature, committed part-timers.

9.4.7 Conclusions Regarding Preference Implied by Actions

An overall rank order for implied female group preference as derived from employers' actions has been calculated in Table 9.20 by averaging the ranks derived by the foregoing analyses. This overall rank indicates that full-timers were preferred to part-timers although there was merely a half mean rank between them. Daytime factory workers, the core of each workforce, were clearly preferred to the secondary workgroups when judged by the treatment they received, as was revealed by at least 1.5 mean rank gaps between them. Twilight workers and homeworkers were shown to be, on average, almost equally ranked with respect to preference judged by actions; they both received equally poor treatment when compared with to daytime females, but on balance, homeworkers were slightly more favoured and marginally preferred to twilight workers.
9.5 CONSISTENCY OF THE STATED AND IMPLIED GROUP PREFERENCES WITH THE COSTING ANALYSIS

A comparison of the stated and implied female group preferences leads to the general conclusion that employers were as good as their words and translated stated preferences into actions whenever practicable. The daytime group was clearly preferred to the secondary groups, as is evidenced by full- and part-timers rarely ranking either 3rd or 4th. There appeared to be some indifference between the full- and part-timers, particularly in the variability of workloads, and some further indifference was apparent between the twilight and homeworkers.

However, stated and implied preference rankings raise questions regarding the effective demands for the secondary workgroups because an excess supply of potential part-timers would have enabled employers to exercise their preferences for part-timers by avoiding twilight workers and homeworkers altogether. That 141 secondary workers had been recruited suggests peculiar influences on secondary workgroup usage. Qualitative data were helpful in interpreting preference results and were particularly useful in the clarification of such influences in chapter 12.

The cost of labour analysis proffered completely opposing conclusions to those from stated and implied preference rankings. Although, employers appeared to be cost-minimizers with respect to male and female labour choices, they apparently did not practice cost-minimization in their selection of the female workgroups. Had they been more cost-conscious they would have recruited firstly homeworkers, then twilight workers, followed lastly by the daytime groups since that was the order of least cost. However, as section 9.2 concludes, there were circumstances such as administrative difficulties and the unsuitability of operations which militated against the use of the secondary workgroups. Furthermore, if secondary group performances were worse than those of the daytime groups, then these lower costs of employment could be outweighed. Consequently, various dimensions of performance are analysed in section 9.6.
9.6 GROUP PERFORMANCE

Employer preference will obviously be influenced by performance levels, poor performances helping to explain low preference rankings. It was therefore considered imperative to make assessments of relative performances to put stated and implied preferences into context. Performance is an elusive quality which has many dimensions. In attempting to assess performance it is often unclear which elements are the most relevant to the circumstances, but those aspects analysed below were considered as the most pertinent to demands for female labour, particularly the secondary workgroups.

Clearly, efficiency and speed of work (i.e. productivity) will be very important to manufacturers concerned with meeting deadlines. It is also pertinent to earnings comparisons in piecework industries. The ability to work unsupervised and take satisfactory decisions about work in hand (i.e. competence) are important dimensions of performance when supervision is either limited or non-existent. The level of work spoilage (i.e. quality of workmanship) is also important in price-competitive conditions. Late return of work from homeworkers and its subsequent re-delivery for correction could imply low ability, so relative quality of workmanship needs to be clarified. Absenteeism, an important dimension of performance when manufacturers face deadline pressure, and illness, a particular form of absenteeism, have been included, it being anticipated that twilight workers and homeworkers might be under great stress from long active days and isolation. Reliability, explained to mean an ability to 'pull out the stops' in difficult deadline situations, is an important dimension in seasonally fluctuating industries where intermittency requires production at, beyond or below full capacity; variations in dependability can be expected to coincide with stated preferences. High turnover is important and could indicate either dissatisfaction or lack of alternative employment opportunity. Disputes and work stoppages have been assessed because of their obvious importance to production plans; these occurrences could also reveal the workgroups' perceptions of their own bargaining strengths, a topic relevant to power relationships, see 11.2. Homeworkers, commonly regarded as in a weak bargaining position, might not participate in normal dispute procedures, but rather adopt other practices to further their own causes. Thus, an open-ended question was asked relating to the measures used by homeworkers to further their interests. Weekly working hours, an influential determinant of the work performed, has also been included.
Wherever possible, actual values for these dimensions of performance were extracted, but accurate statistics were often unavailable and in many cases values were not comparable across establishments. When this occurred, and because respondents could unhesitatingly answer regarding group similarities and differences, they were asked to rank the groups from "best to worst" (ranks 1 to 4 respectively). Whilst this approach could embody an element of prejudice, employer perceptions are important to employment policy and thus to workgroup usage. Employer assigned ranks were processed as demonstrated in Table 9.20. Calculated mean ranks indicate the consensus of experiences and opinions and standard deviations assess levels of discrepancy in respondent answers, i.e. disagreement regarding the appropriate ranks to assign. The topic of workgroup preference prompted employers to discuss at length the high variation in individual aptitude and application which they generally associated with age and maturity, see 10.5. Male performances were not investigated because job-segregation made irrelevant direct comparisons with women.

### 9.6.1 Productivity

Meaningful answers in terms of hourly units were impractical due to the operations performed and divisions of labour varying by establishment, see 4.2; time input per unit depended upon the operation and its complexity so causing units per hour to vary when working with the same effort. Thus, relative rankings have been adopted as the productivity measure (see Table 9.21); although actual values were sometimes available they were useless for comparison purposes.

Both part-timers and twilighters were ranked as more productive (i.e. they worked faster) than full-timers; part-timers were fastest and there was least divergence of opinion about their ranking. Twilight workers were a close second, but generated more divergence of opinion. Employers explained that the generally high productivity of these groups emanated from their composition of mature persons who had with greater financial commitments than the contingent of young women in the full-time group. Financial need, which was particularly spotlighted by several respondents with respect to twilight workers, encouraged rapid work to increase earnings. Part-time and twilight workers were perceived as maintaining faster speeds over their shorter working periods than the full-timers were judged either willing or able to sustain.

Homeworker answers were notable for the lack of knowledge and divergence of opinion they displayed. Thirteen respondents did "not know
about the productivity of homeworkers". Of the 9 who assigned ranks, 4 assessed them to be best or joint best, and 5, worst or joint worst; there was no middle ground. This produced a rank order of 4 and a relatively large standard deviation. Conflicting rankings can be put into context by reference to qualitative information relating to recruitment methods (Table 7.1) and employer perceptions (10.4). Of the homeworkers 12% had been selected from among ex-employees who had been highly productive when inside the factories (Table 7.1). High levels of homeworker job-competition ensured that, of the previously skilled unknown operatives attracted, only those with high skill, productivity and the desired personal attributes were selected and retained. Respondents with these experiences ranked homeworkers first. Low rankings of homeworker productivity (and other aspects of performance) were given by those respondents who perceived homeworkers to be undisciplined, taking frequent coffee breaks and often interrupted by visitors and telephone calls. This perception was common, but no employer had been sufficiently curious to check whether this was indeed the case. Comments suggested that this perception was prompted because most homeworkers produced less weekly output than the 'average' part-timer, although there were individual exceptions; one homeworker regularly earned more than £60 per week, but her employer suspected that she enlisted the help of others, see 10.4.

Interesting features were employers' general lack of knowledge and obvious lack of concern about homeworker productivity, see also 9.6.8. Overriding interests concerned weekly output, rather than pace in terms of units per hour, but in contrast, productivity was the focus of interest with respect to the indoor component. Internally, productivity and weekly output amounted to the same thing because speed of work determined output when hours were fixed by contract. However, 'fast' and 'slow' homeworkers could process the same output between deliveries by expending variable amounts of productive time.

Lack of concern about homeworker productivity and working hours arose from piecerates (4.2.2(c)) which required payment per unit of output rather than time taken. Piecerates ensured that employers were neither penalized by slow, nor benefitted by fast, homeworker speeds but they were both penalized and benefitted by the corresponding speeds of indoor workers. These differing effects had dual causes: (a) the contractual circumstances, under which the indoor component had agreed work hours while homeworkers had not; and (b) the nature of work supply (4.2.2(d)) whereby indoor workers received a continuous flow and homeworkers had intermittent
small batches. The fixed hours of the indoor component meant slow workers produced less weekly output rather than worked more hours and this reduced price-competitiveness because machine and factory overheads had to be spread over fewer units. With high productivity, overheads comprised a lower proportion of unit costs, so high indoor productivity was imperative. Discreet, small batch deliveries to homeworkers meant that employers were unaffected by pace, both in terms of wage costs and weekly output, provided that all work was punctually returned at the next scheduled collection.

Homeworkers themselves benefitted from their own fast speeds in terms of more weekly hours free of market work and from higher hourly earnings, but not in terms of increased weekly earnings since they were productively idle after work completion until re-delivery. Penalties for slow speeds or frequent interruptions were fewer weekly hours free of market work and low hourly earnings, but weekly earnings were unaffected, these varying with the items per delivery. Ability to secure this change was usually beyond individual homeworker's control; she had to accept the amounts of work delivered, but a frequent employer complaint was that few homeworkers would undertake satisfactorily large amounts. Several employers insisted on minimum deliveries, see 9.6.8.

In contrast, fast indoor workers benefitted from both higher hourly earnings and higher weekly earnings because the continuous flow of work enabled them to increase their weekly output; slow workers were correspondingly penalized by both lowered hourly and weekly earnings. Hours free of market work were unaffected, working hours being fixed. In summary, individuals varied greatly in their productivity levels, but in workgroup terms, part-timers and twilighters were judged to be more productive than full-timers. There was a general lack of knowledge and concern regarding the productive pace of homeworkers, although 4 respondents with close contacts ranked them to be better than, or equal to, all other groups. In fact, if homeworkers were not sufficiently productive they were usually quickly severed.

9.6.2 Competence

Respondents were told that 'competence' referred to the general ability to perform operations satisfactorily and to take appropriate decisions regarding work in hand. Table 9.22 shows there was only a half rank between the most competent (part-timers) and the least competent (twilight workers). A consensus of opinion that part-timers were the most
CHAPTER NINE

EMPLOYER PREFERENCE

Competent is shown by their standard deviation being lowest. Full-timers were second, but with more disagreement about rankings. Homeworkers averaged only 1/3 of a rank below full-timers despite lack of supervision, and twilight workers were fourth. The relative closeness of this ranking indicates that respondents judged there to be only slight competence variation among the workgroups regardless of varying supervision levels (8.2.2.(a,ii)); in fact, 10 respondents ranked all groups equally. Respondents who were using twilight workers and homeworkers for machining stated that they had to be more competent than comparable indoor workers since they must settle their own queries. This characteristic caused some respondents to regard the secondary workgroups as suitable only for very simple jobs, and indeed, the extreme simplicity of many 'homeworker operations' appeared to unfairly stigmatize homeworkers as generally less able. Consequently, there was more disagreement with respect to twilight worker and homeworker rankings, but overall, they were judged to be only slightly less competent than indoor daytime workers.

9.6.3 Quality of Workmanship

With respect to work spoilage, recourse again had to be made to rankings because of product and job differentiation. Table 9.23 shows there were only slight differences between part-timers, full-timers and homeworkers, and each had similar levels of disagreement about rankings. Twilight workers however, were judged to be worst for work spoilage. It was commented that twilight workers caused many errors because they rushed in order to increase earnings to meet financial needs (see 9.6.1); a similar comment was obtained during the pre-pilot study. One respondent thought that higher spoilage arose from lack of supervision. Homeworkers performing simple jobs were considered to have "nothing to spoil", but most respondents said that if the homeworkers' work quality was unsatisfactory their work supply would be "phased out".

9.6.4 Absenteeism

9.6.4 (a) Absenteeism Rates

Surprisingly, few establishments troubled to calculate their absenteeism rates and this resulted in a low response rate. In total, only 8 respondents could quote statistics, and in each instance this was a blanket value covering both full- and part-timers. The daytime workgroup rate ranged from 0% to 8% of contracted hours, with a mean of 2.58%, see Table 9.24. Statistics offered were usually regarded as lower than the
industry average which respondents perceived as being between 8 to 10%; 5 to 15% was the range encountered by NEDO\textsuperscript{192}. Only two conflicting responses were obtained for twilight workers; one a 0% rate, the other claiming twilight absenteeism to be "very high" but without furnishing statistics.

Homeworkers could not be absent in the same sense as the indoor component, but they could be away from home when deliveries arrived, refuse work, or request temporary reductions in the amounts supplied. These strategies have been taken as proxies for absenteeism. Table 9.25 indicates that more than half of the homeworker sample (working in 13 establishments) never unilaterally refused or adjusted workloads; only 16% of the sample refused or adjusted workloads at fairly regular intervals. Respondents did not maintain records of these refusals so they were impossible to quantify, but one described them as "quite often" while another commented that there was "an arbitrary return of work". Both these respondents employed relatively large numbers of homeworkers. Between these apparent extremes of absenteeism were 6 establishments, employing 24% of the homeworker sample, in which workloads were reduced "only rarely". In 3 establishments (18% Hw sample) the frequency averaged one refusal per homeworkers in every two years and these were considered to be justified on the grounds of illness or annual holidays.

9.6.4 (b) Relative Absenteeism

Values quoted in Tables 9.24 and 9.25 are not directly comparable and so respondents were additionally requested to rank the workgroups according to relative absenteeism, with lowest absenteeism ranked 1 and highest 4, again taking refusal or late return as homeworker proxies. Table 9.26 shows that homeworkers were ranked first, with slightly less disagreement about the rank to assign than for other groups. While experiments with flexitime have had mixed results\textsuperscript{193}, the Knitting Sector Working Party\textsuperscript{192} recommend flexitime as a strategy for reducing absenteeism and it is relevant that only homeworkers could have dovetailed production with personal commitments. However as Allen\textsuperscript{140} points out, homeworker autonomy in choosing when to work is a myth due to their role of servicing others on an unwaged basis. Homeworkers nevertheless had the best absenteeism record for as respondents explained:

"They adjust their work times rather than refuse work."

It is commonly understood that homeworkers are afraid to refuse work in case their supply dries up. In this context, one respondent stated:
"They refuse once only. Then they are finished."

Full-timers were ranked better than part-timers for absenteeism whereas in productivity, competence and quality they had been ranked worse. In several establishments with high part-time absenteeism this was perceived as arising "not only from their own, but also from family illnesses" since many were mothers. With respect to full-time absenteeism, it was frequently noted that:

"...younger workers are more frequently absent than older ones".

The younger element were seen as pulling that group's rating down for several dimensions of performance including absenteeism. This point was also noted in the NEDO survey192.

At the time of interview the onset of the recession was being experienced and there were rumours of redundancies in 2 establishments. In these, it had been observed that the absenteeism rates of both full- and part-timers had:

"...dramatically fallen since the threat of redundancies had been announced".

Twilight workers were ranked last, but with a greater divergence of experiences. Two establishments (not currently employing twilight workers and thus not in the statistics of Table 9.26) had previously experienced unreliable twilight worker attendances, this being due either to childrens' illnesses, or because husbands complained about the wife's absence from home in the evenings. It should be remembered that twilight shifts were at a low level in March 1980, and it is reasonable to assume that only where satisfactory attendances had been experienced would there be a willingness to retain when business was generally low. Consequently, results for twilight workers might be higher than they would otherwise have been.

Three respondents commented that the males were better than all the female workgroups with respect to absenteeism, and this was also noted by the NEDO study140. However, the employer of 9 female, and 3 male, hand-machine knitters who admitted the work to be particularly monotonous had experienced otherwise. This suggests that absenteeism could be affected by the variety, interest and perhaps the pay of the job as well as by the servicing of others, and that gender segregation into superior and inferior jobs could create gender performance differentials.

9.6.4 (c) Personal Illness

Researchers have found that homeworkers often experience feelings of isolation and suffer from strain and depression. The author suspected
that twilight workers might also face similar circumstances and therefore an attempt was made to ascertain comparative illness levels, this being a specific form of absenteeism. However, no respondent had knowledge of the health of homeworkers and this again underlined their general lack of integration and frequent lack of personal contact.

No respondent had noticed any differences in the personal health of indoor workers, except in one company where part-timers and twilight workers were absent more frequently for illness than full-timers. These results could imply that no appreciable differences occurred and that twilight working imposed no undue stress, but caution should be exercised with this conclusion. Despite their weak market position (11.2.2), and the few jobs even in busy times, their relative absenteeism and voluntary turnover was worst (Tables 9.26, 9.29). Possibly twilight workers relieved stress by these means, or perhaps the short duration of most jobs gave strain illnesses insufficient time to develop. However, similar to homeworkers, twilight workers were not well integrated into workforces, and low contact with employers (4.4.2(c)) could have caused personal illnesses to pass unnoticed. Thus, the findings on personal illness are open to different interpretations and are inconclusive other than that employers were unaware of workgroup differences.

9.6.5 Reliability

There was general agreement that full-timers were most reliable for producing output in 'tight' situations, although 4 respondents remarked that younger girls were not as reliable as the older, more mature women, see Table 9.27. Possibly for this reason, 14 respondents ranked part-timers as equally reliable. However, the full-timers' longer working day provided greater productive possibilities which, combined with insistent supervision and exhortation, could increase output from the youthful sub-group when completion dates were imminent. Despite this, part-timers were a relatively close second-best. Homeworkers, ranked third, were generally considered to be less reliable than the daytime workers, although there was divergence of opinion, since 6 of the 17 respondents assigned first or equal first ranks. There was slightly less disagreement about twilight worker ranks, with only one of the 6 respondents ranking them equal to daytime labour.
9.6.6 Voluntary Turnover

9.6.6 (a) Voluntary Turnover Rates

Voluntary turnover in textile industries is reputedly high; i.e. between 27% and 45%\(^1\), and between 14% and 50%\(^2\) with female rates reputedly higher than those of males. Voluntary turnover is also regarded as costly; an industry rule of thumb being £150 per quit and replacement\(^3\), but this figure is doubted by the author since costs depend on methods of recruitment. NEDO\(^4\) proffer advice on how to calculate turnover figures and then reduce it. Despite this, only 2 respondents could provide percentage turnover figures; the others merely stated numbers quitting over a given period from which percentage rates shown in Table 9.28 have been calculated for each establishment and then averaged. Only two respondents could distinguish between full- and part-time operatives.

Table 9.28 indicates that homeworkers had lower turnover rates than the indoor component, but several employers remarked that newly recruited homeworkers, "frequently pack it in within one to six weeks", see 10.4.2. Employers did not regard such short-stay workers as 'their homeworkers', so they were not included in the statistics provided. Neither were indoor workers included unless they had completed the trial period (usually one month). Consequently, percentages should be regarded as representing turnover rates after a minimum stay of one month.

In one establishment there had been no homeworker turnover during the previous 8 years; in another, none in the last 6 years; and in four further establishments, no turnover during the previous year. In contrast, only one establishment reported no turnover of full- and part-timers. The mean rate for the daytime group was more than double that of homeworkers and the 21% is within the industry's range, although high standard deviations show variability among establishments. Only one establishment could provide twilight worker figures which makes it impossible to draw firm conclusions, although general comments confirmed turnover to be high. Disregarding twilight workers therefore, reported rates reveal a similar picture to rank order of relative turnover as shown in Table 9.29.

9.6.6 (b) Relative Voluntary Turnover

A full response rate was achieved for relative rankings because respondents had clear perceptions of the groups' relative performances. Table 9.29 also shows that homeworkers had the lowest relative turnover, followed closely by part-timers who had the lowest standard deviation. Twilight workers were the worst for voluntary turnover. Section 5.2.1(a)
shows that 50% of establishments employing knitters, and accounting for 74 (22%) of the sample, had not tested the LLM because they had experienced no turnover. By contrast, only one establishment had experienced no turnover of daytime females. It can therefore be concluded that the turnover of males was generally lower than that of females as shown by CAPITB\textsuperscript{194}, and that it was lowest in small establishments.

9.6.7 Disputes
9.6.7 (a) Number of Disputes

Table 9.30 gives the numbers and types of dispute that had occurred during the previous year. In total, 11 establishments had experienced 13 disputes involving daytime females. Full- and part-timers had identical dispute patterns arising from their interpolation in manufacturing processes; disputes generally affected worker grades or factory departments, and were mainly concerned with earnings and holidays, see 11.2.2(c). No twilight worker or homeworker had staged any kind of dispute and the suggestion that they might do so caused wry amusement. Two comments serve to summarize the situation:

"Twilight workers are more docile" (than daytime workers);

and, about the number of homeworker disputes,

"None. They are so expendable".

The occurrence of disputes could indicate perceived bargaining strength on the part of persons involved, and may therefore be regarded as 'employee perceived market power'. From this viewpoint, Table 9.30 suggests that twilight workers and homeworkers had perceived a total lack of bargaining power for it is unlikely that they were more satisfied with their jobs than were daytime workers, even though twilight workers were paid the same rates. Thus, a revision of rates or holidays would automatically be received by twilight workers who had little need to stage disputes on their own accounts. This situation did not apply to all homeworkers, many of whom performed operations not undertaken inside their factories, or were paid discriminatory rates, see 8.2.1(d) and 8.9.2 respectively.

9.6.7 (b) Relative Quiescence

Relative quiescence (Table 9.31) confirms the findings of quoted values in that respondents unanimously ranked twilight workers and homeworkers first, or equal first, and this resulted in a zero standard deviation. Employers were therefore clearly aware that the secondary
work groups had very little 'muscle' when desiring to affect their own conditions of employment. The daytime workers' mean rank was reduced to only 1.58 because 13 establishments had not been involved in disputes causing all groups to be ranked equal first.

9.6.7(c) Homeworkers' Measures To Influence Their Work Situation

It was hoped that the open-ended question relating to homeworkers' strategies would elicit a variety of responses such as the practice, suspected by the pre-pilot employer, of using loaned machines to manufacture for competitors. In fact, these activities did not emerge, the only devious practice being one homeworker who "tried to sell both machine and output". Responses centred around homeworkers' abilities to conduct person-to-person negotiations with their employers. Perhaps not surprisingly, these negotiations were most successful in 7 small companies where homeworkers were relatively numerous, averaging 34% of the workforce. Negotiations in 6 establishments whose respondents admitted, "homeworkers usually complain about piecerates", often failed whereupon the homeworkers either "accepted the rates", "went elsewhere", or "ceased homeworking" altogether. Homeworkers had no measures at all in a further 6 establishments. Consequently, only 41 (34%) homeworkers were in a position to influence their own conditions of service.

Small companies relying quite heavily on homeworker production maintained better communications than did larger establishments to which homeworker output contributed little. Indeed, several proprietors of small companies paid regular visits to their homeworkers, whereas homeworkers had to make contact with larger establishments either directly by telephone, or indirectly via delivery van drivers. Good communications worked to the advantage of homeworkers whose only option was individual negotiation.

9.6.8 Hours Worked

Working hours comprise two elements:

(a) the basic week, i.e. the hours that the employee has agreed to work in a given time span, and which form part of the written or implied contract of employment or service;

(b) the extra hours worked, either regularly or occasionally, over and above the contracted hours, i.e. overtime.

9.6.8(a) The Basic Week

Respondents were asked to state the average basic weekly hours of
workers in each of their workgroups; results are given in Table 9.33. All full-time and shift workers worked a basic week of 40 hours. Part-timers ranged between 24 and 34 hours, but averaged almost 30 hours per week. Most employers fixed a lower limit to the hours that they would accept from part-timers, but as discussed in 12.5.1(d) some were willing to modify this limit in the light LM conditions. The most usual limit was 20 hours per week, although one employer had set 32 hours as the minimum.

Twilight worker hours varied: those working 15 and 16 hours per week attended for 4 hours per evening, 4 days per week; those working 22.5 hours worked for 4.5 hours per evening, 5 days per week.

As discussed in section 2.3, homeworkers hours are generally unknown. No establishment kept records, and none had an accurate idea of occupied time. Consequently, respondents were asked to estimate how long it would take an average indoor full-timer to perform the average amount of work given to homeworkers; 13 were able to supply this information. This method of estimation, although the only option, was likely to understate expended time due to less conveniently arranged work environments and possibly more interruptions than would be the case for indoor workers. Nine respondents estimated them to be usually supplied with less than 25 hours of work per week, and in every establishment they averaged less output than 40-hr/wk full-timers (although one homeworker produced more than comparable full-timers). Consequently, all respondents regarded their homeworkers as the equivalent of part-timers.

Studies on the supply side of the LM have shown some homeworkers to be occupied for a large number of weekly hours, and that they sometimes use the labour of other members of their families. It is the contentiousness of the topic of homeworker hours that accounts for discrepancy between what employers claim they pay and the hourly earnings that researchers have found homeworkers to receive. It should be noted however, that while the estimated homeworker hours shown in Table 9.33 could be an understatement of actual hours worked, they are very useful for comparison purposes since they circumvent interruption time and lower productivity stemming from poor work surroundings. The average was 20 hours of work, but the 8.57 standard deviation indicates that there was a fairly wide dispersion of values. Eight respondents stressed that every homeworker received a minimum weekly delivery and this was sometimes considerable. From one establishment it represented the equivalent of 30 hours work by a full-timer; from another, the respondent described the volumetric capacity as occupying 18 cubic metres, and weighing about 1/2 ton! These statistics show the amount of
free accommodation provided by homeworkers, but it should be noted that the latter company used only a few homeworkers occasionally which suggests that free accommodation was not the overriding motive of demand.

Even allowing for considerable variations in individual productivity, it is unlikely that twilight workers or homeworkers could consistently produce the same number of items per week as full-timers given that they averaged only about half of the full-timers' hours, but the relatively small differences between these secondary workers' hours could be compensated for by productivity differences thereby causing twilight and homeworkers to be viewed as equivalents in productivity terms. However, part-timers averaged 75% of full-timers' hours, so highly productive individuals might have achieved comparable production targets.

9.6.8 (b) Overtime

Regardless of gender, the number of overtime hours varied among individuals, and not all members of each group worked overtime. Consequently, respondents indicated the average hours worked by each workgroup when overtime was being worked, and also stated the proportion of workers involved. Data and comments showed that a much greater proportion of men than women worked overtime; that male overtime was usually associated with knitting, although shift workers worked it only when under deadline pressure while full-time day knitters worked it on a regular basis; and that female overtime was often worked by young women without family responsibilities.

Actual computed statistics were generally unavailable, but those presented in Table 9.34 have been calculated by the author from raw data. It shows that shift worker overtime varied seasonally and averaged 3.7 hours per week, but that overtime was a permanent feature of the full-time day knitters' work-pattern and averaged 7.4 hours weekly. In no establishment did females (or males associated with the finishing stage of production) work overtime on a regular basis, but a few of them seasonally averaged 2.7 hours weekly. Three respondents estimated the duration of overtime working to be between 12 and 20 weeks per year. In 9 (36%) establishments, females never worked any overtime.

Data are insufficient to distinguish between full- and part-timers, but it was commented that:

"Few part-timers work overtime because they are unwilling to work full-time hours anyway".

According to the national agreement, no premium was payable to part-
timers until after 40 hours had been worked, a factor which could have
discouraged part-time overtime, but limited overtime was worked by part-
timers in 3 establishments that relied heavily on them and paid them an
overtime premium.

The 22.5 hrs/wk twilight workers also occasionally worked an extra
hour or half hour per day when requested. These same twilight workers
never took their allowable tea breaks because, it was explained, they were
"eager to increase their earnings". In no establishment were homeworkers
considered to work overtime, although 6 respondents said their homeworkers
would take more than their usual work to "help get over particular
difficulties". Very good relationships between homeworker and employer
were claimed to exist in these establishments.

In summary: Table 9.34 clearly shows that males generally worked more
overtime than did females. This patterns of overtime working was
consistent with the general shortage of women able to work 40 hours per
week, and with the reported difficulties of getting part-timers to work
almost full-time hours. As discussed in 12.5 an inability or unwillingness
of women to work overtime was influential in structuring demands for
secondary labour and consequently, on the characteristics of market
operation.

9.6.9 Conclusions Regarding Performance

An overall assessment of performance should preferably have each
dimension of performance weighted according to its relative importance.
Collected data could not provide such a weighting, and in the absence of
this knowledge, an equal weighting has been adopted. Unweighted ranks have
been calculated for each workgroup in Table 9.35 by averaging the
calculated rank orders of each performance dimension.

The general conclusion to be drawn regarding overall performance (with
the exception of twilight workers) is that there was little differentiation
among the groups. The closeness of the full-time, part-time and homeworker
mean overall performance ranks (which have only 0.5 of a rank between them)
show that, although slight differences have been revealed for each aspect,
no one workgroup was persistently better or worse than the others. Had
there been clear differences with all respondents ranking the groups
similarly, then standard deviations would have been zero and integer ranks
of 1.0 to 4.0 would have resulted, as was the case for twilight workers and
homeworkers in Table 9.31. The greatest discrepancies were for twilight
workers who received worst assessments in 6 performance dimensions. Hence,
twilight workers' performances could additionally indicate why so few establishments were using them at the time of survey. Greater levels of disagreement about the secondary groups, as shown by larger standard deviations, might be attributable to individual variations, small numbers of twilight workers and homeworkers generally being used and probably causing individual performances to be more noticeable. As one respondent who used a comparatively large number of homeworkers commented:

"Homeworkers are 75% good, 25% poor and unreliable".

Thus an employer using, say one or two homeworkers who fell into the poor category would hold a completely different view from an employer whose homeworkers fell into the good category. Nevertheless the almost consistently better ranking of homeworkers relative to twilight workers helps to explain why homeworkers were utilized more heavily.

The slightly better overall performance, and in particular, the better productivity of part-timers relative to full-timers, helps to put into context why employers actions on redundancy and variations in workload indicate some indifference between these groups, and further, why some employers were apparently content to have part-timers comprising the majority of their female segments when they almost unanimously said they preferred full-timers.

9.7 CONCLUSIONS ON PREFERENCE

The unweighted overall preference ranking calculated in Table 9.36 shows that when taking many pertinent factors into consideration, such as the costs of employment, stated preferences, employer actions and workgroup performances, the order of female workgroup preference was:

1 = full-timers; 2 = part-timers; 3 = homeworkers; 4 = twilighters

As anticipated in section 9.5, the slightly better overall performances of the daytime workgroups might have partially offset the higher costs of their usage, even though on certain dimensions of performance either one or other of the secondary workgroups was judged to perform better.
CHAPTER TEN - EMPLOYER ORIENTATIONS, OBJECTIVES AND PERCEPTIONS

Respondents were always encouraged to discuss the schedule's topics at length when interview time permitted. This strategy yielded valuable qualitative information which was carefully documented and processed. The data proved to be extremely useful because it yielded illuminating insights into employer preferences and choices. Recurrent themes evident from these discussions form the basis of this chapter which clearly underlines the need to consider wider, non-employment factors when analysing LM behaviour.

10.1 EMPLOYER ORIENTATIONS

Irrespective of whether respondents were owner/managers or employees within organizations, they all displayed a production-centred orientation rather than a person-centred orientation towards their styles of management. For example, worker characteristics that frustrated the achievement of production objectives were strongly condemned; few attempts were made to help women overcome the obstacles they faced in combining their domestic and market work other than the acceptance of part-time hours, and when these were allowed, the maximum possible number was usually insisted upon. The varying emphases placed on selection criteria for different workgroups and under changing circumstances (section 9.3.1a) also demonstrated this production orientation. It is noteworthy that proprietors who were manually working on the shopfloor were more appreciative of efforts made by their employees, but even so, the main thrust of their labour market objectives was product oriented. In short, employers' production orientations elevated product market goals above those of the LM, see sections 10.2 and 10.3. Nevertheless, employers generally recognised that the achievement of production targets was contingent on factory harmony (see LM goal 3), and therefore if disquiet threatened to jeopardize shopfloor relations employers would actively involved themselves in resolving difficulties, hence the search for the person who would fit in. However, the motive behind these activities was always production centred. Labour market objectives were therefore dependent on product market dynamics and production targets. Indeed, employer perceptions of employee groups were moulded and conditioned by the contribution that each could make towards the achievement of output targets, see 12.7.3. Strategies for maintaining a congenial environment
were therefore sound economic policies.

10.2 EMPLOYERS' PRODUCT MARKET OBJECTIVES

Employers in this sample had many objectives. There were those relating to the product market and others to the LM. Some were major in that they underscored those with lower priorities. Objective could also be conceptualized as arranged along a time-scale continuum where the major aims were at the long-term end while the objectives of emergency responses were positioned at the short-term end of the continuum. Although there were strong general patterns, some diversity existed among employers, this being more particularly related to product rather than labour market goals.

The desire for expansion was clearly a major goal for many, but not all respondents, although this was generally implicit rather than expressed. Employers were more expressly concerned with retaining their market shares or even with survival in the deepening recession, than to be actually planning expansion at the time of interview. A minority were content with their peak production levels, either because to expand further would create space problems, or because they were pleased to have so well withstood the industry's difficulties.

A more immediate product market goal was to retain satisfied customers, and this was to be achieved by the linked objectives of maintaining high quality and meeting order deadlines. Late deliveries could mean customers were left with stocks of unsold garments that had missed a fashion fad or had to be marketed in the wrong season (e.g. autumn instead of summer) and were thus of the wrong weight for the weather. Anxiety was openly displayed that to deliver orders after deadline dates would mean loss of future custom, and that the retention of satisfied customers was important for future prospects. Consequently, the timing of inputs was seen as critical, and in this the punctual delivery of yarn and the return of garments from subcontract dyers were as essential as having the appropriate workers available; complaints were therefore frequently voiced about the lateness of material deliveries and the short-term unavailability of suitable labour. The latter had important implications for LM actions.

10.3 EMPLOYERS' LABOUR MARKET OBJECTIVES

The research was designed to establish whether employers were cost-minimisers in their demands for labour and if they were, to determine how this objective affected the demand for each workgroup; section 9.2.4 concludes that cost-minimization was a major employer objective. Cost-
minimization is a ramification of employer production-centred orientations and it can also be seen to affect their other objectives.

Employers' labour market goals can be summarized as follows:
(1) cost minimization;
(2) the retention of 'preferred' core employees; and
(3) the achievement of harmonious inter-personal relationships.

10.3.1 Cost-minimization

Establishments operated in highly price-competitive product markets, and cost-minimization enabled them to compete more easily. Job-segregation was a cost-minimizing strategy that allowed lower payments to the majority of the workforce (women on labour-intensive work, see sections 8.2 & 8.3) because equal pay claims became complex. Labour-intensiveness is influential since high marginal costs accrue from increases in pay. As commented:

"...we get no applications from men, but I'm sure that they wouldn't accept the low wages earned by women..."; and

"...to employ men on finishing, we'd have to put the rates up".

It could be argued that a removal of gender entry barriers would not increase overall wage costs since rises and falls in rates would be counterbalanced, but an equivalent reduction in men's rates caused by women's penetration would need to be very substantial to offset even a small rise in finishing rates due to the ratio of finishing to knitting jobs (at least 3:1). Furthermore in recessions, more redundancy occurs on labour-intensive jobs, so low pay contains redundancy payments by being a factor in their levels. Thus, job-segregation was an effective means of minimizing costs. Cost-minimization is further illustrated by: (i) more intensive use of costly machinery; (ii) setting substantial lower limits for acceptable part-time hours; (iii) recruitment via the EILM; (iv) redundancy selection procedures; (v) the structuring of temporary/permanent redundancy practices; (vi) the retention of core personnel to save training and re-recruitment costs; and (vii) in the patterns of secondary labour usage.

10.3.2 Retention of Preferred Core Personnel

The preferred employee can be conveniently characterized as: A person with a high level of competence (i.e. ability and experience) in a required expertise (i.e. a particular skill) who possessed the desired personal characteristics (e.g. gender and marital status) and was able to attend the premises (i.e. a factory worker) for the desired weekly hours (i.e. 40-hours) at the appropriate times of day (i.e. single or multiple shift times).
From this generalization it can be seen that several elements contributed to the notion of 'preference'. Consequently, it was difficult to obtain personnel with all the desired attributes, especially in tight LMs. Recurrent recruitment difficulties had caused employers to desire retention of their core workforces, even in production troughs, since by doing so they were prepared for the upturn in production when it came.

The three most influential elements affecting this desire for retention were:

(i) the difficulties of obtaining persons with the 'preferred' characteristics;

(ii) the costs of obtaining persons with the 'preferred' characteristics (i.e. (a) recruitment and screening costs, and (b) Instrument S costs (14.2.4) such as poor quality and low levels of output from new recruits which imposed timing costs);

(iii) unpredictability in the product market.

Lack of workers with appropriate skills meant unacceptably poor quality output which strongly conflicted with production-centred orientations and product market goals. Core worker retention was thus a means of achieving product market and cost-minimizing objectives because poor quality goods, were very costly in terms of the firm's future prospects. An alternative strategy would have been to 'hire and fire', but this was deemed to be more costly. In addition to the actual costs of training, the recruitment and training of inexperienced workers carried heavy costs in terms of timing when production loads were high; this was due to the lower volume and quality of output produced by part-trained personnel who occupied machinery that could otherwise have been used more effectively. Hence, having obtained skilled core workers, employers avoided redundancies (and voluntary turnover where possible) to:

(i) hoard skills that would be difficult to replace;

(ii) avoid redundancy payments, although the 'last in, first out' practice ensured such payments were either avoided or reduced to a minimum;

(iii) bolster confidence of existing workers who could otherwise fear redundancy and react by seeking employment at companies they perceived as offering more stable employment;

(iv) maintain the firm's status and prestige in the neighbourhood;

(v) maintain the confidence of potential recruits in the stability of the firm's employment so as to assist possible future recruitment.

In order to minimize hoarding costs employers aimed to employ only sufficient labour to produce average output when working moderately fast,
and then to apply a variety of instruments to achieve the necessary boosts and cut-backs in production. Illustrative comments of this strategy were:

"...we have no slack"; and
"...we have no back-up personnel...we can't afford to have them standing around doing nothing in between times"; and
"... we keep manning tight to keep wages high."

Piece-rate payments were chosen whenever practicable and this ensured that retention costs were minimized since only the output produced was paid for. The popular practice of appointing as homeworkers only those people with previous experience with the company was yet another tactic for hoarding skills and reducing screening, training and spoilage costs.

These features demonstrated the long-term attachments existing between H&K employers and their core personnel and they accord well with the long-term employment contracts predicted by both ILM and cost-minimizing IC theories. Indeed, the use of secondary twilight workers and homeworkers as adjustment instruments (see chapters 13 and 14 for a typical adjustment mechanism) allowed these employers to operate without "slack". In this context, a plentiful supply (i.e. a reserve army\textsuperscript{231}) of capable twilight workers and homeworkers (Beardsworth's\textsuperscript{200} 'unestablished workers') who could be easily introduced and discarded (i.e. marginalized, see Allen\textsuperscript{140}) was crucial to these employers who wanted to adjust to market uncertainty without radical modifications of established customs and practices that would de-stabilize such long-term relations, see 12.7.3.

10.3.3 Harmonious Inter-personal Relations

Achievement of harmonious relationships between employers and employees, and among employees themselves, was a goal that was important, especially in small establishments. This objective stemmed from a desire to avoid the costs of voluntary turnover and disputes which could cause disruptions to production, especially during periods of peak demand. This objective was conditioned by production-centred orientations and the cost-minimizing motive, and although somewhat less central than the other goals, it was closely allied to the hoarding of personnel insofar as failure to retain them imposed similar costs. To achieve harmony, emphasis was given to obtaining personnel who would, "fit in with rest of the workforce". This objective resulted in personal attributes figuring prominently as a selection criterion, for example, in the search for "the 'right' sort of person". Nevertheless, this objective was rarely sufficiently important to
persuade employers to grant flexible working times to mothers with children who had to be absent from school. Thus, the 'right' sort of person was someone who could make private arrangements for such eventualities (or preferably didn't have the responsibilities at all) without inconveniencing the employer.

10.4 EMPLOYERS' PERCEPTIONS OF THE WORKFORCE GROUPS

10.4.1 Perceived Male/Female Differences

Out of the 25 respondents, only 5 (3 females and 2 males) displayed an appreciation of the efforts made by women to combine the domestic role with that of employee. Rather than take a sympathetic stance, most respondents displayed irritation especially during questioning on the topics of school-holiday arrangements and children's illnesses. Flexibility of hours during these times was sometimes agreed to reluctantly, apparently because employers perceived they had little choice but to agree. No concessions were voluntarily made to ease women's difficulties other than the organization of work time in two establishments to permit early closure on Fridays to assist shopping (it being assumed as the woman's responsibility) and provide long weekends. Five respondents demonstrated anger when the topic of maternity pay was broached, and a typical comment was;

"I didn't ask her to have a baby".

The widely adopted practice of persuading part-timers to offer the maximum number of hours possible was indicative of an often openly displayed attitude that the family responsibilities of female workers were a nuisance. Although mothers were perceived as proficient workers, their divided loyalties between home and work conflicted with the employers' aspirations for a fast and uninterrupted production flow. In short, there was widespread disapproval, and in some cases resentment, of the perceived importance that mature females attached to their families.

Respondents generally gave the impression that male workers were superior precisely because they did not leave to have babies, or absent themselves because it was school holidays or to take children to the doctor. On the contrary, comparably circumstanced males were perceived as seeking more work in the form of overtime or by moonlighting as a consequence of family responsibilities, whereas women aimed for less. Thus, family responsibilities and financial commitments were perceived as being assets for men but liabilities for women. Moreover, these perceptions clearly acknowledged the inter-dependence of men's and women's orientations to work, and illustrate their instability in changing circumstances, p2-36.
10.4.2 Perceived Differences Between the Female Groups

A dichotomy in performance according to the youthfulness/maturity of full-time workers was often the subject of comment (see 10.5). The dichotomous character of the full-time group created some apparent indifference between part-timers and full-timers when the latter group was regarded as an entity. Respondents reacted as though the poorer performance of the younger cohort of full-timers cancelled out the better performance of the older cohort to make them, on balance, equivalent to part-timers. Hence, part-timers were accepted as an important core group although they were considered as 'second-best' and somewhat less reliable in the sense that over half of them (56%) were mothers with divided loyalties, see Table 6.2. Jointly, the full-timers and part-timers were perceived as being the mainstay of the female segment which was entirely responsible for the finishing of garments and thus of great productive importance.

Although twilight workers were an in-factory group, they were viewed entirely differently from all others. They were regarded as a temporary feature by all but two of the 12 establishments previously using them (see 9.4.3) and thus respondents generally showed little if any concern, or even patience, with twilight workers. Employers did not know whether they were union members, they were not included in any blanket statistics; it had been suggested that few establishments provided written contracts, see 3.2. Some twilight workers in both the pre-pilot and main samples were perceived to be particularly financially pressed. Respondents gave the overall impression that a twilight shift was occasionally an unfortunate necessity to get over a particularly large bottleneck and that the workers themselves were a small, unimportant, inconvenient, temporary addition to the permanent core of the labour force of which they were not a part.

Perceptions of homeworkers varied considerably. In some establishments, usually small ones, they were completely responsible for an operation or range of operations on total output, see 4.4.1(d), and were viewed as permanent features of the firm's labour force. A similar situation existed when employers had failed to recruit on-site workers with appropriate skills and had resorted to homeworkers as an alternative but necessary form of labour. In both these circumstances, employers relied on homeworker output so they often insisted on minimum deliveries; mutual trust, understanding and two-way communications were therefore important elements in the relationships between homeworker and factory personnel. Respondents considered that homeworkers accepted the arrangements as
"mutually beneficial"; the validity of this claim being evidenced by the long associations of some homeworkers with their employers, see 9.6.6. Homeworkers in these situations more often received rates that were comparable to those of factory workers, particularly the skilled machinists. However, 3 respondents perceived certain individual homeworkers to be unreliable and uncommitted to work, often returning it late. This they attributed it to lack of self-discipline and "frequent interruptions for coffee breaks". It was for these reasons that they adopted rigorous selection criteria, and phased out work to such individuals.

In other, often larger establishments, where homeworkers were a very small percentage of the workforce, they were used, similarly to twilight workers, for temporary convenience to get over both short- and long-term bottlenecks. Such employers had lists of experienced personnel encompassing all the operations considered to be suitable for domestic production. Individual homeworkers were used only as and when necessary to meet weekly production plans, with favourite 'compliant' homeworkers used most frequently. In such establishments, homeworkers were perceived as weak, but useful, instruments who should be thankful for the work they got and should accept without question the conditions imposed. It was usual for these homeworkers to be paid lower than factory rates; some had to accept very large volumes of work. A 'take it, or leave it' employer attitude pervaded this type of arrangement.

Regardless of establishment size and criteria of homeworkers use, respondents perceived that homeworking required self-discipline and strong motivation if homeworkers were not to tire and quit. There was an appreciation that earnings would be lowest during the first few weeks when work was strange. There was a general belief that if new recruits survived this early period they would to be satisfactory. A very high early drop-out rate was stated by several respondents, but no statistics were provided to quantify this claim.

Three conclusions can be drawn with respect to abortive attempts at homeworking:
(i) employers knew from experience that although some homeworkers would quit, sufficient numbers to meet requirements would prevail, i.e. "there were plenty others where they came from". Thus employers could still achieve objectives while adopting the 'take it, or leave it' stance;
(ii) the 'take it, or leave it' stance resulted in a scarcity of good homeworking jobs.
(iii) better homeworking jobs would be offered by companies relying on homeworker output.

It was suggested by respondents that the least likely persons to drop out during the early stages of homeworking were:

(i) those who were very "short of money"; and

(ii) ex-employees who were well-known to the employer and with whom there existed good relationships built on previous associations.

No respondent had any clear notion of homeworker productivity, and none displayed concern about it, see 9.6.1, although they recalled that production performances of ex-employees was the prime reason why they had been approached or accepted as homeworkers. Concern was expressed about the relatively small amounts of work that homeworkers were willing to accept because it meant more numerous deliveries, batch breaking and administrative work for a given amount of output. Out of 25 respondents, only one, a manually working proprietor, expressed an appreciative understanding of the difficulties encountered by mothers of young children attempting to earn by working at home, and this again underlined employers' production-centred orientations.

10.5 Employers' Perceptions of Employee Orientations to Work

A consistent theme throughout interviews, regardless of the question being posed, was the influence that 'age' (or rather mature responsibility) had upon performance. If employers raised the topic and time permitted, the relationships between age, performance and group demand was explored. The following sub-sections have been based on the views voluntarily offered by 12 (48%) respondents. Table 10.1 shows the number of respondents who commented, without being being prompted that young workers generally performed less well than all other workers with respect to the tabulated aspects of performance. These values must be regarded as the 'absolute minimum' since respondents took the initiative in offering the information. It would therefore be inaccurate to assume that respondents who did not comment had not observed these, or indeed had observed conflicting associations. Approximately half of the respondents commented on their experiences of poor performances from young workers, see Table 10.1, and additionally they usually asserted that this was a widespread feature of youth employment. Furthermore, a high voluntary turnover rate of young workers has been documented, and this could be consistent with lower performance levels. It was claimed that young workers had relatively low commitments to their work.
10.5.1 The Relationship Between Age and Financial Commitments

Several respondents observed that the process of maturing as employees was linked to the individual's gradually increasing financial commitments, and further, that the magnitude of private responsibilities created variations in employees' approaches to their work. Observations referred to both men and women, although the example below illustrates only the female case. Changing orientations as young employees passed through the critical life-stage of becoming financially responsible and totally independent of parents created variations in performance. Although there were exceptions, the general pattern of development was for financial commitments to increase as the younger worker met a partner, saved for marriage or partnership, and possibly purchased a home and raised a family. Comments revealed that, although this process involved the passage of time which permitted the observed relationships to be regarded as age-related, it was the move to complete independence and the maturing process itself that brought about the changes, making the critical life-stage the dependent variable rather than age.

10.5.2 The Effect of Financial Commitments on Orientations to Work

Respondents noted that as financial commitments increased, the young person's orientation to work gradually changed; a particularly eloquent respondent described the following general pattern of development as observed by him while managing a large establishment for over 14 years. It accurately summarises the discussions with the other respondents.

From age 16 when recruited from school until sometime in the 20s, young workers were generally content with the modest earnings that resulted from fairly low average levels of productivity. The non-automatic nature of 'female' machinery meant that slow speeds resulted when attention wandered even though the work operation could become spontaneous. Slow speeds meant low weekly output which in turn yielded lower earnings since the majority were paid by productivity-based piece-rates. It was not unusual for young employees to achieve only 75% of the average earnings of mature workers on the same operations. During these years, the focus of attention was observed as mainly directed toward social lives, both inside and outside of the factory. They were regarded as, "more flirty", and, "lacking concentration"; features that were used by several respondents to explain low productivity levels. It was claimed that financial aspirations were directed towards the satisfaction of pleasure...
activities; earnings were devoted to social events and clothing, while savings were utilized for holidays.

(This description of the work orientation at the outset of the person's work-life can be characterized as 'socialistic' (see Appendix II), since the focus of attention is social life (both inside and outside the factory) and pleasure activities that are mainly external to the workplace. It emphasises the importance of examining extrinsic factors in relation to work performance and experience as is argued by labour process theorists.)

At some time "during their 20s", it was normal for young persons' circumstances to change. Many embarked on serious relationships which captured their focus of attention and switched it from concentration on socializing to centring on the accumulation of wealth to permit marriage or partnership, and the establishment of themselves as units independent of parents. This new outlook produced, "...a dramatic increase in productivity".

Heavier financial commitments accompanied by higher productivity than formerly continued after marriage with the accumulation of domestic equipment and furnishings and the advent of a family.

Another respondent recalled how some individuals so paced their work that they would exactly predict when a specific item would be bought. This revised orientation, probably indicative of a revised orientation to life in general, can be characterized as 'economistic', since it focuses principally upon the financial rewards with which to satisfy revised aspirations. This account clearly illustrates the perceived instability of orientations.

10.5.3 The Implications of Work Orientations

A 'socialistic' orientation caused low productivity because speeds reduced, or work stopped altogether, when young workers "chattered" or were otherwise distracted from their productive activity. It was possible that such orientation in the early stages of work-life encouraged young workers to gravitate towards larger establishments where colleagues were more numerous and where they would find more friends of similar age. To choose employment in small factories would yield fewer people with whom they could mix socially and such a motivation could explain why larger establishments had been able to attract more full-time females than smaller ones, see 4.5.

The new economistic work orientation caused by the desire for savings created the dramatic increase in productivity, and it was concluded therefore that financial need was the most influential factor in the observed relationship between this critical life-stage and the enhanced
performances observed. Incentive payment methods and a general lack of promotion and up-grading opportunities meant that the only ways of increasing earnings were to work at faster speeds or increase the number of hours worked. In addition, maturing workers became willing to work overtime (see 9.6.8.(b)), and many young women were as keen as young men to have this opportunity. This fact illustrates how differences and similarities in workplace behaviour between men and women, might be linked to both the intrinsic features of employment and the extrinsic factors that determine their employment orientations.

10.5.4 The Implications of Productivity for Employer Preference

Whether or not the above perceptions were accurate assessments of youth behaviour, they represented the attitudes of at least half of the respondent sample. Employers' production-centered orientations caused them to view productivity and weekly output as of paramount importance and unsurprisingly they preferred those workers who were capable of and willing to consistently achieve high levels of weekly output since achievement of production targets was determined by productivity levels and hours worked. Full-time work patterns and high productivity were therefore the characteristics searched for, but these two attributes would rarely coincide, since many full-timers would be viewed either as young, flighty and without commitment, or as mature and shouldering responsibilities that vied with factory loyalty. Data shows employers overwhelmingly preferred full-time workers (9.3.3), but that they implied some indifference between full- and part-timers by their actions (Table 9.20). Certainly, respondents from establishments that had difficulty in obtaining full-timers were apparently unconcerned about it and this was further demonstrated by the frequent lack of separate statistics, and by part-timers comprising over 50% of the female segments in 9 (36%) establishments.

However, when this anomaly is viewed in the context of perceived employee orientations it no longer appears contradictory. Stated preference did not conflict with actions because the preference doubtlessly referred to 'mature' full-timers without family ties who were in particularly short supply. Indifference probably stemmed from employers' experiences of comparing young full-timers with mature part-timers, both of whom were substantial cohorts in their groups, hence the comment, "A good part-timer can produce as much as a young full-timer".

Indeed, part-time economism was further illustrated by reports of acrimony between full- and part-timers over the part-timers' "greediness
for work", while twilight workers' economistic orientations were demonstrated by twilight workers choosing not to take their permitted breaks.

It was concluded therefore that an apparent lack of concern about a shortage of full-timers stemmed from beliefs in the socialitistic orientations of many full-timers and the economistic orientations of many part-timers. An inability to recruit preferred full-timers had merely small detrimental effects providing employers had plentiful supplies of experienced mature part-timers with economistic orientations, since weekly output would be largely unaffected by this compromise. Recruitment practices for core workers were therefore designed to compensate for shortages of ideal workers. For instance, respondents actively searched for persons who, "needed to work for the money", i.e. the economistic orientation. Thus; the indifference between full- and part-time workers is explicable in terms of a complex inter-relationship between age, financial need, work orientations and productivity.
11.1 DEFINITIONS AND SOURCES OF POWER

Power has different meanings in different contexts. In an essay on power and structure, Lukes examines the concept of power and claims that although it, "...looks so simple and innocent...(it) actually carries considerable theoretical and ideological loads". Bertrand Russell, taking a general view defined power as, "...the production of intended effects", and Wrong said, "I do not see how we can avoid restricting the term 'power' to intentional and effective control by particular agents".

For Max Weber, power was signified by, "The chance of a man, or a number of men, to realize their own will in a communal action even against the resistance of others who are participating in the act".

The definition adopted for this thesis is similar to the latter. Here, the word 'power' means, the ability of the parties to favourably influence the terms and conditions under which they work. Lukes sees individuals as possessing a set of expanding and contracting abilities, and being faced with expanding and contracting opportunities. Together these constitute the structured possibilities that permit actions to be taken to influence events. A web of possibilities exists for each individual, the nature of which is both active and structured and sets the limits within which choices can be made and strategies pursued. Lukes claims that any methodology which looks at individuals without examining the structural limits within which they function will not address the problem of these interactions. The structural limits within which the workgroups of the study operated are considered in the following sections which examine national collective agreements, effective representation by trade union officials at local level, the availability of ample alternative employment opportunities and the impact of law. These are seen as the individual and structural limits, or sources of power, capable of producing differential LM status and bargaining strength.

11.2 RELATIVE POWER EMANATING FROM COLLECTIVE BARGAINING

Institutions in the collective bargaining arena of the H&K industry
were the trade union, the employers' associations and the National Joint Industrial Council (NJIC). The NUHKW was the only trade union to represent workers in interviewed establishments and consequently all references to 'the union' signify the NUHKW. Local branches of the manufacturers' associations, each being affiliated to the Knitting Industry Federation (KIF), were situated in Leicester and Nottingham. Table 11.1 shows union recognition by sample establishments and Table 11.2 shows levels of establishment affiliation to employers' associations.

11.2.1 Trade Union Activity at National Level

Interviews with national union officials generated the following data and perceptions. The NUHKW, with its Head Office in Leicester, was organized into 12 local district branches, each having members on the executive committee. Sub-committees relating to various branches of the industry (i.e. (i) socks, (ii) tights, (iii) underwear, (iv) outerwear, and (v) knitting) considered topics relevant to these specific products and formulated policy.

Negotiations for the National Agreement were undertaken by the NJIC which included representatives from the NUHKW, the KIF, and an independent person. Only one national agreement was produced annually, being effective from the beginning of each year. The agreement which related solely to direct production workers applied to affiliated establishments which the union's research officer estimated to comprise 80% of local industry. NJIC meetings occurred 4 times yearly to discuss industrial matters and produce the written document for signing by employer and union officials. Agreement was achieved by consensus after discussion since legislation did not specify voting arrangements.

11.2.1 (a) The National Agreement and its Impacts

The national agreement in force in March 1980 is outlined below together with the impacts of its provisions. Twilight workers were not referred to specifically except to exclude them, but they came under the general 'umbrella' of part-time workers. The KIF refused to recognize homeworkers as employees, but rather as self-employed workers and consequently they were excluded from the agreement's provisions.

The pay agreement took the form of a percentage increase on existing rates, which until the late 1960s was tied to the retail price index. Unsuccessful attempts had been made to reintroduce this relationship. There was no target wage to be attained by the average employee, but the
local union representatives had "notions", or "concepts of reasonable rates for the job". This fair wage concept was founded in the pay of similar factories and the topic was always on the agenda of each industry-sector sub-committee. Product differentiation created wage-setting complications because of the variations in product sizes, varying complexities in the operations performed and differences in the divisions of labour, hence the comment, "It is the variety that causes the complications". The agreement recommended that homeworkers be paid "reasonable rates".

Enhanced terms to supplement the statutory short-time working agreement had been achieved. Employees thrown onto short-time working received their normal piece rates for the hours actually worked, but were paid guaranteed weekly payments at the rate of 90 pence per hour for 'average' workers on single shifts (i.e. mainly women), or £1.20 for those on 2 and 3 shifts. These rates were payable for the remainder of their contracted hours, minus four. Thus, a full-timer received payment for 36 hours and a part-timer contracted for 32 hours would be paid for 28. The guaranteed payment was due whether the worker was idle in the factory or stayed at home, but it could be waived for circumstances beyond the employer's control although not for shortage of orders. The agreement could be suspended for 4 days in each calendar month. There was a cut-off point at 20 contracted hours which caused all but the 2 x 22.5 hour twilight workers to fall outside the scope of the agreement.

Overtime payments at the rate of 36 pence per hour were payable for time over and above 40 hours. The national agreement did not extend premia to part-timers until after they had worked the full 40 hours. Saturday afternoons and Sundays attracted a further 26.5 pence, but union officials claimed that the union was, "theoretically opposed to Sunday working". Due to the characteristics of their employment, twilight workers would find it impossible, and low hour hour part-timers difficult, to achieve overtime payments unless their employers went beyond the national agreement.

There were 27 paid days of holiday per year which had been increased by 1 day for 1980. The Holiday pay rate was 11.5% of the average annual earnings, payable in a lump sum and taxable. A clause in the agreement specifically excluded homeworkers and those part-timers working fewer than 20 hours weekly which excluded 12 of the twilight worker sample.

During the 1970s various flat-rate increases had been awarded under state incomes policies, these being time-based payments. Employers generally wished to consolidate these payments into their piece rates, but this brought a mixed response from employees. Above average workers stood
to gain higher earnings by the consolidation of all payments into piece rates, but below average workers would sustain drops in earnings. The national agreement therefore permitted companies to introduce consolidation provided all affected parties agreed to it. The union had agreed to encourage its members to accept consolidation. Consolidated rates applied equally to all in-factory groups and were beneficial to comparably paid homeworkers who had rarely received the flat-rate payments.

Shift premia, or 'unsocial hours' premia, were payable for hours worked outside the period 7.0 a.m. to 7.0 p.m. at a flat-rate of 46 pence per hour. Twilight workers were specifically excluded from this provision even though they work some of these unsocial hours. Presumably employer negotiators were aware of the purpose of the Evening Employment Order, see Section 2.2.

The power structure suggested by the impact of the national agreement, as judged from the order of greatest benefit, was: equal first = males and full-time females since they received all the provisions; third = part-time females, most of whom received most of the provisions; fourth = twilight workers because they received a few provisions such as holidays and holiday pay; and fifth = homeworkers who were excluded from all provisions.

11.2.1(b) Unsuccessful Negotiations

The following topics regularly appeared on the NJIC agenda, but agreement had proved unachievable. Hours reduction to below the basic 40 weekly hours, sickness pay and a pension scheme had all been persistently refused by employer representatives. The union's aim was to negotiate a "topping-up" of the state graduated pension scheme. Had this proved successful, males would generally have benefitted most since many females broke LM activity during child-rearing years, while flat-rate contributions would have taken a larger proportion of the females' lower earnings. Attempts to introduce an insurance scheme whereby deaths while in work would have resulted in a topping-up of the state scheme to give widows extra income had been unsuccessful. No mention was made of widowers. Homeworkers' holiday pay was strongly resisted; it was claimed that, "the employers stand firmly against it", so the union had always to give way on this point even when they gained concessions for the core membership. "The trouble is, so few homeworkers are members of the union". To remedy this situation, the union had offered concessionary union membership fees to homeworkers. The twilight workers' shift premium was a regular topic, but it had been impossible to negotiate its extension to twilight workers.
11.2.1(c) Perspectives at the National Level of the Union

National officials of the NUHKW were in the forefront of the campaign to improve homeworkers' conditions and the union's official view, in a slightly diluted form, were set out in a code of practice prepared for The Development Board of Rural Wales. Suggested as a minimum, were holiday payments at 10% of annual earnings, reimbursement of overheads, agreement on tax and insurance contributions, maintenance of registers for Factory and Wages Inspectorates, warnings on fluctuations in workloads, access to concessionary goods and social activities; these topics to be formalized in a written statement.

The General Secretary of the NUHKW was a member of the Advisory Committee on Homeworking for the DE and of the TUC's Homeworking Working Party which prepared "Homeworking, A TUC Statement." Despite this top level activity, or perhaps because of it, the union had experienced difficulties in extracting information from companies about their homeworkers. Officials estimated homeworker earnings to be £25 to £30 for a 40 hour week, which they considered to be "very low for skilled operatives". Although many homeworkers were aware of current rates through their previous work inside the factories, union officials believed they accepted less for "the convenience, or more usually the necessity, of working at home". The Homeworkers' major complaint was perceived as being the lack of holiday pay, but annual attempts to remedy this failed since, "little can be achieved because homeworkers are not in a collective bargaining situation, being so dispersed".

Twilight workers were assessed as few in number ("500 in the Leicester area", June, 1979), 50% of whom were thought to be union members. It was thought that the limiting of hours to fewer than 16 to avoid legislative provisions was not a widespread practice. The most controversial issue for twilight workers was perceived as the lack of unsocial hours' premium, which was widely resisted because, "employers claim to provide work at times convenient to the workers". It was perceived that twilight workers were the most vulnerable to a reduction in demand and consequently, "they should be told on appointment of the flexibility of their position". Officials had knowledge of "employers actually bargaining continuity of employment for lower piece rates; for example, 30 pence per dozen instead of 50 pence". Some twilight workers they knew of had accepted such terms, and "therefore union officials need(ed) to be alert to prevent such practices".

Union officials perceived antipathy between daytime factory workers
and homeworkers due to the anticipated threat posed to factory jobs and it was thought that in redundancy situations daytime workers would pressurize employers to sever homeworkers first. Jealousy by daytime workers, many of whom had to work more weekly hours than they preferred, was perceived as arising against both homeworkers and twilight workers because the employer was considered to be accommodating these groups' wishes in contrast to refusing their own. It was stated, "the only bargaining strength that twilight workers and homeworkers possess is their skill which most of them underestimate as a lever".

11.2.1(d) Employer Awareness of National Activity and Agreements

Respondents for all unionized factories were acutely aware of the annual percentage increase in pay and the existence of "union rates" for overtime and shift premia, although there were slight confusions about their current levels and about the details of the guaranteed week agreement. Anxiety was expressed about the guaranteed week's effect: one respondent referred to the Union's manipulation of the employers' desires for consolidation, while another claimed, "...they used consolidation as a 'big stick' to get the guaranteed week". All were aware of an agreed holiday period, most realizing its extension by one day for 1980, but there was diversity of opinion about the current holiday pay rate. Levels of employer awareness of national agreements dropped dramatically for all other topics. Employers perceived the union as "trying it on each year", but that, "normally there's a reasonable settlement". Efforts to improve the secondary groups' conditions were considered "unlikely to succeed", and indeed, "unwise", since they would, "backfire in loss of jobs".

11.2.1(e) Spill-over of National Agreements to Non-unionized Companies

Table 11.3 shows that 10 of the 11 non-unionized establishments were influenced by the national agreement on pay. Two companies occasionally gave less than the agreed percentage, whereas 3 offered more. The spill-over effect of the pay agreement was thus great, since all except 39 of the factory workers in the study received it. As in the unionized sector, all respondents were aware of "union rates for overtime and shift premia", but not all adhered to them. All knew of the holiday periods, many being aware of the one day increase for that year, but there was diversity in the percentage used to calculate holiday pay. No respondent referred to the guaranteed weekly agreement. Thus, as with the unionized sector, concern centred around earnings and holidays for there was little interest in other
conditions of service. The institutional impact on non-unionized establi-
ishments can be summarized by the comment;

"In this area, lower rates won't work because they can go next door
and get 'union' rates".

However, since the national agreement excluded homeworkers, less than
factory rates could be paid in non-unionized establishments, whereas in
unionized establishments union officials could theoretically evoke the
clause referring to reasonable rates. It might be expected therefore that
non-unionized managements would take advantage of union absence by paying
low rates to their homeworkers. Table 11.4 compares homeworker/factory
rates by unionized and non-unionized establishments. It shows that a
higher proportion of homeworkers were paid lower than factory rates by the
unionized sector (39% relative to 13%). However, a high level of non-
comparability in the non-unionized sector conceals the total amount of low
payment, but such non-comparability supports the observation that many
small companies hived-off entire sections of their production process to
homeworking in phase-one type rationalization (see 4.4.1(d)). Neverthe-
less, such underpayment in the unionized sector underlines the ineffective-
ness of unions for improving homeworker conditions and points to the neces-
sity for State intervention to guarantee a fair deal for homeworkers.

11.2.2 Trade union Activity at Local Level

As Boraston et al176 show, it is important to examine union activity
at the workplace in order to accurately determine differential group
benefits from collective bargaining; this is reported below.

11.2.2(a) Institutional Representation

An important duty of any local union official is to secure the union's
recognition. Table 11.1 details the level of recognition in the
establishment sample and the number of workers in the unionized and non-
unionized sectors. Although only 56% of the establishment sample was
unionized, 87% of the worker sample was employed in it. Hence, unionized
factories had larger workforces which enabled the union to have a wide
influence for a given effort. An examination of group utilization by
unionized and non-unionized establishments (Table 11.5 and Figure 11:1),
shows that the overwhelming majority of males (92%), female full-timers
(94%), part-timers (87%) and twilight workers (86%) were employed in the
unionized sector in comparison to only 43% of homeworkers. This
differential union coverage was caused by homeworkers being concentrated in
small establishments where the union was not recognized. Thus, a greater proportion of males and full-time females than of the other groups were directly affected by the National Agreement. Had the NJIC agreed an improvement in homeworker conditions, it would have benefitted only 43% of the homeworker sample unless non-unionized factories also adopted it.

Table 11.5, which indicates average group size per establishment in each sector, shows that there were numerically more full-time than part-time females in unionized establishments, whereas the reverse was the case in non-unionized companies.

A similar situation emerged with respect to establishment affiliation to the KIF. Table 11.2 shows that 72% of establishments were affiliated, and that they employed 92% of the worker sample. Thus, both collective bargaining institutions represented the larger establishments.

An indication of the bargaining strength of employers relative to employees is implied by Table 11.6 which shows that 70 workers were employed by affiliated establishments that did not recognize the union, whereas all establishments that recognized the union were also members of employer associations. This suggests that employers were strong in the bargaining arena relative to these 70 workers, but it also helps to illuminate why there was such a large spill-over of the National Pay Award.

11.2.2(b) Trade Union Membership

Respondents supplied data on their employees' trade union membership since most collected union dues, but only a slight discrepancy in female full- and part-time membership is revealed in Table 11.7. Approximately 75% of all core factory workers were union members. There was a low level of awareness about twilight worker membership, but a high degree of awareness about the non-membership of homeworkers: no homeworker was known to be a trade union member. A rank order for union membership has been assigned to the female segment at the foot of Table 11.7.

11.2.2(c) Trade Union Activity At Factory Level

A subjectively assessed index, representing shopfloor activity across establishments, has been compiled for each group to illustrate their relative representation at grass roots level. Respondents stated the number of times over a 5 year period that each topic had been the subject of union activity. Questions were posed on each condition of service as they were investigated in the interview; respondents thereby being persistently prompted to reveal union influence. Explanations proved
invaluable in revealing the impact of national agreements on non-unionized establishments, but nevertheless, only the 14 unionized establishments have been reported in this sub-section.

Table 11.8 summarizes the number of establishments where various conditions of service had been the subject of union involvement, and shows the assessed workgroup impact of the union's activities. An index has been compiled by examining the union's activity and ascertaining for which group it was its intention to benefit. A direct beneficial involvement received a positive rating of plus 1; an act or omission considered to have a detrimental impact scored a minus 1; where no direct intentional involvement occurred for a workgroup, a zero rating was recorded, even though there could have been an unintentional beneficial spin-off for them. Positive and negative scores were summed to produce an unweighted index. Figure 11:2 illustrates this index to reveal the power structure as it arose from workplace bargaining.

Local union activity about pay rates had occurred in 11 establishments on behalf of the males and daytime females. One firm had paid part-timers 6% less than full-time rates, but the union had negotiated equality. Plus one scores have been awarded for these core groups. There had been no direct negotiations for twilight workers, but this was not detrimental because they always received identical rates: zero was thus scored. Homeworkers received lower than factory rates in 7 establishments, but no action had occurred to stop it: this omission was detrimental and so a minus 1 rating was given. The National Agreement excluded twilight workers from shift premium benefit, but there had been no local action to obtain it. All shift males received premia. Thus, negative and positive ratings were awarded accordingly.

Twelve companies had dismissed workers and union officials had been involved on behalf of males and daytime females; 2 full-timers had been represented in industrial tribunals. No action for twilight workers or homeworkers had occurred despite 2 twilight workers having been dismissed. Homeworkers, "tend not to be dismissed", but, "laid off on the pretext of no more work". There had been no activity to stop this practice. Positive ratings were given to core groups and negative ratings to secondary groups. Six establishments had effected redundancies, and males and daytime females had been the subject of consultations. Letters of intent had been sent to over retirement age workers, and this had a greater part-time impact since most were part-timers. There had been no representation for twilight or homeworkers despite their high levels of actual and implied redundancies.
(9.4.2 and 9.4.3). A few respondents stated that twilight and homeworkers were pinpointed by local union officials for severance before redundancies were considered for core workers. Positive ratings have been recorded for core workers and negative scores for the secondary groups as a result of these acts and omissions. There had been no activity on **redundancy pay** for any workgroup, but severed core workers received the statutory payments. Secondary groups were denied these payments because they were either unlikely to qualify, or were specifically excluded. No local efforts had been made to obtain payments for them, so negative ratings have been given.

Only two establishments reported any activity about **holiday times**. Positive scores were allocating to the core workgroups and zero to the secondary groups who were absent from these factories. No local negotiations had occurred to obtain **holiday pay** for homeworkers. This omission is detrimental to homeworker interests, so a negative rating has been recorded. No negotiations had taken place to agree a strategy for mothers during school holidays despite its importance to both employers and employees. Mothers had to negotiate on personal rather than collective bases and consequently a minus rating has been recorded. No negotiations had taken place to obtain holiday pay for homeworkers. This omission is detrimental to homeworker interests, so a negative rating has been given.

Table 11.8 shows that the greatest efforts had been concentrated on negotiating piece rates and with involvement in dismissals and redundancy procedures. Little activity had occurred regarding other aspects of service. The power structure suggested by these data is considered in subsection 11.2.2(e).

### 11.2.2(d) Areas of Trade Union Inactivity at Factory Level

The National Agreement provided that the **overtime premium** was applicable only after 40 hours. Although several non-union companies offered the premium to part-timers working more than their contracted hours, no such attempts to negotiate this for part-time and twilight workers was reported by unionized establishments, and therefore negative ratings have been recorded in Table 11.8. Neither had any attempts been made to negotiate a **contract of employment** for homeworkers even though the absence of a contract placed them outside legal protection. Omission of such activity was deemed to be very detrimental, so a negative rating was awarded. Tacit approval can be imputed to local union officials in the
light of no union activity regarding the *job-segregation of the industry*. Lack of activity is therefore beneficial to males who obtain the highest paid jobs. A positive rating has therefore been allocated to males.

11.2.2(e) The Power Structure Suggested by Workplace Bargaining

Table 11.8 indicates that, males and daytime females benefitted most from the actions and omissions of their local union officials, but that secondary groups were, overall, penalized by their actions on selection for redundancy and by their lack of action to remedy inferior treatment. The totalled ratings of Table 11.8 are plotted in Figure 11:2 to illustrate the power structure deriving from workplace bargaining. This clearly depicts the degree of secondary group weakness relative to the core of the workforce which was recognized by employers who claimed that:

"Local representatives prefer indoor workers." And that:

"They do not represent twilight or homeworkers at factory level."

Clearly, there is a discrepancy in the perspectives and attitudes of national and local officials if these employer claims are well-founded.

Redundancy strategies were considered by the author to be the best indicator of union preference and thereby of group bargaining strength, because the ability to retain jobs is of crucial importance to any workers. Respondents were asked to rank, on the basis of their experience of local union representatives, the order in which their representative would expect workgroups and/or worker categories, to be severed. Table 11.9, which omits the men who were not substitutes for women, presents these results; rank 1 represents the first to be made redundant. The mean rank shows a clear-cut distinction between the anticipated treatment of core and secondary labour, but only slight differences towards the workgroups forming them. Employers assessed the union’s strategy as complying with their own (Table 9.14) and the resultant power position accords with that depicted in Figure 11:2.

There is little doubt from evidence presented here that secondary workers had very weak bargaining strength, as had been recognized by national officials. Secondary workers were indeed at the bottom of the power structure. Within the core section of each workforce, part-timers were weaker than full-timers who were in turn weaker than the male shift operatives. Consequently it was to be expected that national attempts to secure improvements for the secondary groups failed, because employers, daily observing these weaknesses, reinforced their own resistance to change. In summary, the power structure suggested by trade union activity...
was: 1 = males; 2 = full-time females; 3 = part-time females; 4 = twilight workers; and 5 = homeworkers, where 1 is the most powerful.

11.3 RELATIVE POWER DERIVING FROM THE AVAILABILITY OF CHOICE

Considerable bargaining strength can derive from the opportunity to exercise choice of employment, so that a power structure can still exist when bargaining institutions are absent. Such power derives from the employees' ability to obtain suitable alternative employment, and the employers' ability to introduce appropriate substitutes for labour. There are supply (and demand) side options; voluntary turnover (or worker substitution) can either actually take place, or merely be threatened, in order to resist detrimental changes or remedy unsatisfactory circumstances.

11.3.1 Employee Choice

Employee choice hinges on the availability of suitable vacancies and the supply of competitors; the more vacancies and the fewer competitors, the greater will be bargaining strength. Levels of supply analyses of section 5.2 show generally that males were in adequacy and full-time females were in shortage, but that all other female groups were in excess. The relative importance of selection criteria (9.3.1) confirms that employers sought full-time operatives from preference, so the 477 jobs occupied by part-timers gives an indication of the degree of shortage of full-time females. Full-timers therefore had greater choice possibilities since they were always able to transfer to other employers, but part-timer excess meant job-competition from both full- and part-timers, causing part-timers to be substantially weaker. The scarcity of secondary worker vacancies, particularly of the twilight type, and the great excess of potential secondary workers gave homeworkers and twilight workers respectively very limited, even non-existent, choice possibilities. In a broader context but within the confines of the surveyed LLM, males had more varied and numerically more job opportunities outside the H&K industry (see 2.4) than their female counterparts, and their choice possibilities were therefore enhanced. In certain nearby LLMs a shortage of knitting skills existed which further increased their choices. Consequently, the choice power ranking is assessed to be: 1 = males; 2 = full-time females; 3 = part-time females; 4 = homeworkers; and 5 = twilight workers, where 1 is the most powerful.
11.3.2 Employer Choice

Employer choice hinges on the relative importance of the need and want elements of intended demand and the supply of suitable potential workers, see chapter 13. In general terms therefore, the employer was weak relative to full-timers and strong relative to part-timers who were in excess, and stronger still relative to twilight and homeworkers whose large over supply permitted selection of especially weak individuals strongly needing to retain jobs for financial or other reasons. However, want modification can result in the substitution of less preferred workers and when substitutions are made, the bargaining power of the preferred group is weakened and that of the employer and substitute worker enhanced. Due to the substitution of part-timers for full-timers, the apparently high bargaining strength of full-timers and weakness of part-timers could have been somewhat modified. Examining those operations using either high-cost capital or short-supply skills in greater detail, the operatives concerned were in stronger positions than their lower-skilled and labour-intensively-used colleagues regardless of their workgroups.

11.4 POWER DERIVING FROM LEGISLATION

The Employment Protection (Consolidation) Act 1978 provided the framework for the control of LM behaviour and formalized employment rights (section 2.2), but certain classes of person fell outside the scope of the Act's provisions. Consequently, to determine the impact of this enactment it is necessary to examine the qualifying conditions and interpret them in the light of each workgroup's employment pattern. Individuals or workgroups denied provisions are in weaker bargaining positions than those qualifying for entitlement.

11.4.1 The Scope of the Employment Protection (Consolidation) Act

The following discussion of the Act's provisions does not purport to be a complete interpretation, for this can only be given by the Courts and Industrial Tribunals. For brevity, the qualifying conditions discussed in this section have been confined to those relevant to the study. Consequently, categories of employee frequently excluded from entitlement, such as members of the police force, crews of vessels engaged in share fishing, House of Lords staff, are ignored, as are employees married to the employer since no such workers were encountered.

Table 11.10 column headings utilize the same numbering system as that used on page 2-22 to identify each provision and provide quick reference to
the qualifying conditions which are in turn numbered i to xii, (see row headings). The symbol X indicates that the specified groups were barred from entitlement; where no X appears in a group's column then rights to the provision did exist.

Continuous employment of the stipulated length was the basic qualification for the provisions under the Act and this was termed 'continuous reckonable employment' (c.r.e.). The continuity of service was calculated in weeks ending on the Saturday of the week of termination. Weeks during which employees were on strike did not count as reckonable service, even though employees were still under their contracts of employment, but weeks of lock-out did count. Under the Act, a part-time worker was an employee who worked between 8 and 16 hours per week, but for this study a part-timer has been defined as an employee who worked fewer than the 'normal weekly hours', see glossary. Consequently, part-timers (as defined for this study) and full-timers received identical treatment under the Act's provisions, unless they were contracted for fewer than 16 weekly hours which was rare. The EPCA did not distinguish between men and women, but a differential impact could arise because the different retirement ages of men and women. Persons over the State retirement ages of 60 and 65 for women and men respectively, and young persons below the age of 18, were treated less favourably than other employees for certain provisions, see rows (ix), (x) and (xi) of Table 11.10.

Twilight workers straddled the distinction between full- and part-time workers as defined by the Act. In theory, being employed for slightly less than 16 hours placed twilight workers in substantially inferior positions under law as can be seen from a comparison of row (v) with rows (ii), (iii) and (iv). In practice it made little difference, as will be discussed in the next section. Persons working fewer than 8 hours fell outside the scope of legislation. Some twilight workers could have been engaged on fixed term contracts whereupon they were subjected to special exclusion clauses, see rows (vi), (vii) and (viii).

An employee was defined as, 'a person who is, or has been, engaged under a contract of employment'. Self-employed persons were therefore not employees, but they may be engaged under a contract for services as distinct from a contract of employment. The distinction between these two types of contract is often difficult to establish, see section 2.2. All employers treated homeworkers as though they were self-employed, which thus caused them to fall outside the scope of the Act's provisions, except apparently, Provision 5, the recovery of debts on the employer's
insolvency, see row (i).

11.4.2 The Differential Impact of the Legislation

Table 11.10 clearly shows that the weakest workers under law were the homeworkers. For this reason homeworker pressure groups had unsuccessfully lobbied to have homeworkers written into LM law by means of the Homeworkers' (Protection) Bill, 1979, see section 2.2. The next weakest group were twilight workers with fewer than 16 weekly hours of employment, who also, in effect, fell outside certain provisions due to their intermittent employment pattern. The empirical work has shown that twilight workers were unlikely to retain their employment continually for 5 years. Hence they were in almost as weak a position as the homeworkers, having additionally only the rights to trade union membership and activities and trade union consultation rights on redundancy. However, as considered in Section 11.2.2 (e), these rights had no real value because local trade union representatives rarely pursued twilight worker interests. Part-time day and twilight workers with fewer than 16 hours were in an identical position under law, but part-timers were more likely to qualify for the provision requiring 5 years' c.r.e. than were twilight workers because employer demands for daytime labour was more consistent.

Part-timers with more than 16 hours' service, shift workers and both male and female full-timers were treated identically under the EPCA. These groups had merely to satisfy the c.r.e. clauses for the following provisions: (6) the guaranteed weekly scheme; (7) redundancy provision; (8) dismissal provision; and (9) maternity rights (where appropriate). These groups have therefore been awarded an equal one ranking. Part-timers have been included in this equal ranking because almost all were employed for more than 16 hours. Twilight workers have been ranked fourth because they were always regarded as employees with contracts of employment, and homeworkers have been ranked fifth since they were specifically excluded from the Act.

11.5 THE OVERALL POWER STRUCTURE

Table 11.11 which summarizes the conclusions of the previous sections and shows that whichever measure of power or bargaining strength was applied, men were stronger or equal to women, and daytime females were stronger than twilighters and homeworkers. Full-timers usually had more bargaining strength than the part-time group, and twilight workers usually had more than homeworkers. Relative to employers, males were the most
powerful of all the workgroups not least because each individual knitter operated several automatic machines which caused them to be highly productive. Collective action, or the threat of it, could therefore be very influential.

Thus, the overall power ranking derived by considering all the major aspects contributing towards the workgroups' relative bargaining strength has been judged as follows: 1 = male knitters; 2 = full-time females; 3 = part-time females; 4 = twilight workers; and 5 = homeworkers, where rank 1 is the strongest.
PART C

CONCLUSIONS AND SYNTHESIS
CHAPTER TWELVE - IMPLICATIONS OF THE EMPIRICAL WORK

This chapter aims to explain demands for workgroups, in particular how twilight workers and homeworkers fit into an overall demand pattern. It attempts to clarify many of the issues raised in chapter 1 and to present an overview based on the quantitative and qualitative data, supplemented by the author's personal observations of workers at their work stations. It should provide a base of knowledge regarding secondary workers which will be useful to future researchers in secondary LMs.

12.1 SEGMENTATION

For the hosiery and knitwear LM, the author maintains that:
(i) segmentation occurs between men and women; and
(ii) segmentation also occurs among the various female workgroups.

Segmentation occurring among the female workgroups is distinguished from that occurring between men and women in that it is possible, even probable, that particular individuals will be able to cross the boundaries between one group and another. However, such mobility rarely takes the form of direct group switching; rather it takes place at different stages in the life-cycle, and when it occurs it does not erode the characteristic differences among the groups. Segmentation between men and women is upheld by workforce segregation whereby it is almost impossible for women to climb to the higher segments retained for men.

Why is this so? What purpose do these forms of segmentation serve? Why do they persist in the face of equal opportunity legislation? The general answer must certainly be that both forms of segmentation offer savings for the employer who is operating in highly competitive markets, but there are subsidiary reasons for the existence and persistence of segmentation.

12.1.1 Male/Female Segmentation

With respect to the persistence of male/female segmentation it is contended that this is strongly influenced by the differences perceived by employers in male/female LM activity which results in different male/female work patterns. These employer perceptions are:
(i) the young of both sexes tend to be unreliable; but
(ii) the young male's reaction to marriage and family is to increase his LM attachment via a willingness to increase the number of hours worked,
either basic or overtime hours;

(iii) the young female's reaction to marriage and family is to decrease LM attachment as demonstrated by the fewer hours she is willing to work at those particular stages of her life-cycle;

(iv) most men have little difficulty in working full-time hours at any time of day and therefore can work shifts reliably;

(v) many mature women have severe restrictions on their weekly hours and the daily times available for paid employment, and therefore are generally unsuitable for shift-work due to low hour inputs which causes high idle-time costs;

(vi) many women with domestic commitments are more unreliable relative to men in terms of absenteeism and voluntary turnover and therefore are unsuitable for shift-work because these characteristics cause unviable machine idle-time.

Further research is required to test the validity of these perceptions thoroughly. It could be that blue-collar women exhibit decreased LM attachment after marriage and family only because their employment options are within the present unfavourable job-segregated structure; i.e. if they were in the high paid jobs they could exhibit the same reactions to marriage and family as do men. Even if verified for some individuals, it does not follow that a majority of women cannot work shifts, and therefore these employer perceptions should not be accepted as justifications of segregatory or segmentary practices. Nevertheless, it is contended that such perceptions had strong influences on employer tactics.

It is a rational response to require the running of costly machinery only on a full-time hours basis. Consequently, employers consider it sufficiently worthwhile to give training to young men to operate such machinery because of the continuous nature of life-time employment and their ability to work shifts; however, they do not offer the same training to young women due to expected future intermittency in full-time employment. Their perceptions stigmatize all women as being unsuitable for shift-work which inevitably leads to the use of men only for costly machinery, and ensures a lack of supply of females with knitting machine experience. This perpetuates the job-segregation on capital-intensive/labour-intensive lines.

As illustrated in Figure 12.1 a vicious circle, or positive feedback situation, can arise whereby perceived characteristics positively influence job-segregation, and the desire for cost-minimization also reinforces job-segregation since different wage setting standards can be adopted when
workgroups do not perform 'like work' as specified in law. The resultant LM segmentation produces different LM behaviour by gender which permits employer observations to reinforce their perceptions and this completes the cycle. It is contended that such a positive feedback is the motive force in the persistence of job-segregation in the H&K industry despite equal opportunity legislation.

Male/female segmentation in the H&K industry is judged to exist on the basis of lower female earnings; it is contended that this arises from job segregation because women are confined to lower paying jobs. Lower pay appears to stem from the inferior wage rates that are paid to women with standards of skill similar to those possessed by men. Certainly, many perform work that is equally demanding, if not more so, in terms of the manipulation, dexterity and concentration required. In this respect, it is contended that employers, whether intentionally or by custom, practice divide and 'benefit' rather than divided and 'conquer' tactics, and that the 'cheap labour hypothesis of demand' can be extended to women in relation to men in the H&K industry.

12.1.2 Segmentation Among Female Workgroups

Assuming that employers' perceptions of female workers are well-founded for a substantial number of women, then strong influences on workgroup formation are also supply imposed via the constraints to paid-work-available time and insufficient less-than-full-time employment opportunities. These pre-entry LM influences during the child-bearing and rearing years are therefore fundamentally responsible for segmentation among female workgroups, but post-entry influences arising from shortages of skill and factory space also have impacts. Insufficient part-time vacancies encourage the consideration of twilight and homeworking jobs, but for some potential workers these forms of activity are doubtlessly the only options. Thus, the hours, time and place constraints create an oversupply of potential workers for the part-time and secondary groups and this causes high levels of competition for these jobs and weakens the market positions of individuals seeking them. "Take it or leave it" attitudes pervade many employers' approaches to secondary group applicants and this is illustrated as the restrictive specification barrier in Figure 12:2. The exclusion of homeworkers from equal pay legislation leaves the door open for employers to adopt discriminatory pay rates, although some do not do so, and the high level of job competition, coupled with employer attitudes, no doubt places potential homeworkers in the invidious situation
of having either to accept discriminatory rates, or to have no paid work. Part-time and twilight workers are in slightly better positions in that, as employees, they are better protected by LM law and collective bargains, and the fact that none perform exclusive operations. Again, the 'like work' loophole would have enabled employers to adopt inferior wage rates for these groups, but collective action had removed or prevented the implementation of these company policies in the surveyed LLM.

The impossibility of providing supervision for homeworkers influences many employers towards allocating higher skilled jobs to daytime workers whose quality of workmanship can be hierarchically monitored by supervisors, and the lower skilled jobs to homeworkers to reduce risks of spoilage, see Figure 12:2. The over supply of potential less-than-full-time workers facilitates this selection strategy by allowing the recruitment of skilled part-timers. While this form of skill segregation is a rational response to managerial control problems, the non-comparability of operations performed by homeworkers again enables different rate setting standards to be adopted. The differential pay rates so caused result in a degree of segmentation within the female segment. Thus, the earnings of homeworkers can reflect both a degree of confinement to lower skilled jobs and the payment of discriminatory rates. However, the greatest discrepancy between secondary and core worker experience is in the lack of permanency of twilight and homeworking jobs and the variability of homeworker workloads. Both full- and part-timers have much greater degrees of permanency and constancy than do the two secondary groups.

Whether or not secondary workers are confined to lower skilled jobs is largely determined by the reasons for their use; these are discussed in section 12.3. Obviously, secondary workers introduced to supply rare skills and being used because of bottlenecks on skilled operations, or twilight workers employed to intensify the use of specialized machines, are not being given low skilled jobs but rather have access to skilled jobs via the back door, see Figure 12:2. Thus, the skill profiles of the secondary groups are not uniformly semi-skilled.

12.2 THE RATIONALE BEHIND WORKGROUP DEMAND

The prime objective of all labour demands, given a production-centred orientation, is to tailor labour inputs to production requirements. Within the context of the above suggested segmentation, three fundamental reasons explain the complex inter-related demand patterns of the various workgroups. These are:
CHAPTER 12

Reason Why Demand Arises

1. To produce the steady bulk of output.

2. To provide services for the rest of the workforce.

3. To provide production flexibility to adapt to variable product demand.

Workgroups Involved

Male shift workers; female full-and part-timers; a sub-group of the male full-timers, i.e. dyehouse workers; and a homeworker sub-group demanded to provide additional space, or rare skills.

Part-time men and the remainder of the male full-time group, i.e. warehouse and internal delivery men; machine mechanics.

The twilight and homeworker groups; demands for overtime and short-time hours from the core workgroups.

The inter-play of these fundamental reasons for demanding workers produces the observed employment patterns and workloads for workgroup members. For instance, workers demanded for reasons 1 and 2 enjoy continuous employment and relatively regular workloads; workers used for reason 3 experience irregular workloads and employment. However, the reasons for demanding twilight and homeworkers vary more than for all the other groups, and although it is contended that generally they are used for reason 3, a substantial number of individuals comprising these workgroups are used for reason 1 (i.e. to produce part of the stable bulk of output) due to the following two subsidiary reasons:

4. Shortage of daytime workers with the desired skills.

Twilight workers and homeworkers.

5. A shortage of factory space.

Homeworkers to provide domestic space; twilight workers to intensify factory/equipment utilization.

Reason 4 results in secondary workers being given skilled jobs (Tw=71%; Hw=52%). Reason 5 is an important factor in the allocation of
semi-skilled jobs to secondary workers, since by adopting this policy there tends to be less risk of spoilage due to lack of supervision which is particularly difficult to arrange on a permanent basis for twilight workers, and impossible for homeworkers. Labour demands arising from reasons 4 and 5 provide relatively stable employment for a hardcore of secondary group members, but as product demand fluctuates, a less permanent supply of extra secondary workers are introduced and severed to cope with twilight worker and homeworker bottlenecks. Hence, 'core' and 'secondary' elements can be conceptualized within the secondary groups themselves.

Notwithstanding that these reasons encompass demands for both core and secondary labour, the external conditions under which demands arise and the choice processes associated with them require clearer exposition.

12.3 CONDITIONS UNDER WHICH WORKGROUP DEMANDS ARISE

As implied by the reasons for demanding labour, group utilization springs directly from prevailing conditions in product and labour markets. Matching labour input to product output is no doubt a relatively simple matter in industries facing constant product demand, for having recruited sufficient numbers to produce the necessary output, the most that remains is to replace leavers. For industries such as H&K that face substantial, short-term, irregular variations in product demand, the matching process can necessitate considerable short-run flexibility, such as alternating recruitment and severance policies with their attendant costs, unless alternative adjustment strategies are devised. Sub-section 10.3.2 claims that retention of experienced workers was a major goal of interviewed employers, but this objective conflicted with a recruitment/severance policy. Consequently, employers utilize the secondary workers as a strategy for providing necessary adjustments to production requirements whilst retaining intact the experienced core of the workforce.

It is concluded therefore that twilight workers and homeworkers are used to provide employers operating in variable product markets with short-term flexibility. They are demanded to 'cushion' the employment of core workers as was hypothesized in 1.5. It is held however, that short-run fluctuations in product markets are not the only conditions that motivate the use of secondary workers. Bottlenecks of work in progress can develop from machinery breakages and short- or long-run stoppages, or from shortages of appropriate labour in both stable and unstable product markets. These bottlenecks also create the need for variable production capacity, but they have their origins either in the organizational problems
of the firm itself, or within the dynamics of the labour market. Consequently, employers operating in stable product markets may also demand secondary labour intermittently.

Nevertheless, it is contended that in general, short-run fluctuations in the product market are characteristic features of secondary group employment. Reasons 1 and 2 (page 12-5) typify core labour demands while reasons 3, 4 and 5 typify secondary labour demands.

12.4 STRATIFICATION IN THE HOSIERY AND KNITWEAR LABOUR MARKET

Clearly, workers demanded for reasons 1 and 2 are placed in higher LM strata than those demanded for reasons 3 by virtue of having more stable workloads and lower chances of redundancy. The criteria of demand as outlined above, considered in conjunction with remuneration and other terms and conditions of service, lead to the ordering of strata as shown in Figure 12:3. Mechanics are ranked higher than shift knitters because they are generally classed as "staff", are paid monthly salaries rather than weekly wages, and have more benefits such as pensions schemes and bonuses (8.4). Skilled workers have been placed above the semi-skilled, and full-timers above part-timers following the rank orders of Part B. Full-timers have slightly better promotion and training opportunities (8.2.2(a) & 9.4.1), and probably less chance of redundancy. Part-timers face more stringent selection and some do not obtain certain rest periods. Part-timers have been ranked above twilight workers due to the twilight redundancy conditions, while twilight workers have been placed above homeworkers because none are paid the discriminatory pay rates of homeworkers and they do have the legal status of employees. However, the core homeworkers of stratum 10 have been ranked higher than the twilight workers of stratum 11 because of the greater permanency of employment for these particular homeworkers.

The stratification depicted in Figure 12:3 illustrates how men generally held superior positions in the H&K LM, but that the top strata within the female segment were in positions superior to the sub-groups occupying the lower strata within the male segment. In this respect it is consistent with Ashton & Maguire's finding that market segments overlap without boundaries being eroded.

12.5 CHOICE PROCESSES

Choice of a particular workgroup is considerably more complex than appears from the simplified characterization of a workforce comprised of a
harcore of experienced daytime and shift workers to which variable numbers of twilight and homeworkers are periodically added and deducted to furnish the necessary production flexibility. A number of pervasive influences affect the workgroup selection processes.

12.5.1 Factors Influencing Workgroup Choice

12.5.1 (a) The Limitation of Core Worker Numbers

A policy of retaining workers during demand troughs (see, 10.3.2) conflicts with the objective of cost-minimization because it is costly to retain workers who are under-employed, although it is usually more costly to sever them when redundancy payments are incurred. To lower the costs of employment stability, worker numbers are limited to those required to achieve less than peak output when producing at moderately fast speeds; median output is used for illustration purposes in chapter 13. By limiting core worker numbers, employers reduce the costs of retention during production troughs, but by retaining them they:

(a) save the training costs of subsequent replacements;
(b) save training time which is crucial when order deadlines loom;
(c) maintain stable relations within the firm and avoid disruptions; and
(d) reduce voluntary turnover by protecting piecework earnings.

Operatives rewarded by incentive methods cannot achieve high earnings if over-manning occurs and shared workloads force efforts to be below normal levels. Good operatives having their pay eroded in this manner are likely to be tempted to transfer to other establishments that can offer heavier and more consistent workloads. Rather than risk the loss of 'good' employees, an employer will attempt to minimize basic numbers and make adjustments via temporary top-ups of labour input. It is thus rational to under-man rather than over-man, especially in small establishments where low voluntary turnover is particularly important since each operative processes a considerable proportion of total output. This strategy provides another explanation why the smaller sector used more homework labour.

12.5.1 (b) Choice of Work Pattern

The cost of equipment is an important factor affecting workgroup choice because high-cost machinery has high idle-time costs and vice versa, see element (K) in the cost of labour calculation, Table 9.1. Cost-minimizing employers initially select the machinery's work pattern by minimizing the per capita hourly cost of factory operating overheads,
unsocial hours premia and machinery idle-time, and then recruit workers with the appropriate work pattern. Figure 12:4 illustrates this work pattern decision where the hourly cost of machine idle-time *per operative* is plotted vertically, and hourly cost of factory overheads proportional to the amount of space consumed by the operative's machinery is plotted horizontally. A line of equality termed a 'decision line' denotes the breakeven points where the costs of operation equate to the costs of idle-time. If unsocial hours premia are paid for shifts or overtime, new decision lines are created by moving the line of equality upwards by the total value of premia to compensate for additional expenditure. The position that each point assumes in relation to the appropriate decision line determines the work pattern for that type of machinery. Equipment having points above the decision line will be selected for multiple shift operation, while equipment having points below it will be used only on the single shift. Consequently, different work patterns can coexist side by side within establishments, but factory space must be apportioned to balance the throughput of work at each stage of production.

Points F and K depicted in Figure 12:4 have been calculated for an establishment that provided all the necessary details. This company used its knitting machinery on a shift system and its finishing machinery on daywork only. Point F, denoting a 16 pence per person hour overhead cost, shows that it would have been uneconomic to operate the finishing machines on a shift basis because the nationally agreed shift premia at 55 pence per person per hour (11.2.1) overwhelms the one pence per person per hour idle-time cost (9.2). A 36 pence per hour nationally agreed overtime premium similarly makes overtime working uneconomic, although anxious employers will produce by such expensive means for short periods because the long-term costs of lost custom are usually greater. Similarly, the point K shows that despite the 55 pence shift premium it would have been uneconomic to operate knitting machinery on a single shift basis because the 65 pence per person per hour operating cost was considerably less than the £1.44 pence per hour idle-time cost. Even though different makes and models of machine and overhead expenditures will vary among establishments, these cost-effective work patterns for knitting and finishing machinery are unlikely to vary due to the wide discrepancies between the per person value of the machines, see 4.2.1.

Thus, the costs of equipment are highly influential in the selection of either shift or daytime core groups. The lower the idle-time cost, the greater the likelihood that it will be operated on a less-than-full-time
basis. However, after the initial purchase and allocation of factory space it is possible to operate machines less intensively when there is a large fall in product demand, the rationale behind this action being;

"it is better for the machines to stand idle than for them to produce unsaleable products".

In fact, when a point falls near to the appropriate decision line an employer may select a less than optimally intensive work pattern in order to build in considerable flexibility; e.g. for a point falling between overtime and shift premia lines, single shift plus overtime operation may be chosen to build in shift working potential by providing a subsequent doubling or trebling of output (depending on the shift pattern) and simultaneously safeguarding against redundancies should a fall in demand ensue.

12.5.1 (c) Choice of Males and Females

For the reasons outlined above, less-than-full-time work patterns are uneconomic for operating high-cost machinery since they create long-idle time periods. This is the economic backdrop to the recruitment of females to labour-intensive tasks and males to capital-intensive tasks. Employers perceive that a substantial proportion of young female full-timers, when they reach their mid-thirties, will prefer part-time employment if they wish to continue LM participation. Since it is impossible to pinpoint who those particular individuals will be, it is a 'safer' cost-minimizing strategy with respect to capital utilization and training to recruit only males for capital intensive operations.

12.5.1 (d) Choice of Full- and Part-time Females

The firm's choice of core female workers is both externally imposed and internally determined. Employers either cannot (because "males will not accept the low pay involved") or will not (because it would erode wage differentials) recruit males for the more numerous manipulative labour-intensive jobs that remain the woman's preserve. Hence, female full-timers are the preferred choice to fill core finishing jobs for general production purposes. When demands exceed supply, as in the surveyed LLM where concentrations of H&K and footwear manufacturers draw upon similar pools of blue-collar full-timers, employers have the following options:

(i) to recruit males to female jobs, but this could erode pay differentials which would have a large marginal impact due to labour-intensiveness requiring large numbers of workers.

(ii) to recruit part-timers; this strategy results in more machine idle-
time, but many part-timers are highly productive and this offsets the 1 pence per person per hour idle-time cost; or (iii) to recruit the secondary groups, but this means lower supervision and possibly less control over the timing of work completion; batch breaking, delivery and collection impose costs and can be time consuming; therefore if timing is an important parameter of the selection decision, secondary workers with part-time inputs can rarely produce sufficient output in the available time.

Faced with these alternatives, option (ii), the recruitment of part-timers, is the most cost-effective solution. As individual productivities are more clearly visible in small factories where employers and workers are in close proximity, the better performances of part-timers might partly explain why they outnumbered full-timers in the small sector, Table 4.2(b).

An additional reason for accepting part-timers with little objection is illustrated by Figure 13:2 (b) which shows that, as time-rate workers producing as much as full-timers, they are cheaper to employ, a particularly important feature at low output levels when equality of output is most likely to occur. A desire for flexibility can be another minor motive for accepting part-timers since they are usually adaptable in a downward direction when persuaded to work more hours per week than they desire, although this flexibility is offset by less adaptability in an upward direction. However, recruitment of part-timers at peak production times will build-in downward flexibility in readiness for a forthcoming trough. Furthermore, if seasonal lulls coincide with school holiday periods, part-timers can ease the dearth of work at no expense to the employer by "taking time-off without pay". Moreover, part-timers are sometimes demanded by fashion manufacturers to produce special, short-lived fashion features on a limited number of items and in these instances they are the preferred choice because the output required is insufficient to warrant the employment of a full-timer. Nevertheless, in general, part-timers are chosen as a second-best alternative.

12.5.2 Factors Influencing the Choice of Secondary Groups

Secondary groups are generally recruited by factory producers when circumstances or mishaps threaten to undermine intended production plans that rely on core labour. Both twilight workers and homeworkers are demanded to provide flexibility to changing production schedules and to cushion the employment of core workers. Each can be accurately described as bottleneck labour and each is demanded to fine tune labour input by
providing necessary "top-ups" to core labour inputs and absorbing subsequent fall-backs in demand. However, the secondary groups are often only used on a limited number of operations and although they serve the same purposes, factors influencing the choice of secondary groups are more numerous than those affecting core worker choice and this makes selection more complex.

12.5.2 (a) The Nature of Production Bottlenecks

Selection complexity arises because bottlenecks can be general or specific, foreseen or unforeseen, large or small. For instance:

(I) **General undercapacity** exists when there are shortages of labour or capital equipment on all operations.
   (i) general undercapacity will be **foreseen** when more orders have been accepted than can be produced on premises, and as such the degree will be calculable so that prior arrangements can be made to sub-contract the work to other firms.
   (ii) **unforeseen** general undercapacity can result from labour disputes, bouts of absenteeism arising from local epidemics or service breakdowns such as power cuts.

(II) **Specific undercapacity** arises from lack of particular expertise or specialized capital equipment for selected operations.
   (i) specific undercapacity can **predictably** result from deliberate first-phase rationalization as described in 4.2.1(d).
   (ii) specific undercapacity will more usually arise **unpredictably** from machinery breakages and/or employee absence or voluntary turnover.

(III) **Large bottlenecks** of all four types described above usually stem from high production schedules and therefore most frequently occur in large establishments.

(IV) **Small bottlenecks** of all four types will often arise from the lower production schedules of small companies, but naturally they can also occur from short stoppages in large factories.

Several common situations that produce bottlenecks and give rise to secondary demands can be identified. These are:

1. shortages of core personnel with the required skills;
2. shortages of factory space;
3. unbalanced and varying productivity levels at different stages of production;
4. under-manning;
(5) pace of work variations on different operations; and
(6) absenteeism and turnover.

(1) Shortages of Core Operatives with the Required Skills

Shortages of daytime core personnel with specific skills can arise during either high or low product demand due to general shortages of such labour in the ELLM, or from voluntary quits and illnesses coupled with short-term irreplaceability. Deadline pressures often allow insufficient time to train inexperienced replacements, or even for re-recruitment and induction of experienced workers, which thereby prevents the solving of bottlenecks by core personnel themselves. Secondary workers who owe their employment to general shortages of specific skills in the ELLM, particularly those with skills that are being technologically superceded and for which employers are reluctant to train, are the elite of the secondary groups and can find their work supply regularly and constantly heavy because they are demanded for reason 1 of section 12.2.

(2) Shortages of Factory Space

Companies that expand over time as is frequently the case (see, 4.3.2.) can experience shortages of factory space. This constraint is particularly prevalent in small, entrepreneurial companies commencing trading from low financial bases and which are thereby unable to procure large or extendable premises. Reorganization as described in 4.2.1 (d) is a rational response, with the first phase providing secondary group employment of a continuous nature, and the second phase often withdrawing it, except for intermittent, short-term, unpredictable bottleneck demands.

(3) Unbalanced and Varying Productivity Levels

Different operations in the productive process with unmatched productivity levels can lead to backlogs of work when workers with different LM activity characteristics man them. Outputs can become unmatched, even though manning and outputs were initially balanced, due to varying levels of overtime input or increases in effort. Figure 12:5 illustrates output flexibility for differently productive operations having heterogeneous labour input. Low-output operatives produce only half (say 5 batches per person per hour) of the production possible on high-output operations (10 batches per person per hour) when working with the same degree of effort. Consequently, twice the number of low-operatives are used to balance the throughput of work and ensure a continuous flow from one operative to the next. If labour input flexibility varies, as when different amounts of overtime are offered, frequently claimed to be the case with male and female labour, the previously balanced output becomes
unbalanced. For example, when 7 hours of overtime per person per week are worked on the high-output male operation (Table 9.34), and 4 hours each (i.e. 8 hours total at a ratio of 2:1) on the low-output female operations, the result is as follows:

High-output opn. 7 hrs x 10 batches x 1 opv. = 70 extra batches/wk

Low-output opn. 4 hrs x 5 batches x 2 opvs. = 40 extra batches/wk

A bottleneck of 30 batches per week is produced on the low output operation. In this situation the employer has several options:

(i) he can set his employee ratio permanently higher than 2:1, but this forces him to carry a greater excess capacity than necessary during low activity which conflicts with the cost-minimizing objective and erodes piecework earnings so risking voluntary turnover of experienced core personnel;

(ii) he can allow the ratio to vary with activity, but this conflicts with the goal of retaining intact a stable internal workforce;

(iii) if deadlines are imminent he can introduce temporary secondary workers for the bottleneck period and this does not adversely affect the core element of his workforce;

(iv) he can limit the amount of overtime worked on the high-output operations so as to maintain equilibrium, but this produces less than the possible output of option (iii); or

(v) he can allow the snarl-up of work to accumulate in the knowledge that as production schedules fall, the bottleneck will disappear as high-output operatives cease overtime and fast pace, while low-output operatives continue overtime and fast pace until the bottleneck is removed.

Of these options, (iii) and (v) are the least disruptive and most cost-effective, but there may be insufficient time before deadlines to adopt option (v). Hence option (iii) is the most common solution.

4 Under-manning

Many companies under- rather than over-man since this strategy offers savings in fixed labour costs and provides the opportunity for piece-workers to reach high earnings, which encourages loyalty, see 12.5.1(a). However, tight manning policies aggravate bottlenecks during periods of high activity but prompt fast work pace since small amounts of absenteeism, unpunctuality or voluntary turnover result in relatively quick snarl-ups.
Overtime introduction and the temporary recruitment of secondary labour are the usual short-run expedient solutions.

(5) Pace of Work Variation on Different Operations

Payment-by-results schemes encourage high productivity by permitting workers to reach high earnings and this is particularly advantageous to employers during periods of high activity. However, time-paid employees are penalized for fast work since they achieve lower remuneration per unit produced when earnings remain constant, see Figure 13:2(a & b). Employers can find that time-paid personnel are unwilling to increase pace to the same extent as incentive-paid personnel and consequently bottlenecks occur on the time-paid jobs. If overtime and bonus payments fail to induce incumbent workers to clear the backlog, temporarily introduced secondary workers are commonly resorted to.

(6) Absenteeism and Turnover

Even without a tight manning policy, bottlenecks can occur in both expansionary and contractionary times as work flows from one operation to another when positions are unmanned. Empty positions can arise from absenteeism or quits and the short-term irreplaceability of personnel. When reliance is placed on mothers with dependents, the risk of absenteeism is claimed to be relatively high because those with no background support for dependents will be absent for family commitments as well as personal illnesses.

* * *

These general situations lead to the accumulation of bottlenecks of varying sizes and characteristics. Selection of the appropriate group to remove them is, like core labour, subjected to pervasive underlying influences, some of which encourage, and others that discourage, specific group use.

12.5.2 (b) Choice of Twilight Workers

Factors influencing the choice of twilight workers are:

Encouraging Factors
(i) a large backlog of work;
(ii) large-sized, or costly capital equipment; and
(iii) a shift-system already in existence.

Discouraging Factors
(iv) additional costs of factory overheads and quality control;
(v) the need to comply with statutory regulations.
In general, substantial bottlenecks are necessary before twilight working becomes viable because a minimum of 2 persons are required for factory work by the Factories Acts. A wise employer will therefore recruit a minimum of 3 twilight workers to build-in some limited but automatic cover for absenteeism. Large bottlenecks are likely to occur in large establishments and thus twilight working is more associated with large establishments than small, and also with factories where a shift system is in use because existing shift workers can provide supervision and first-aid cover at no additional cost. Twilight working is the only in-house option for solving bottlenecks on machines that are too large for domestic premises, and it is a convenient means of intensifying the use of the relatively costly equipment manned by females. A twilight shift is a useful means of re-attracting, at practical times of day for them, experienced personnel temporarily withdrawn from the LM due to family commitments.

However, since twilight working usually additionally commits the babysitting services of assistants, twilight workers are perceived as being unreliable and with high turnover rates and they are sometimes avoided for these reasons. Shortages of factory space can discourage the use of twilight workers for, when earnings are calculated from completed batches, one operative cannot take over another worker's work without complicating the calculation of wages, a circumstance that is strongly resented by employees. Provision of 'special' twilight supervision, quality control and first aid personnel, and the incurring of factory overhead expenses by opening the premises especially for them, makes twilight workers relatively expensive alternatives to homeworkers, even though greater influence can be exerted over them by the bureaucratic mechanism. These extra costs, plus the employers' statutory obligations arising from their status as employees, can make twilight workers a less attractive proposition for cost-minimizing employers than the homeworker group which is excluded from protective legislation. These important factors were probably responsible for the larger number of homeworkers than twilight workers in the workforce sample of surveyed establishments.

In summary, twilight workers are essentially the large machine, large bottleneck alternative to homeworkers. Obviously, after a twilight shift has been introduced, additional workers can be inexpensively introduced on any operation. As a result, side-by-side with large or costly machinery, or in the presence of an existing shift system, it is possible to observe small-sized, low-cost machines operated on a twilight
shift basis. When bottlenecks accumulate on large machines and are the reason for the introduction of a twilight shift, other existing shift systems may not be present alongside it.

12.5.2 (c) Choice of the Homeworker Group

Homeworkers are recruited for any type of bottleneck situation provided that the necessary capital equipment can be fitted into domestic premises. More numerous factors encourage the choice of homeworkers than twilight workers, and these are:

Encouraging Factors
(i) small-sized bottlenecks;
(ii) short-lived bottlenecks;
(iii) a shortage of factory space;
(iv) a shortage of in-factory workers with the appropriate skills;
(v) a shortage of time to train inexperienced in-factory applicants; and
(vi) exclusion from protective legislation.

Discouraging Factors
(vii) the impossibility of providing supervision;
(viii) the time and costs involved in batch-breaking, quality control, delivery and collection; and
(ix) the labour-input-to-bulk ratio.

From the employer's viewpoint, homework is most useful for small-sized, short-lived bottlenecks that can be cleared within a few days or weeks, since severance of homeworkers is less noticeable than redundancies of the more visible twilight workers, and thus is less likely to unsettle the core factory workforce. Shortage of factory space that results in first phase rationalization particularly encourages homeworking. In first phase rationalized situations a hardcore of well-respected homeworkers benefit from a continuous work-flow because their jobs are essential and not internally undertaken, while other homeworkers are introduced and discarded to accommodate the seasonal cycles. Thus, a simple stratification of homeworkers produces markedly different income and employment sensitivities for homeworkers employed by the same establishment; employers use both core and secondary homeworkers for these exclusive jobs. In addition, homeworkers are frequently introduced to provide the short-supply skills that are internally unavailable, either in the short- or long-run, and again such homeworkers have continuity of employment and income until internal workers can be procured. The time factor is normally very influential in seasonal fashion industries because to deliver orders late
can mean that customers are left with unsaleable stocks when a fashion fad has passed its peak, and thus loss of customers will probably result. A shortage of time to train in-factory workers encourages the use of experienced personnel who are temporarily withdrawn from factory employment. Exclusion from the EPCA and Equal Pay Act provisions furnish the opportunity for employers to pay discriminatory rates and this is doubtlessly a strong encouraging influence on unscrupulous employers who are willing to take advantage of the weak market positions of homeworkers.

However, an important drawback to the employment of homeworkers is that each individual has to work unsupervised. Lack of supervision can mean that the less able individuals will provide work of lower quality than could be obtained from the same persons when closely supervised internally. A common response is therefore to put-out only the simple, unskilled/semi-skilled jobs. Another shortcoming is that each individual homeworker can take only a relatively small quantity of work, and consequently the organizational problems, the time and costs involved in batch-breaking, the recording of work out and in, quality control, and delivery and collection can make this a cumbersome form of production for busy factory producers. Hence, a common response is to sub-contract to an agent who will shoulder these responsibilities. Unfortunately, supplying companies rarely insist that agents are accountable to them for conditions of service and payments given to homeworkers, and it is in this context that the worst deprivations of the homeworking arrangement are to be found. Respectable factory employers who distribute the work themselves and pay identical to factory rates, claim to find homeworkers as costly as factory labour.

An important constraint on homeworker demand is the labour-input-to-bulk ratio, i.e. an interaction of the amount of work, or length of time, to be expended on each item, relative to its size. If the ratio is low, because the work input is small relative to its bulk, then high transport and handling costs result and these, together with the commandeering of large areas of valuable domestic living spaces militate against domestic production. If the ratio is high, the task might be suitable for homeworking provided that small quantities of the necessarily small bulk product can be economically delivered and collected to obviate the possibility of large material stocks lying as idle capital in homes. Thus, a compromise must be reached between high and low labour-to-bulk ratios for homeworking to be economically viable. An employer strategy for low ratios is to transfer the time and costs of delivery to the homeworker herself, whereas for high ratios homeworkers can be recruited from the same
small locality to economize on frequent deliveries.

12.6 THE ECONOMIC SIGNIFICANCE OF SECONDARY LABOUR

As can be deduced from section 12.5, the desire for flexibility is judged to be the prime motive for the employment of both twilight and homework labour. Employers are also judged to be cost-minimizers, but the desire for flexibility does not prevent employers from taking advantage of groups that prove cheaper to employ. In this respect, both secondary groups are excellent solutions to variable production problems since they provide short-run flexibility at low cost and thereby satisfy two major objectives.

12.6.1 Conclusions on the Cheap Labour Hypothesis of Demand

Table 9.1 showed that sample homeworkers were cheaper to employ than twilight workers, who in turn were cheaper than the female daytime groups. A desire to minimize costs is often an important criterion for selecting homeworkers in preference to twilight workers, or for selecting twilight workers in preference to paying in-factory core workers overtime premia, which Figure 12.4 shows to be uneconomic, especially on a protracted basis.

The cheapness of secondary labour springs from their exclusion from the premia and fringe benefits, from avoidance of supervision costs, redundancy pay and the payment of discriminatory rates. For only 49 (35%) homeworkers (Table 8.8) was equality of payment confirmed. These findings are evidence to support the conclusion that in these establishments at least, homeworkers were not primarily selected from a cheap labour motive. A similar conclusion can also be drawn from establishments that did pay discriminatory rates since these tended to be the larger companies. Had the cheap labour motive been paramount, many more homeworkers would have been employed by them in order to make greater savings, because like their smaller counterparts, with higher levels of worker use, these establishments had many tasks eminently suitable for homeworking. It is therefore concluded that the relative cheapness of secondary group employment makes these groups very attractive adjustment mechanisms, or 'reserve armies', for fluctuating female operations in job-segregated labour markets, rather than providing the sole reason of demand.

A distinction must be drawn at this juncture between 'factory' and 'non-factory' employers. A non-factory producer can be defined as an individual or organization not manufacturing in factory premises, but who may have warehousing of other storage facilities, and who purchases basic
materials (e.g. fabric, shaped pieces or other goods) and then distributes these to homeworkers for conversion into partly or wholly finished goods before resale. While for factory producers the cheap labour motive is important, it is generally subsidiary to the objective of providing a form of flexibility that satisfies all the product and labour market objectives and is painless to core workers. The cheap labour motive however, may be paramount to, and even explain the existence of, non-factory employers who only demand homework labour.

12.7 PARTICULAR PERSPECTIVES ON SECONDARY LABOUR

12.7.1 Conclusions on the Life-cycle Hypothesis of Supply

It was envisaged in 1.6.3 that there would be, for a substantial number of women in paid employment, a chronological progression through the workgroups. It has been suggested that entry is made into the full-time group from school. After a break from LM activity to have or raise children some women, temporarily withdrawn from LM participation, attempt to enter the twilight or homeworker groups, and this is later followed by a return to one of the daytime groups when family commitments permit. As retirement approaches, a return is made to the part-time group, and after retirement from factory employment, the homeworker group is re-entered. It is acknowledged that this description refers to a general overall pattern of female workgroup progression and that at each stage there will be those who drop out of labour market activity altogether.

Data collected from the demand side of the LM are not ideal for investigating the life-cycle hypothesis, but nevertheless, some general conclusions can be drawn. The female groups' age profiles are consistent with the life-cycle hypothesis. Very low levels of straightforward transfers from one group to another reveal that mobility was not direct, but separated by periods of inactivity or alternatively also accompanied by inter-establishment mobility. Nevertheless, some inter-group mobility did occur. Employers always searched for trained/experienced workers regardless of the workgroup and this indicated that the same pool of individuals was being drawn upon. Consequently, it is concluded that there is some substance in the suggestion of a chronological group progression tied to the female life-cycle.

12.7.2 Why Are Virtually All Twilight Workers and Homeworkers Women?

The reason why all, or virtually all, workers comprising the twilight and homeworker groups are women is concerned with the chain of reactions
that find their origin in the initial decision to job-segregate men and women into capital- and labour-intensive jobs respectively, see 12.5.1(c).

For instance, labour-intensive, or more accurately low-productive, jobs require a greater increase in worker numbers to produce a given increase in output than do capital-intensive (highly-productive) jobs. Allocation of low-productive jobs to women means that a larger number of women than men will have to be found periodically if, as is usual in garment manufacture, business cycles occur. At certain stages many women opt for less-than-full-time employment if they wish to continue LM participation and many part-timers are unwilling to increase weekly hours by offering overtime. Other than the overtime offered by a cohort of mainly childless women, there is little upward, although possibly considerable downward, flexibility in the core of the female segment. In contrast, there is considerable upward flexibility in the form of offered overtime hours in the core of the male segment, and the highly productive nature of male jobs means that the increased overtime input, coupled with men's ability to work full basically weekly hours, is sufficient to clear most major bottlenecks. Not so with women; bottlenecks arise that cannot be cleared by the core workforce's overtime input, so secondary workers are resorted to. Employers always hope to recruit trained/experienced personnel, but men have not had experience of finishing operations. Women are searched for and found because many previous factory workers are tied to family commitments, the woman still being the main provider of free domestic services. Literature suggests that the few men who undertake homework are members of LM minority groups (e.g. the disabled, senior citizens, or ethnic minorities) who find themselves in similar weak market positions to housebound women and therefore take 'women's' jobs. It is thought that twilight working men are mainly young moonlighters trying to increase the family budget. Thus, the female secondary workgroups are the equivalent of male overtime.

This phenomenon can be explained by drawing the distinction between conventional male and female contributions to the nuclear family. Traditionally the woman's contribution has been the input of time and effort, whereas the man's contribution has been the provision of finance. Time is necessary to provide personal household care and maintenance; money is necessary to purchase food, clothing, domestic equipment and leisure. Particularly when budgets are tight, as is often the case during the child-rearing phase, each partner may contribute to both of these inputs; for example, the husband gives some domestic assistance, and the wife
undertakes some market work. Due to existing time demands, a less-than-full-time work pattern with no overtime is preferred by the wife, while the husband seeks extra overtime hours to increase his financial input since his wife can contribute relatively little from less-than-full-time employment. The outcome of these attempts produces the observed LM characteristics; the man has increased, and the woman decreased, LM activity rates during the early child-rearing phases of their life-cycles.

In conclusion, it is contended that this general scenario will not change substantially until such time as the division of labour within the home, including child-rearing and the provision of free caring services, is more evenly distributed between the sexes. Only when employers are convinced that women are not the sole providers of free domestic services will they consider women to be suitable for highly-productive, capital-intensive manual jobs, but even then, a breakdown in the job-segregated structure of their ILMs will impose high marginal costs and probably be strongly resisted.

12.7.3 How Marginal are the Secondary Groups?

When judging marginality by numbers used (Table 4.2) it is clear that the twilight workers were marginal in all establishments, and homeworkers in some establishments, in the sense of making only small contributions to total output by virtue of their very few jobs which were generally part-time equivalents. In other establishments homeworkers were not marginal in that they made significant contributions by being present in comparable or even greater numbers than daytime workers. When judging the secondary workers' contribution in aggregate across the company sample (Figure 4:3) it is seen that homeworkers were almost as numerous as the full-time males. Thus, the homeworkers' contribution to their own firms varied considerably, but in aggregate they cannot be regarded as 'marginal' workgroup.

Part C describes in detail how these secondary groups are used to give flexibility to the employer who can thereby cushion the income and employment of core workers. In this context, a plentiful supply (i.e. a reserve army\(^{231}\) of capable twilight workers and homeworkers (Beardsworth's\(^{200}\) 'unestablished' workers) who could be introduced and discarded with ease (i.e. marginalized, see Allen\(^{140}\)) was crucial to these employers who wanted to adjust to market uncertainty without radical modifications of existing work patterns, customs and practices that would destabilize long-term relations and break implicit contracts. In this respect therefore, the unestablished workers can not be justifiably
conceptualized as providing a marginal function for the employer.

12.7.4 Would the Acquisition of Employee Status Put An End To Homeworking?

Researchers, including the author, recommend that traditional homeworkers should be legally designated as employees, but it has been argued (mainly by employers) that this would cause the loss of homeworking jobs. The author considers that this reaction to employee status would indeed occur in the most extreme cases of exploitation of self-employment, but that the majority of employers would still continue to use homeworkers, as they now use twilight workers who are employees, because the need for flexibility of the type absorbed by homeworkers would still be present. Firms terminating homeworker demand would require greater adaptability from the female daytime workgroups and this has often presented difficulties. As argued in 12.7.2, women with home and family responsibilities will be able to behave as men now do only when domestic work is equally shared. Thus it is contended that even though employers might intend to phase out homeworker use, they will be placed in situations to which they are likely to respond by resorting to homeworkers. These projections visualize that homeworkers will continue to have unstable employment in the future, but even so, the acquisition of employee status will afford them valuable protection and benefits from which they are now excluded.

12.7.5 Do Twilight Workers and Homeworkers Undercut Daytime Workers?

It is shown Part C that twilight workers and homeworkers are often used to manufacture 'top of the peak' output and to provide flexibility. In this respect therefore, they reduce core worker numbers somewhat and could be seen as undercutting the employment of daytime factory women in peak conditions. There was no evidence to suggest that homeworkers were used by sample establishments to undercut the wages of core employees. However, as part of the deal in implicit contracts these workgroups are severed first (see 16.1), thereby being used as a mechanism for honouring implicit contracts with core workers. They therefore serve a valuable function for core employees who have employment cushioned to the point where redundancies might be avoided. Thus, rather than having employment and wages permanently undercut by the presence of twilight workers and homeworkers, core workers benefit by greater employment and income stability.
CHAPTER THIRTEEN - LABOUR INPUT ADJUSTMENT MECHANISMS

Chapter 12 implies that the demand for twilight workers and homeworkers by the H&K industry is an integral part of a wide and complex adjustment process, and thus the central aspect of this chapter concerns the variety of responses that employers can make to shortages and surpluses of labour. The range of instruments that can be used by employers is outlined in 13.2, and evaluation of their relative merits and shortcomings implicitly indicates that an appropriate sequence for their use will vary in differently fluctuating environments. It is contended therefore, that many of the adjustments are universally applicable and that they can be used in a variety of combinations to suit different industries (section 13.4). The assumptions embodied in the suggested adjustment sequence are based on the evidence presented in Part B, but ultimate testing of these by specially constructed empirical work must be left to future researchers. This chapter examines labour input strategies that precede or even pre-empt approaches to either the ELM or EILM, and the adjustment process described demonstrates the large amount of flexibility that is often built into an existing workforce. This in-built flexibility may be sufficient for wage adjustments to attract additional labour to be unnecessary, even in widely fluctuating product markets. It also helps to explain why neo-classical economists who have focused on wages as the LM's major adjustment have found unsatisfactory empirical evidence to support their theories.

Understanding adjustment processes is important from several viewpoints: chosen instruments can affect both the allocation of workers to jobs and thereby the apparent efficiency of LM operation; the individual worker can be emotively concerned about the stability of employment and income; and the employer can benefit from a clear understanding on which to base his choices. These issues are of pivotal interest to both academic theorists and policy makers because market operation has implications both for LM theory (section 16.1) and consequently, further research (section 16.3), and for policy prescriptions (section 16.2).

13.1 THE NEED FOR A LABOUR INPUT ADJUSTMENT MECHANISM

The decision to confine empirical work to Footwear and H&K industries allowed concentration on establishments that had high product demand fluctuations. Although surveyed companies experienced slightly different market conditions depending on their product(s), most needed to adjust to
substantial variations in output throughout each trading year. Respondents explained that even with years of experience of their companies and the industry it was impossible to accurately predict future production requirements, although naturally, they had expectations about them. It was quite usual for output and consequently the need for labour inputs, to double as trading passed from trough to peak. Nevertheless, wages were raised only once yearly following the national agreement (11.2.1), and 17 of the 24 establishments employing 71% of daytime females had incurred no redundancies over a 10 year period (9.4.2a). A labour input adjustment mechanism, other than wage manipulation and hiring and firing was clearly being used. Explanations and discussions revealed that a wide range of strategies were adopted according to labour and product market goals and expectations about the extent and direction of product market changes.

13.2 THE RANGE AND VALUE OF POSSIBLE ADJUSTMENT INSTRUMENTS

It is important in any consideration of LM adjustment to distinguish between stocks and flows of workers. Internal stocks comprise workers already in jobs, and external stocks, those in the ELM searching for employment. When existing workers leave their jobs, either voluntarily or involuntarily, and when recruitment occurs, outward and inward flows are generated respectively. As Thomas & Deaton 196 have pointed out, employers seek to influence both these elements as part of the adjustment mechanism, but the firm is primarily interested in the stock position, i.e. whether it has the desired quantity of labour.

Adjustments instruments can be classified into 5 basic strategies, see Table 13.1. These are those that:

1. limit the degree of variation in business activity;
2. vary labour input from a fixed number of established workers;
3. vary worker numbers without changing hiring standards;
4. vary hiring standards to modify labour supply;
5. vary workers' earning potential to modify labour supply.

Thus, strategy 1 attempts to limit the need for worker stock variation, and strategy 2 aims to influence output from the existing stock of workers, while strategies 3 to 5 attempt to influence labour flows, each in different ways.

Employer evaluation of instrument advantages and disadvantages is influenced by his product and labour market goals; e.g. employers concerned with: (1), obtaining and retaining an experienced labour force, and (2), obtaining and retaining congenial inter-personal and inter-group relations.
will disfavour instruments that precipitate inconvenient voluntary turnover or create discontent; cost minimizers will dislike costly instruments. Several instruments have unpleasant images because they incorporate important disadvantages for employers and/or employees, and consequently they are generally unpopular and avoided whenever possible. Others are even agreeable, or at least 'painless' in that they have no ill-effects for either party. Some instruments have different impacts on workgroups and categories of worker so causing mixed responses which undermine a contented workforce. For example, workers' desires for hours of work vary considerably depending on domestic circumstances and instrumental orientations to employment; overtime, while pleasing many men and young women who are often freely serviced by wives and mothers, will displease mature females who combine paid employment with domestic work. Thus, complicated trade-off situations arise that require complex, balanced decision making with respect to the choice of instruments, particularly when employers find their favoured instrument unusable due to prevailing conditions or imposed constraints such as trade union resistance.

The relative terms 'high', 'moderate' and 'low' product demand levels have been used in this chapter since variations in size of establishment precluded the used of values. A moderate output level encompasses that mid-range of values between the seasonal highs and lows, i.e. it centres around median output. A range of outputs is therefore included within each term, but the extent of this range will vary among establishments relative to their degrees of variation from trough to peak. The amount of flexibility provided by each instrument will also vary among establishments and be governed largely by the characteristics of individual workers. Establishments with fairly constant product demand could require only one instrument, say pace variation, while those with wide fluctuations will require several. It has been assumed, according to observations, that employers set their labour force numbers such that a moderately fast pace of work from each employee would produce median output.

This chapter reviews the adjustment mechanism from the employers' standpoint and evaluates the economic advantages of each of the instruments shown in Table 13.1. To save thesis space and confine topics to demand side issues, supply implications of instrument usage have been deliberately omitted except where likely employee reactions could have implications for instrument effectiveness or alternative strategies. The adjustment instruments considered are those that were used by H&K employers; the postulated sequence is offered as being relevant to, indeed
13.2.1 An Evaluation of Strategies to Limit the Degree of Variation in Business Activity

As section 4.2.1 suggests, the order/product relationship varies across establishments and consequently, Instrument A (the option for varying product stocks) is precluded for companies producing only to meet existing orders unless order/product strategies are revised. Stock manipulation can be beneficial to both employer and employee; it eliminates low spots by manipulating short-term demand, ensures that equipment is operational, and encourages skilled workers to remain rather than move elsewhere for more stable earnings. A wise choice of stock item enables subsequent stock withdrawal which permits acceptance of more orders in peak times than would otherwise be possible. Stock withdrawal can thus lay the foundations for future expansion, reduce undercapacity and save overtime expenditure. However, stock manipulation carries grave risks; it can cause the demise of companies with circulating capital tied up in unsold stocks. Instrument B is therefore a less risky instrument for stabilizing activity.

Instrument B (variation of the product range) is a diversification into additional products with the aim of evening-out seasonality. Companies with wide activity fluctuations can attempt to introduce new product lines having demand peaks coinciding with existing troughs and/or phase out selected products with similarly timed peaks. Unfortunately in seasonal industries it is difficult to devise perfectly integratable products, so that failure to find a suitable product, or a slight mismatching of demand peaks are likely outcomes. Whilst militating against the worst effect of seasonal lows, integrating seasonally different products can produce otherwise avoidable bottlenecks. Nevertheless, these represent beneficial increases in trade.

13.2.2 An Evaluation of Strategies to Vary the Input from a Fixed Number of Established Workers

Instrument C (the selection of a payment system) is probably the most important adjustment decision because each of the two basic systems have mixed side-effects for the employer. These arise because automatic
adjustment of labour input occurs by variations in pace when workloads vary while factory attendance remains unchanged.

When workloads are light, each worker produces less than normal as available work is shared thinly. Under productivity based payment systems this yields lower earnings (see Figure 13:2a), and employees cushion their employers against the worst effects of fewer orders by allowing labour costs to fall relative to output. Variable wage costs can obviate the employer's need to reduce over-capacity in the short-run because it costs little to retain it. This facility is a particularly convenient cost-minimizing strategy when future demand is unpredictable or expected to rise in the short-term. Employers who have inadvertently engaged 'below average' workers are similarly compensated for their low output by paying a constant price for what is produced rather than the time taken to produce it, see Figure 13:2(b). When workloads are heavy, high productivity is encouraged by the workers' ability to increase earnings. This is particularly advantageous to employers who save overtime payments when the faster pace can clear the extra work, but even when it can not, overtime costs are minimized.

Notwithstanding these benefits, there are attendant disadvantages to productivity-based schemes. Employees are usually unwilling to switch to tasks at which they have no proficiency or to those with lower pay rates because earnings are reduced. Resistance to re-deployment prevents the internal remedying of simultaneous under- and over-loading, produces low intra-firm mobility and production inflexibility. Inflexibility is also caused when wages are calculated from full batches, because an employee cannot complete another's part-batch without complicating wage calculations, a situation strongly resented by most employees. The major disadvantage however, is that employees rush to push earnings high and this impairs performance quality. Payment-by-results schemes are therefore generally unsuitable for highly detailed tasks in which precision is very important, or for one-off, complex, or non-repetitive jobs in which the recording of operations is inappropriate. Piece rates are most valuable for encouraging dexterity and speed on repetitive jobs where numerical recording of produced units and the monitoring of performance is practicable.

Time-based payment schemes are the antithesis of incentive schemes; they overcome payment-by-results disadvantages, but also incorporate shortcomings. There are two major advantages to time-based schemes:

1. earnings remain constant, so employees do not spoil by rushing; and
CHAPTER 13 LABOUR INPUT ADJUSTMENT MECHANISMS

(2) A workforce is job-flexible when not penalized by lowered pay.

The major disadvantage for the employer is that the same hourly rate is paid irrespective of output, see Figure 13.2(a). Unit labour costs therefore rise relative to falling output (Figure 13.2b), and this causes employers either to raise product prices and be less competitive, or to absorb the extra costs and erode profits. Variations in competitiveness and profits are particularly damaging in price-competitive industries because they can undermine company stability. However, time rates are useful for remunerating employees under training since they maintain goodwill by providing acceptable earnings until proficiency is gained, and this can ensure a sufficiency of trainees. Unit labour costs fall as productivity rises, but employees' constant wages give them no incentive to work faster. Thus, strong exhortations and strict supervision might be necessary to prevent bottlenecks occurring between piece- and time-rate operations when workloads are heavy.

Interactions can occur when the two schemes are used side-by-side in a production sequence. Payment-by-results clearly benefit fast and penalize slow workers, whereas time-based schemes have the opposite effects. This can cause jealousies within and between these worker categories, particularly on the part of slow piece-workers. Workforce tensions can become acute when activity falls and fast piece-workers take a disproportionate share of available work, but all piece-rate employees are disadvantaged by falling incomes when workloads reduce to very low levels. Time-rate workers benefit from constant incomes when workloads are low. Congenial factory relations require employees with comparable skills to be similarly rewarded, but this is difficult to achieve in factories with wide business fluctuations causing the above effects. Figures 13.2a & b depict equilibrium as occurring at median output (i.e. hourly earnings of results-paid and time-paid workers are identical at median output), but at whatever level equilibrium occurs, changes in business activity from that point are problematical from an equity viewpoint. Nevertheless, surveyed employers generally chose to trade harmony for cost-minimization since all used both systems; most had unpredictable product demand and few (20%) paid productivity bonuses to time workers (8.4.5). Clearly, each system has its merits and it is of advantage to employers to switch between systems in order to adapt to dynamic environments, but in practice, payment switching is difficult to achieve due to collective actions and union resistance.

* * *

An important labour input adjustment is to vary workweek length and
this can be achieved by instruments D to H of Table 13.1.

**Instrument D** (alteration of the number of hours comprising the basic work-week) has usually taken place after social pressures or collective negotiations succeeded in reducing hours, rather than as employer manipulations to solve short-term fluctuations. This instrument, although capable of substantial adjustments, is therefore more appropriate to long-term falling demand trends than to short-term labour input adjustments.

**Instrument E** (short-time working) is a short-run alternative to instrument D, whereby hours worked are temporarily reduced to fewer than those in the employment contract. Short-time working is an unpopular instrument; it is 'painful' for employees who lose their earnings and it risks voluntary turnover, thereby undermining goal 3 (section 10.3). Its introduction in low demand periods has the same effect as reducing overtime when demand falls from high levels. Both short-time and overtime working can be successively increased and decreased by increments of a few weekly hours to provide a more-or-less continuous adjustments to output in both upward and downward directions. Increases or decreases in the number of workers involved in short- or overtime working make both instruments even more responsive to both large and small changes. The greatest employer benefit from short-time working stems from savings of time-paid wages (assuming that only attendance time is paid for), but no payment-by-results savings accrue since these workers cannot earn even though they attend the factory when work is unavailable. Hence, determined cost-minimizers might attempt to place only time-rate workers on short-time. Time-off increases opportunities for non-market activity for the employee and this can act as a trade-off against frustrations over wasted factory time. Guaranteed weekly payments provide a threshold below which earnings will not fall (Figures 13:2a & b). This curtails wage savings and limits the economic advantages of short-time working, but in turn can also help a trade-off by discouraging voluntary turnover and maintaining workforce stability.

**Instrument F**, overtime working, is similarly a highly sensitive instrument and it is popular with employers, some full-time women and many men workers particularly those with heavy financial commitments, but generally unpopular with the other female groups. Thus, the inbuilt upward flexibility of each workforce is governed by the individuals comprising it so that the amount of adjustment available can vary substantially across establishments and by time periods. Generally, overtime flexibility is lower the higher the proportion of working mothers. When only overtime volunteers are used, an uneven impact can result that may not coincide with
CHAPTER 13  LABOUR INPUT ADJUSTMENT MECHANISMS

existing bottlenecks and even exacerbate or create them. Requiring overtime from unwilling workers can undermine workforce stability by precipitating voluntary turnover which becomes easier for employees during industry booms. There are thus limits to the usefulness of overtime.

* * *

Many surveyed employers stated that they varied toleration of less-than-full-time workers as the seasonal position changed. Such adaptations can be manifested through instruments G, H, P, Q, R, S, T, U, V and W.

Instrument G (workgroup switching), often a mutually beneficial downward adjustment during over-capacity, is achieved by granting requests for transfers from the full-time to the part-time, twilight or homeworker groups especially when employees previously have been persuaded to work more hours than they wished. It may, depending on the individuals, be capable of substantial adjustment. When workloads increase, a gradual hardening of attitudes to less-than-full-time hours is adopted which ultimately leads to strong exhortations for inter-group mobility in the opposite direction. However, over-pressurization might endanger loyalty and this places limits on the instrument's usefulness in an upward direction.

Instrument H (variation of less-than-full-time weekly hours) can provide considerable flexibility when concepts relating to acceptable weekly hours are modified. More, or fewer, hours can be recruitment stipulations as market conditions change, while increases or decreases in hours worked can be requested from existing employees, and more or less work can be delivered to homeworkers. Again, employee loyalty can be jeopardized by over-use, making this instrument counter-productive.

Instrument I (redeployment of personnel) can be precipitated, even at low output, by employee and machinery mishaps that result in simultaneous under- and over-loading. When high and low productive operations are combined in a manufacturing sequence, changes in production schedules have an uneven impact if labour input flexibility varies by operation, see 12.5.2a(3). It is advantageous to redeploy under-employed persons to over-loaded jobs, but this can be difficult if over-loaded operations require a skill not possessed by those under-employed. Unwillingness to be relocated is considered under instrument C, but potential transferees can become less resistant if earnings are maintained. Maintenance of earnings is not simply achieved however, for it can lead to disputes when switching involves differently skilled operations. Employees will see it as inequitable if the switched normally high-skilled worker receives more wage than the incumbent low-skilled, but more proficient worker. To be
successful, the full co-operation of all employees is necessary, and this can limit the use of instrument I. It was for this reason that certain surveyed companies retained a few specialist "all-rounders" who received individual rates and were able and willing to switch to any job.

**Instrument J** (changing attitudes to absenteeism and unpunctuality) is a convenient and unobtrusive means of adapting labour, and furnishing adjustments suitable for 'fine tuning'. The granting of requests for time-off without pay during low activity is mutually beneficial to the employer and both absent and attending employees. The employer temporarily reduces capacity; earnings of attending results-paid workers are boosted by access to more work, while absent workers are able to perform external activities. Wage expenditure under time-based schemes is reduced by time-off, when attendance-only is remunerated, but not under piece-rate schemes. Uncritical acceptance of unpunctuality further reduces overcapacity, but compliance can generate habits that 'backfire' during high activity when successful eradication of absenteeism and unpunctuality is important for minimizing the personnel and equipment used. However, employees themselves sometimes make adjustments because identical weekly earnings can be generated by taking time-off for part of the week and then working fast for the remainder, or by working at slow pace during the whole of the week.

When each employee attends numerous automatic machines, **Instrument K**, the number minded can be varied to provide substantial manufacturing flexibility in an upward direction. Reducing the number merely accommodates falling demand, but does not curb results-paid wage costs since earnings are proportional to the short supply of work. It does, however, permit equitable work-sharing and the retention of experienced employees by avoiding redundancies and redundancy payments, while idle machines facilitate general overhaul and maintenance. If workers are time-paid, retention is costly, but the saving of redundancy payments can offset the cost of retaining workers. Machines can be reallocated when demand revives, but the number that can be adequately attended without impairing quality limits expansion by this instrument. While instrument K avoids redundancy for some employees, retention of surplus personnel reduces results-paid earnings and may precipitate voluntary turnover, although this is generally more acceptable than redundancy.

The subcontracting of work, **Instruments L and M** stem from two slightly different conditions; general and specific undercapacity, see 12.5.2(a).

**Instrument L** (the subcontracting of work to other firms to adapt to general undercapacity) can also take two forms; (1) subcontracting to other
factory producers, and (2) subcontracting to non-factory producers.

Factory producers are useful for substantial, predictable general undercapacity created by the acceptance of more orders than can be met and for very large bottlenecks. This is a popular adjustment for expanding companies. Unforeseen undercapacity subcontracted to other manufacturers can squeeze profit margins since emergency costs of subcontract work can be greater than allowances made in quoted product prices, but retention of satisfied customers by delivering orders punctually can justify the use of short-term, high-cost alternative production methods. However, subcontract firms are likely to want substantial orders, and so this instrument is generally unsuitable for small-scale unforeseen bottlenecks.

Non-factory producers (i.e. homeworker subcontractors or agents) can be used to save the company from the administration of handling the substantial work generated by general undercapacity. This form of subcontracting is often be organized on a tender basis with cost-minimizing employers opting for the lowest tender.

Instrument M (the sub-contracting of work to individual homeworkers) is more suitable for small-scale bottlenecks, whether specific or general, predictable or unforeseen, because small amounts of work can be delivered to homeworkers. Where several different operations must be dovetailed, or where bottlenecks are so large as to require numerous individuals on different operations, administration can be cumbersome on an individual homeworker basis, given the stretched nature of company resources which initially caused the bottleneck. First phase reorganization (4.2.1d) is a common response when this type of bottleneck is regularly experienced.

The demand for homeworkers is prompted by a variety of different considerations and circumstances, see 12.5.2(c) and this has caused homeworker use to appear as different instruments. For instance, Instrument R, additional recruitment, identifies shortages of accommodation followed by first phase rationalization as a reason for homeworker 'preference'; instrument W, modification of hiring stipulations, pinpoints shortages of skilled core personnel as the reason for demand of homeworkers as second- or even third-best labour.

* * *

All the above instruments keep constant the number of internal workers employed directly by each establishment. None is mutually exclusive so, by judicious blending, managements can adapt labour input to considerable variations in output while still maintaining the three LM objectives (10.3). As indicated however, most instruments have constraints on their use so
that worker number variation might become inevitable in large fluctuations.

13.2.3 Evaluation of Strategies that Vary Preferred Worker Numbers Without Changing Hiring Standards

It is contended that a reduction in core worker numbers is not a viable short-term solution when operating payment-by-results schemes that cushion the employer, or when an upturn in trade is expected. While number reductions save the wage costs of time-paid workers, only statutory contributions, shift premia, and guaranteed weekly payments are saved for results-paid workers because wage/output adjustments are automatic. Even minimum redundancy payments, that depend on age and tenure, can be high enough to offset these savings, while subsequent re-recruitment costs also reduce them further especially if there are labour shortages in the ELLM. Thus, reducing numbers can be a costly short-term exercise.

Results-paid workers retained after redundancies have occurred benefit from boosted earnings by sharing the work that was formerly done by the severed workers. These enhanced earnings can encourage loyalty and help to achieve goals 2 and 3 (10.3). Labour retention depresses earnings, can lead to discontentment and precipitate voluntary turnover thereby defeating the objective of retention. Thus, retaining underemployed workers can be an automatic mechanism for reducing worker numbers relatively painlessly and cheaply by natural wastage (instrument 0). The latter sequence of events has been called 'the results-paid retention trade-off' and the former, 'the results-paid severance trade-off' for brevity since these situations arise with several of the instruments evaluated below.

Instrument N (variation in the number of shifts worked) can give large upward adjustments; increasing shifts from 2 to 3 increases capacity by 50%. Smaller adjustments can be made by involving only part of the shift workgroup. Reducing shifts, like reducing the number of machines per operative, does not lower results-paid wage costs which are proportional to output, but it does imply some redundancy which reduces capacity. Moving from 3 shifts to 1 is synonymous with workgroup switching, but it has been defined as Instrument N because it involves the shedding (recruitment as an upward adjustment) of labour, whereas Instrument G does not. Recruitment costs caused by increasing the number of shifts, might be sufficiently high to offset the savings obtained by the reduction of idle-time on inexpensive equipment, particularly when a large number of workers are required, thus making the introduction of a multiple shift system uneconomic (12.5.1b). Employees, particularly those with outside commitments, are likely to
resent disruption of established routines by alteration of work patterns. Thus, because it could be counter-productive, instrument N is more appropriate for adjusting to long-term trends or protracted business cycles rather than short-term seasonal fluctuations.

Instrument O (voluntary turnover, i.e. the non-replacement of quits in the short-term) is an easy and inexpensive way of reducing employee numbers and avoiding difficult, disruptive or embarrassing selection for redundancy. Establishments with high turnover, either throughout the workforce or in sections of it, can obtain substantial downward flexibility from natural wastage while maintaining harmonious relationships and bolstering employee confidence by lack of redundancy. Thus, high turnover, a characteristic that surveyed employers associated particularly with young women, is a very convenient adjustment mechanism. It is especially beneficial on labour-intensive operations where the large numbers cause more under-employment during troughs than on capital-intensive operations. Hence, the perceived high turnover of women is yet another reason why job-segregation by gender has been persistently practiced. NEDO192, while addressing the reduction of turnover, also recognizes its usefulness.

Relying on falling earnings to prompt natural wastage with its results-paid retention trade-off, can lead to retention of the less able since 'better' workers can more easily obtain jobs elsewhere. Natural wastage has further limits in that an automatic reduction of voluntary turnover often occurs when LMs are slack. Moreover, randomness, leading to workforce imbalance or unmanned operations, often forces early replacement. Instrument P (replacement recruitment) can be undertaken after various time lags. Delay during high, but falling, output can prevent future over-capacity, while delay during low activity produces the results-paid severance trade-off effects. Whatever the time lag between quit and recruitment, replacement can serve different functions; it can be used to rationalize the workforce (e.g. by replacing part-timers by full-timers), or it can be used to re-recruit workers who were previously made redundant, thereby honouring implicit contracts (section 2.1). The implication of long time lags have been considered as natural wastage under instrument O, but employers might find it expedient to re-recruit before absolutely necessary in order to obtain previously severed workers or short-supply labour when specific skill shortages exist in the ELM. Early replacement is usually vital, but often difficult, at peak times and this can persuade employers to opt for one of the modifications to hiring standards reviewed below.
**Instrument Q** (redundancy) is the most unpleasant of all instruments from a supply viewpoint, and can be costly for employers who give priority to goals 2 and 3. It is thus usually delayed to a late stage of the downward adjustment for core workgroups. Redundancy offers the employer the possibility of removing particular individuals, such as troublemakers, poor performers or few-hour employees; reasons given for selection must withstand examination at an industrial tribunal, but motives are not always reflected in stated reasons. Rationalization of the workforce is often deemed desirable when past compromises and second-best workers remain. However, redundancy costs can offset wage bill savings, and redundancies can make subsequent re-recruitment difficult when confidence in the stability of employment at the company has been undermined.

In contrast, twilight and homework redundancies are often considered to be expedient at an early stage in downward adjustments and both groups are easy and inexpensive to sever because they are largely invisible to unions and core workers and exempt from statutory benefits.

**Instrument R** (additional recruitment of preferred labour by the creation of new posts) provides an immediate boost to productive capacity, but when undertaken before a sizable backlog of work has accumulated it can produce the results-paid retention trade off. Statutory contributions, recruitment and training costs increase expenditure, so cost-minimizers have additional reasons for delaying. Delay in the introduction of extra workers is particularly advisable until an upturn in trade is well-established since an unexpected reversal would quickly make them superfluous and create the redundancy dilemma. Additional recruitment reduces overtime costs, but this will displease workers seeking overtime. It also provides opportunity for changing the workgroup mix and rationalizing the labour force, but accommodation constraints might limit the amount of additional labour that can be introduced. Consequently, easy-to-remove twilight and homework labour is often 'preferred' to additional core recruitment in uncertain environments unless high core voluntary turnover rates can be relied on to provide automatic downward adjustment in the short-term by natural wastage. Chronic shortages of accommodation which result in first-phase reorganization cause added homeworkers to be retained as preferred workers rather than being resorted to occasionally, but where expansion is prevented twilight workers may be preferred to homeworkers for operating the more expensive and/or large-sized machines since they permit intensive use of existing equipment. However, twilight workers can create disharmony by causing loss of earnings for daytime
CHAPTER 13
LABOUR INPUT ADJUSTMENT MECHANISMS

workers whose machinery they share if breakdowns occur from failure to operate it carefully.

* * *

Only when the aforementioned instruments have been unsuccessful in providing sufficient upward labour input adjustment will downward modifications of hiring standards be contemplated.

13.2.4 Evaluation of Strategies that Vary Hiring Standards to Obtain Additional Labour

**Instrument S** (modification of stipulations about a recruit's skill/experience), by accepting responsibility for training, can be a means of attracting workers to the core workgroups. Attitudes to instrument S can be varied: in slackening markets skill/experience stipulations can be progressively enforced; in tightening LMs they can be relaxed, but with short-term fluctuations there is often insufficient time to train raw recruits before order deadlines. Hence, when training is seen as the solution to skill shortage, sufficient time has to be allowed prior to peak production for recruits to become assets rather than liabilities by needing supervision from experienced workers. Cost-conscious employers might prefer to modify the stipulations relating to worker attributes, or time and place of work, rather than skill stipulations that impose training costs.

**Instrument T** (modification of stipulations about a recruit's personal attributes) is the most economical hiring standard adjustment when the specified attributes are poor predictors of performance. Preferences relating to age, race, gender, family status and other rule-of-thumb assessments can be relaxed and enforced at will to recruit to desired work patterns, but training (instrument S) may also be involved where such workers have been previously excluded by all local employers.

**Instrument U** (modifications to a recruit's weekly hours) proved to be the most popular hiring standard adjustment in surveyed establishments. Successive downward revisions of acceptable hours during tight LMs, and upward modifications during slack LMs, is a recruitment response that clearly reflects market conditions. Slight reductions below basic weekly hours can be less costly than training individuals who might ultimately exhibit low aptitude or soon quit, especially when recruited part-timers have much experience and above average ability.

**Instrument V** (a modification relating to a recruit's daily work times) permits attendance in the evening or early morning and can attract people with the desired skills and personal attributes. When factories are
already operating at these times of day, this instrument is less costly to introduce because existing shift workers can provide supervision and first-aid cover while overheads are already incurred. Instrument R, which views twilight workers as a preference for large-sized, high-cost machinery has evaluated twilight working, but the use of twilight workers as a second-best alternative during skill shortages can result in small machines being used or hand operations being performed. Thus twilight workers are not exclusively large-machine operators, and those introduced from a skill shortage will have more permanent employment since they will be retained until additional suitably qualified core workers can be obtained. Nevertheless, second-best twilight workers are the first to have workloads reduced when activity falls.

Instrument W (modifications of the stipulation relating to work inside the factory) produces the homeworker group as a second-best alternative and is a common response in establishments without shift working. Weekly hours and daily time stipulations also fall by default under this compromise, but provided work is returned punctually this does not usually concern the employer. Strongest constraints on domestic production stem from the large size of equipment and the labour input to bulk ratio, see 12.5.2(c).

13.2.5 Evaluation of Strategies that Vary Workers' Earning Potential

The foregoing evaluations show that a great amount of labour input flexibility can be provided before it becomes necessary to attract further workers via earnings adjustments. Earnings variations may be inappropriate responses in seasonal industries except for long-term trends, but even when appropriate, these strategies could precipitate disapproval within local industry. Should earnings adjustments prove necessary, three different approaches can be adopted either singly or in conjunction because earnings comprise basic pay, additional premia/bonuses and fringe benefits.

It may be possible to restrict Instrument X (variation in basic pay rates) to specific sections of a workforce by altering selected rates only. This will distort customary grade differentials and this can lead to strife, but non-comparability of operations confounds comparisons of earnings and makes selected increases more likely to succeed without objections. To increase all rates imposes a large marginal cost for a few extra workers. Cost-minimizing employers therefore use increased earnings only as a last resort, and then pay the smallest necessary increases. The time taken for information about increased rates to filter through information networks could also jeopardize success and make instrument X
inappropriate for adapting to short-term fluctuations. Difficulties in determining potential earnings from quoted piece-rates (see 7.3) can further limit success in attracting extra workers, and merely cause higher costs. Reductions of basic pay by as much and as soon as possible is often desired, but this can be difficult due to collective reactions. Freezing rates and allowing pay to decline in real terms as other prices rise with inflation can often be a preferable option. Thus, Instrument X can be both costly and ineffective, which probably explains why surveyed employers so rarely used it.

The above comments relate to factory workers who have employee status, but homeworkers, who have no legal protection often face variable wage rates, even in institutionally organized LLMs largely because they are 'invisible' and dispersed. Thus, the downward use of instrument X is frequently confined to the collectively weak groups.

**Instrument Y** (variations in premia and bonuses) is more popular than changes to basic rates because increases in overtime and shift premia are restricted to individuals working those patterns and this minimizes marginal cost effects. Raising overtime premia encourages more input from existing employees and also serves to attract recruits with a taste for overtime which increases the in-built flexibility of the workforce. Raising shift premia attracts only shift workers and this is convenient when these are needed. Higher overtime and shift-premia widen earnings differentials, but the weak comparability of non-shift, non-overtime workers undermines collective action. Modifications to these components are therefore less likely to prompt stoppages than changes in basic pay.

The introduction/removal of ex-gratia bonuses are similarly less likely to be disruptive, but because these are often confined to selected individuals and comprise only a small element of earnings expenditure savings from their removal are small.

**Instrument Z** (provision of fringe benefits) can be varied for new or replacement recruits. Either a greater number or more costly benefits can be offered as LMs tighten, but few savings will be made in slack LMs because these can be difficult to remove when written into collective agreements or contracts of employment. Types of benefit can be adapted to worker grades. Whereas cars, mortgages, private health insurance and private education are more associated with executives, the blue-collar manual workers of the studied LLM were fortunate to receive pre-Christmas celebrations such as hampers or dinners, extra holiday pay, good canteen and social clubs, subsidized transport or creche facilities. Other than a
creche, it is doubtful whether these benefits would provide sufficient pull to resolve worker shortages.

13.3 SUGGESTED SEQUENCE OF INSTRUMENT USAGE IN SEASONALLY FLUCTUATING INDUSTRIES

While probably not a complete catalogue, the foregoing evaluations show how numerous possible adjustment instruments can be and thus how rarely it may be necessary to resort to earnings variations. However, it will be observed that many instruments are subject to constraints which can affect, not only their choice, but also their effectiveness when chosen. Constraints can arise from a variety of sources. They may be: budgetary constraints, especially if the employer is an avid cost-minimizer; time constraints for example when a production deadline is so pressing that certain instruments have insufficient time to operate; collective action constraints for instance fear of a stoppage caused by wage reduction; 'fairness' constraints which deter differential treatment of sections of the workforce; reliability constraints which influence choices where the firm's reputation might be involved; contractual constraints, when explicit or implicit wage or employment contracts limit choice of an instrument without breaking faith with the employees; technical constraints, where adjustment decisions are conditioned by the technology used; and constraints imposed by either product or labour markets. Thomas & Deaton found similar constraints, but they also noted organisational constraints where different departments of large firms had opposing goals that affected instrument choice. In the sample firms comprising this research, however, no differential departmental influences were evident, but this was probably due to many of the firms being of very small size relative to companies in other industries.

Labour input flexibility can be very sensitive to small changes in activity since several instruments can be progressively applied in both upward and downward directions, i.e. they are reversible. It is contended that instrument preference is particularly conditioned by employer objectives and anticipations of employee reactions to instrument usage. Conveniently, the goal of obtaining a contented, experienced internal core (10.3) of the workforce coincides well with the desires of employees for employment, but cost-minimizing/high earnings aspirations are in total opposition. Consequently, instruments that vary core worker numbers, are costly, or risk disputes, voluntary turnover or disharmony are less favoured. Instruments B, C, F to M, O, P, R and U, which do not have these
characteristics, are therefore more favoured, opted for when possible, and thus most frequently used. Instruments A, D, E, N, Q, S, T and V to Z tend to be held in abeyance until the less costly, 'painless' instruments have yielded all the adjustment they can.

Clearly, instruments vary considerably in the amount of adjustment they can provide: some give much flexibility (e.g. recruitment and redundancy), but this will depend on the extent to which employers are prepared to use them; others are capable merely of furnishing small adjustments suitable only for 'fine tuning' (e.g. punctuality manipulation). Relative amounts of flexibility are suggested below; where these are dependent upon an individual's characteristics, the instruments appear under more than one heading as appropriate.

<table>
<thead>
<tr>
<th>SMALL AMOUNTS</th>
<th>MEDIUM AMOUNTS</th>
<th>LARGE AMOUNTS</th>
</tr>
</thead>
</table>

* = from persons with external time commitments, such as mothers of dependent children.
** = from persons with few commitments, such as young persons without domestic responsibilities.
*** = from persons with heavy financial commitments, such as 'major bread-winners' with dependent families.

The labour input flexibility provided by certain instruments will vary by gender due to different work patterns, but combinations and instrument sequence are likely to be similar since choices are governed by employer goals. Instruments that are particularly appropriate to each sex are:

**MALES**

- F"#
- K, N.

**FEMALES**

- F#, G, H, M, U, V, W.

# = small amounts.
## = substantial amounts.

Instruments A to D, I, J, L, 0 to T, X to Z are generally appropriate to both sexes. It is important to note that instruments appropriate to male labour can all provide substantially large amounts of flexibility, whereas the effectively useful female instruments furnish comparatively small labour input adjustments.

The usefulness of an instrument can vary over time, for example voluntary turnover and recruitment can depend on changes in the LM. Furthermore, the degree of constraint on an instrument's use can also vary over time. For instance, whereas an employer might consider redundancy to
be a costly instrument at an early stage in demand reduction, he might deem it the only alternative in very bad states when the costs of hoarding are perceived as exorbitant. This example illustrates therefore how instrument costs change via their links to the product and external labour markets, and hence the importance accorded to them can also change. Thus, constraints can be thought of as prohibitive or persuasive, in that the importance attached to them either prevents or merely delays an instrument's choice. These examples give an indication of why employers can seem to act differently in apparently similar situations. An instrument's usefulness will therefore depend upon the current position in the trading cycle and the instruments already in use. However, it should be remembered that instrument costs are perceived in conditions of imperfect information so that faulty judgements and 'trial and error' strategies can result. Caution is paramount and this gives employers a preference for numerous reversible or temporary instruments rather than a single permanent adjustment unless the future can be predicted with certainty.

Interviews revealed that several instruments were used simultaneously and it is contended that, in effect, employers grade instruments according to their perceived merits (see section 13.2): those having equal merit are introduced more-or-less simultaneously as a set, and only after that set's flexibility has been exhausted will the next combination be introduced.

In order to postulate an appropriate sequence, a hypothetical company's average output is taken as the locus from which downward and upward adjustments move because that was how interviewed employers apparently visualized activity. It is also assumed that competitors for labour are simultaneously experiencing similar shortages and surpluses.

Figure 13:3 illustrates the business cycle divided into quarters, with each quarter-cycle, or quadrant, sub-divided into periods during which a particular combination of instruments are used to adjust labour input. The postulated adjustment process is illustrated in Figure 13:3 by showing, in each band of the cycle, the identifying letters of instruments used during that period. Chapter 14 uses this adjustment sequence to calculate employment and income implications; it was therefore considered more appropriate to discuss the reasons for the choice of specific instrument in section 14.3. The illustrated sequence is constructed to reflect very wide (by a factor of 5), short-term (weeks rather than months) product demand variations. It thus represents an extreme case of seasonality. Establishments with fairly constant demand will need only those instruments shown in bands 1, 8, 9, and 16. Even companies with substantial
fluctuations (by a factor of 2) will rarely need to adjust through bands 4 and 5 or 12 and 13, unless industry, national or international business cycle troughs (or peaks) coincide with seasonal lows (or highs) and a downward (or upward) demand trend.

Four adjustment bands have been suggested for each quadrant, and in each the sequence of instruments will be influenced by individual employer preferences. For convenience, the suggested instrument sets are depicted as yielding equal amounts of adjustment, but in practice this outcome will depend upon the employed individuals and hence the amount of flexibility provided by each set of instruments will vary across establishments. For example, natural wastage will provide no flexibility for companies with no voluntary turnover; overtime will yield little extra output if a small proportion of the workforce can work only a few extra hours occasionally. Thus, such instruments might be intermittently used during successive bands (despite an employer's wish to use them continuously from a specific juncture) as personnel change and more, or less, amenable employees are employed. Overtime and short-time working can be progressively introduced and continue their usefulness throughout several periods of the cycle while accompanying instruments become exhausted. Instruments such as the subcontracting of work to other firms and variations in shift work patterns are discrete adjustments capable only of occasional use.

The suggested sequence omits product range variation (instrument B) because, by changing the nature of business activity itself, it falls outside the scope of responses to observed activity. Alteration of the hours in the basic workweek (instrument D) has also been excluded because it is more appropriate to long-term trends. The redeployment of employees (instrument I), which is relevant to unexpected, short-term bottlenecks on particular operations that coincide with over-capacity on others, is also omitted because it is impossible to anticipate whether and at what stage of the cycle it would be required. In practice, employers will superimpose redeployment on existing strategies as necessary whatever the cycle band.

The sequence also illustrates how workforce flexibility will usually be sufficiently great to permit accommodation to wide variations in production schedules without resorting to earnings manipulation.

13.4 APPLICABILITY OF THE ADJUSTMENT MECHANISM TO OTHER INDUSTRIES

Figures 13:4(a) to (d) depict how employers of females in seasonally fluctuating companies with the illustrated product demand characteristics
use the twilight worker and homeworker groups to provide blocks of upward flexibility in the short-term. They depict how companies with constant or even falling demand patterns may still need to use secondary labour occasionally to meet short-term bottlenecks during peak activity, although this situation arises more frequently in companies with erratic demand or expanding trends. These illustrations are not intended to depict the emergency demands that arise, even during low activity, when mishaps occur to machines or employees, nor do they show the more constant demands that arise from establishments that have undertaken first-phase rationalization. Thus, in a LLM containing firms with each of these demand patterns, the local demand for twilight and homework labour will be intermittent but frequent.

The author considers that the incremental levels of labour supply that are characteristic of female workgroups make them particularly attractive to employers facing unstable demand, because by manipulating the hours of less-than-full-time workers and by varying numbers they can continually respond to product market dynamics. This characteristic feature of women's LM participation contributes to the sex-segregated nature of many industrial LMs. Males can usually offer so much flexibility via overtime and different shift patterns that employers have little need for male unestablished workers, given existing segregated LM structures.

Many of the evaluated instruments are relevant to any industry, but customer demand strongly influences what is appropriate. The complex sequence of adjustments suggested in 13.3 is appropriate for high, short-term fluctuations typical of seasonal fashion industries and is thus relevant to the rag trade generally, to boot, shoe and box manufacture.

The construction industry, while very different from the rag trade, can offer some interesting parallels because construction companies also have unstable, unpredictable customer demand. It is, however, male dominated, perhaps because traditionally it has been associated with unpleasant working conditions and masculine-type strength. Instruments appropriate to female labour supply are therefore generally inappropriate; part-time work patterns are not adopted, but Bresnen et al.\(^\text{130}\) show that construction employers provided flexibility and spread risks almost entirely by the use of instrument L, the subcontracting of work to other firms. Subcontracting had been carried to such an extent that few companies (responsible for contracts of more than £2 million) had their own directly employed tradesmen. Agency labour and sub-contractors were introduced and removed at short notice, thereby offering the same kind of
flexibility provided by the twilight and homework groups of the H&K industry. Consequently, some of the instruments listed in 13.2 are inappropriate to the construction industry, either because they are associated with shift, female or direct labour.

Manufacturing industries facing more constant demand than as shown in Figure 13:4(a) can obtain sufficient adjustment from instruments C (where appropriate), F, J, K, O and P. It is suspected that such industries could also be characterized by male employment because there would be little use for the graded amounts of labour provided by female workgroups. In contrast, service companies (e.g. shops, bars, restaurants and sports facilities) that have markedly differently demand patterns from those of surveyed establishments often face peaks of activity at certain times of each day and on specific days of each week such as local market days and Saturdays. Figures 13:4 (a) and (b) illustrate how labour input can be adapted in these circumstances; viz., by superimposing regular, additional amounts of relevant length part-time or twilight labour onto a small core of full-time day or shift workers to cover for busy periods. Overtime will be appropriate merely for stock-taking and peaks that are more protracted than usual such as late shopping hours at Christmas. Part-time and twilight labour will thus be demanded from preference by many service industries rather than as second-best choices, and hence hour stipulations will be active positive requirements rather than reactive hiring standard adoptions. Many part-time and twilight employees will benefit from stability of employment. However, part-time work patterns will differ from those outlined for the H&K industry: for instance, some part-timers will work early mornings plus evenings on a split work pattern (e.g. office cleaners, supermarket shelf packers); some will work for a few busy peak hours each day (e.g. sales assistants, bar assistants, waiters); others will work only on certain days each week such as Saturdays, or on a full-time basis but only during certain seasons such as Christmas (e.g. department store assistants, although such persons will not have the stability of employment enjoyed by other service sector part-timers). Twilight workers in bars and restaurants will have more stable employment than do those in seasonally fluctuating manufacturing industries such as the H&K industry. Homeworkers will generally be inappropriate where the service has to be provided on site; exceptions being specialist services that can be provided at distance, such as clerical work or garment alteration for which demand is sporadic making on the spot employment wasteful due to intermittent under-employment.
13.5 IMPLICATIONS FOR UNEMPLOYMENT, UNDER-EMPLOYMENT AND INTERMITTENT EMPLOYMENT

The recession of the early 1980's illustrates that a major influence on levels of employment, unemployment, under-employment and intermittent employment is the national economic climate. Further important impacts are imposed by technological changes that alter the labour/capital balance of industry as is being illustrated by the use of computer-aided equipment and robots. However, when considering short-term changes at the micro level, these influences can be regarded as fixed since changes occur slowly; thus, the labour/capital status of the LM can be taken as given.

13.5.1 The Implication of Preference for Local Unemployment

The major local factor to influence comparative levels of group employment is the mix of industry determining the character of the LLM, and the sizes of potential labour pools within its boundaries. These factors are also relatively fixed in the short-term, but can change with demographic movements and entry and exit of businesses.

It has been concluded (13.4) that less-than-full-time LM participation has an important influence on women's allocation to labour-intensive operations in unstable environments because employers can continually adapt to product market dynamics. The implications of this conclusion are that capital-intensively and labour-intensively dominated LLMs will have different employment and unemployment patterns: labour-intensively dominated LLMs will result in comparatively high female participation; capital-intensively dominated LLMs will cause low female participation and high non-claimant unemployment; mixed LLMs will have correspondingly higher and lower rates of female employment and unemployment respectively. Notwithstanding the usefulness of less-than-full-time workers, full-timers were shown to be the preferred core labour choice for female manual operations which will generally cause full-timers to be the first group to be fully absorbed. This leaves only limited opportunities for less-than-full-time groups when the overall demand for female labour is low due to either low economic activity in labour-intensive LLMs, or to LLM capital-intensiveness. When female activity rates are high, employers searching for full-timers will experience shortages and will frequently have to resort to compromise recruitment strategies (instruments U to W) that provide employment for the less-than-full-time groups. This circumstance implies that hidden (i.e. non-claimant) unemployment of less-than-full-time workgroups will occur in capital-intensively dominated LLMs, and when
economic activity is low, since many workers know that insufficient employment opportunities exist and cease to search. In capital-intensively dominated LLMs therefore, less-than-full-time employment will be confined to the service sector in the manner suggested by Figure 13:5. Thus, capital-intensively dominated LLMs will be characterized not only by lower female activity rates, but also by much higher levels of less-than-full-time unemployment.

As suggested in 13.4, because male employment is not characterized by less-than-full-time activity, men experience greater stability of employment than do females in fluctuating industries since they themselves are capable of large compensatory adjustments to their labour supplies. This has implications however, for their income variation, see 14.5.

13.5.2 The Implications of Adjustment mechanisms for Under-employment and Intermittent Employment

The adjustment process described in 13.3 suggests that substantial amounts of downward flexibility can be provided by successive relaxations in the speed of work as output schedules fall; the costs of such pace reductions being transferred to employees via payment-by-results schemes. This implies that the workforce will be progressively under-employed unless or until natural wastage or redundancies reduce over-capacity. Under-employment arises for core workers whom employers generally aim to retain, whereas the the twilight and homework workgroups are discarded with falling trends. Only the permanent elements of the twilight and homework groups (12.5.2c) are retained and they too will experience under-employment. Intermittent employment is experienced by the twilight workers and homeworkers who are marginalized, or casualized, for the employer's convenience by being recruited and discarded to provide flexibility. Since these workers do not register as unemployed when they are terminated, they are not officially recorded and hence they form another source of non-claimant unemployment. Twilight workers join homeworkers as the hidden reserve army of the nation's labour force91.
14.1 ASSUMPTIONS UNDERLYING A WORKED EXAMPLE OF ADJUSTMENT DECISIONS

Chapter 13 has demonstrated that adjustment instruments used by employers affect the workgroups differently. Consequently, the workgroups' employment and income levels exhibit differential sensitivities in dynamic environments. Based on the previous exposition of employer responses, this chapter aims to demonstrate how aggregate employments of workgroups and the incomes of individually retained workers vary if the adjustment sequence postulated in Figure 13:3 is followed. Several assumptions were necessary in order to calculate the mechanism's effects, but it is believed that these are realistic and appropriate to the circumstances of a sample establishment.

It has been assumed that a hypothetical company, after starting at its median output (6000 batches per week), passes through extremely wide ranging trough and peak conditions. For demonstration purposes the business cycle has been divided into 16 bands over time as in Figure 13:3, with each band representing changes in production of 1,000 batches per week. The median output of 6,000 batches per week has been assumed for convenience in calculating the effects of production rises or falls, but this figure is irrelevant of itself being only for demonstration purposes. Naturally, in practice, the time period for production requirements to rise or fall varies across companies and for different product market conditions; it usually follows an irregular path, but for this worked example a sinusoidal curve is assumed. Although an over-simplification, this example adequately simulates the realistic conditions of variable time bands where in trough and peak regions, the times between adjacent bands are extended. For instance, the time interval to achieve the gradual increase of 2,000 batches across bands 11 and 12 is identical to that required earlier for the rapid 4,000 batch increase through bands 7 to 10 inclusive.

Although this firm regularly faces amplitude fluctuations of 2000 batches representing a doubling of output between trough and peak (see section 13.1), in this example to illustrated extreme as well as normal conditions, it is assumed that a national business cycle is coinciding with the usual seasonal fluctuation to produce variations of twice that magnitude. As a result of past experience, normal levels of activity would be expected to reverse direction when outputs of 4000 and 8000 batches are approached, i.e at time bands 3 and 11 respectively. Hence, reactive rather
than positive responses are adopted until the eventual reversals at bands 4 and 12 are well established.

The initial workforce of the hypothetical company was averaged from similarly sized knitwear companies in the sample in which the ratio of part-time to full-time women approximated to 1:1.3; therefore 30 part-timers and 40 full-timers were chosen. The shift men to daytime women ratio of 1:4.7 was also chosen as being representative of such companies. Homeworkers performing work exclusive to themselves (XHW), as well as non-exclusive homeworkers (NHw) who do the same work as factory employees, are included to illustrate the different employment conditions of these two homeworking groups, even though it would be unusual for such a company to use exclusive homeworkers to the extent shown, this being more a characteristic of small companies. That only 20 XHW could completely process the 6000 batches is explicable because their work would apply to a limited number of items per batch (e.g. hand mending of faults) or because a small input per batch would be required (e.g. putting into large cartons).

Assumptions regarding employer responses, together with levels of voluntary turnover, absenteeism and incomes, have been based on the findings of Parts A and B. Skill differentials have been eliminated by taking the pooled skill average income of £60 for 40 hrs/wk. Non-exclusive homeworkers have been paid equally to factory workers; homeworkers performing exclusive work have been paid at £20 per week when producing median output, a realistic assumption based on the evidence of Tables 8.8 and 8.9. Part-timers are initially assumed to input 75%, and twilight workers 50%, of a full-timers weekly hours, although these vary as Instrument H (hours variation) is progressively applied.

From the assumed numbers of core workers employed in each band, it was possible to calculate the speed of work relative to the median; it was assumed to be impossible to work faster than 10% above median levels and that employees would be unwilling to absorb a pace slower than 10% below the median, preferring instead to work fairly quickly for part of the week and then to adopt short-time working at guaranteed rates for the remainder. Given that production objectives and core worker numbers are known and that speeds of work can be calculated, the accumulation of bottlenecks or shortfalls can be determined, and these respectively dictate the number of non-exclusive secondary workers to be introduced, or the hours of short-time necessary. In turn, the numbers of homeworkers determine their hourly input relative to the median, although it has been assumed, following observed employer practice, that when hourly requirements are low some
individuals will be severed rather than the company having to incur unnecessary delivery expenses.

The resulting schedules are shown in Figures 14:1 and 14:2 for employment and income respectively. The discrete values plotted are those occurring at the successive 1,000 batch production changes which determined the time bands in Figure 13:3; these points are linearly joined so that the graph appears to slope smoothly between adjacent bands whereas in the real company situation they would probably vary discontinuously on a weekly basis as discussed in section 14.5. These calculated values, each based on the illustrated adjustment decisions of Figure 13:3, are summarised below.

14.2 A WORKED EXAMPLE OF AN ADJUSTMENT SEQUENCE*

### BAND ONE

**INITIAL WORKFORCE:** Sm=15; Fm=8; Fw=40; Pw=30; XHw=10; assume Pw=0.75Fw

| **A:** REDUNDANCY | XHw | 10-2=8 |
| **B:** VOLUNTARY TURNOVER | Sm 15-1=14; Fm 8-1=7; Fw 40-1=39; Pw 30-2=28 |
| **C:** PACE REDUCTION (% of MEDIAN), Sm=89%; Fm=95%; Dw=87% |
| **D:** HOURS INCREASE (% of MEDIAN), XHw=104% |
| **E:** UNPUNCTUALITY/ABSENTEEISM, Sm+Fm=2%; Dw=1.5% |

**Production requirements = 5000 batches/week**

- Sm = 14 workers manning 15 machines each over two shifts per day
- Output requirements per Sm = 5000/14 = 357.142 batches per week
- Fastest possible pace with 15 machines is 440 batches per week; thus absenteeism at 2% x 357.142 = 7.142 batches per week can be readily absorbed by Sm
- **Wages** Sm = 357.142 x £0.25 = £89.29

- Output requirements per Fm = 5000/7 = 714.29 batches per week
- Fastest possible pace is 825 batches per week; thus absenteeism at 2% x 714.19 = 14.29 batches per week can be readily absorbed by Fm
- **Wages** Fm (time paid) = 40 x £1.95 = £78.00

- Fw equivalent = 39 + (0.75 x 28) = 60
- Output requirements per Fw equivalent = 5000/60 = 83.333 batches per week
- The fastest possible pace is 105.60 batches per week; thus absenteeism at 1.5% x 83.333 = 1.24 batches can be readily absorbed by Dw
- **Wages** Fw = 83.333 x £0.625 = £52.08
  - **Pw** = £52.08 x 0.75 = £39.06
  - **XHw** = (5000/8) x £0.0333 = £20.83

### BAND TWO

| **A:** WORKGROUP SWITCH, Fw 39-1=38; Pw 28+1=29 |
| **B:** HOURS REDUCTION Pw = 0.725Fw; XHw=83% of median |
| **C:** ABSSENTEEISM/UNPUNCTUALITY, Sm+Fm=1%; Dw=1% |
| **D:** VOLUNTARY TURNOVER, Fw 38-1=37; Pw 29-1=28 |
| **E:** PACE REDUCTION (% of MEDIAN), Sm=71%; Fm=76%; Dw=73% |
| **F:** SHORT-TIME WORKING, Sm=8hrs; Fm=6hrs; Fw=8 hrs; Pw=8 hrs equivalent |

**Production requirements = 4000 batches/week**

- Sm = 14 workers manning 15 machines each over two shifts per day
- Output requirements per Sm = 4000/14 = 285.714 batches per week

* Tables 14.1 and 14.2 were used in the calculations
Output at slow pace with short time of 8 hours is 288 batches per week; thus, 1% absenteeism is absorbable by each Sm
Wages: Sm = 285.714 x £0.25 + (8-4)hrs @ £1.20
       = £71.43 (piecerates) + £4.80 (guaranteed) = £76.23

Output requirements per Fm = 4000/7 = 571.429 batches per week
Output at slow pace with short time of 6 hours is 574 batches per week; thus, 1% absenteeism is absorbable by each Fm
Wages: Fm (time paid) = 34 x £1.95 + (6-4) x £0.90
       = £66.30 (time rates) + £1.80 (guaranteed) = £68.10

Fw equivalent = 37 + (0.725 x 28) = 57.3
Output requirements per Fw equivalent = 4000/57.3 = 69.81 batches per week
This can be produced at slow pace with short-time of 8 hours with 1% absenteeism absorbed
Wages: Fw = 69.81 x £0.625 + (8-4) hours @ £0.90
       = £43.63 (piecerates) + £3.60 (guaranteed) = £47.23
       Fw = £47.23 x 0.725
       XHw = (4000/8) x £0.0333
       = £16.67

BAND THREE
Q, REDUNDANCY, XHw 8-2=6
O, VOLUNTARY TURNOVER, Fw 37-1=36
A, STOCK ACCUMULATION, 1000 BATCHES per week
H, HOURS INCREASE (% of MEDIAN), XHw=111%
C, PACE VARIATION (% of MEDIAN), Sm=71%; Fm=76%; Dw=74%
E, SHORT-TIME WORKING, Sm=8hrs; Fm=6hrs; Fw=7 hrs; Pw=7 hrs equivalent
Production requirements = 3000 batches/week + 1000 stock accumulation
Sm = 14 workers manning 15 machines each over two shifts per day
Output requirements per Sm = 4000/14 = 285.714 batches per week
Output at slow pace with short time of 8 hours is 288 batches per week
Wages: Sm = 285.714 x £0.25 + (8-4)hrs @ £1.20
       = £71.43 (piecerates) + £4.80 (guaranteed) = £76.23
Output requirements per Fm = 4000/7 = 571.429 batches per week
Output at slow pace with short time of 6 hours is 574 batches per week
Wages: Fm (time paid) = 34 x £1.95 + (6-4) x £0.90
       = £66.30 (time rates) + £1.80 (guaranteed) = £68.10

Fw equivalent = 36 + (0.725 x 28) = 56.3
Output requirements per Fw equivalent = 4000/56.3 = 71.05 batches per week
This can be produced at slow pace with short-time of 7 hours
Wages: Fw = 71.05 x £0.625 + (7-4) hours @ £0.90
       = £44.41 (piecerates) + £2.70 (guaranteed) = £47.11
       Pw = £47.11 x 0.725
       XHw = (4000/6) x £0.0333
       = £22.22

BAND FOUR (first half of band)
A, STOCK ACCUMULATION, 500 BATCHES per week for the first half of the band
H, HOURS REDUCTION (% of MEDIAN) XHw=83%
C, PACE REDUCTION (% of MEDIAN), Sm=54%; Fm=57%; Dw=56%
E, SHORT-TIME WORKING, Sm+Fm=16hrs; Fw=16hrs; Pw=16hrs equivalent
Production requirements = 2500 batches/week + 500 stock accumulation
CHAPTER 14 EMPLOYMENT AND INCOME STABILITIES

Sm = 14 workers manning 15 machines each over two shifts per day
Output requirements per Sm = 3000/14 = 214.286 batches per week
Output at slow pace with short time of 16 hours is 216 batches per week

Wages
\[ \text{Sm} = 214.286 \times £0.25 + (16-4) \text{hrs} @ £1.20 \]
\[ = £53.57 \text{(piecerates)} + £14.40 \text{(guaranteed)} \]
\[ = £67.97 \]

Output requirements per Fm = 3000/7 = 428.571 batches per week
Output at slow pace with short time of 16 hours is 405 batches per week;
Wages
\[ \text{Fm} \text{ (time paid)} = 24 \times £1.95 + (16-4) \times £0.90 \]
\[ = £46.80 \text{(time rates)} + £10.80 \text{(guaranteed)} \]
\[ = £57.60 \]

Fw equivalent = 36 + (0.725 x 28) = 56.3
Output requirements per Fw equivalent = 3000/56.3 = 53.29 batches per week
which can be produced at slow pace with short-time of 16 hours
Wages:
\[ \text{Fw} = 53.29 \times £0.625 + (16-4) \text{ hours} @ £0.90 \]
\[ = £33.31 \text{ (piecerates)} + £10.80 \text{ (guaranteed)} \]
\[ = £44.11 \]
\[ \text{Pw} = £44.11 \times 0.725 \]
\[ = £31.98 \]
\[ \text{XHw} = (3000/6) \times £0.0333 \]
\[ = £16.67 \]

BAND FOUR (second half of band)
A, TERMINATION OF STOCK ACCUMULATION OF 500 BATCHES per week
N, SHIFT-WORK PATTERN VARIATION, Sm, double day shift to single shift
K, MACHINE/WORKER RATIO VARIATION, 15 machines to 12 machines x 10 Sm
Q, REDUNDANCIES, Sm 14-4=10; Fm 7-3=4; Fw 36-4=32; Pw 28-8=20; XHw 6-3=3
H, HOURS VARIATION, Pw=0.70Fw (reduction); XHw=111% of median (increase)
C, PACE VARIATION (% of MEDIAN), Sm=63%; Fm=67%; Dw=45%
E, SHORT-TIME WORKING, Sm=12hrs; Fm=10hrs; Fw=20hrs; Pw=20hrs equivalent
Production requirements = 2000 batches/week (stock accumulation ceases)

Sm = 10 workers manning 12 machines each over one shift per day
Output requirements per Sm = 2000/10 = 200 batches per week
Output at slow pace with short time of 12 hours is 202 batches per week
Wages
\[ \text{Sm} = 200 \times £0.204 + (12-4) \text{hrs} @ £0.90 \]
\[ = £40.80 \text{ (piecerates)} + £7.20 \text{ (guaranteed)} \]
\[ = £48.00 \]

Output requirements per Fm = 2000/4 = 500 batches per week
Output at slow pace with short time of 10 hours is 506 batches per week;
Wages
\[ \text{Fm} \text{ (time paid)} = 30 \times £1.95 + (10-4) \times £0.90 \]
\[ = £58.50 \text{ (time rates)} + £5.40 \text{ (guaranteed)} \]
\[ = £63.90 \]

Fw equivalent = 32 + (0.70 x 20) = 46
Output requirements per Fw equivalent = 2000/46 = 43.48 batches per week
which can be produced at slow pace with short-time of 20 hours
Wages:
\[ \text{Fw} = 43.48 \times £0.625 + (20-4) \text{ hours} @ £0.90 \]
\[ = £27.18 \text{ (piecerates)} + £14.40 \text{ (guaranteed)} \]
\[ = £41.58 \]
\[ \text{Pw} = £41.58 \times 0.70 \]
\[ = £29.10 \]
\[ \text{XHw} = (2000/3) \times £0.0333 \]
\[ = £22.22 \]

BAND FIVE
C, PACE INCREASE (% of MEDIAN) Sm=94%; Fm=100%; Dw=68%
E, REDUCTION OF SHORT-TIME WORKING, Sm+Fm=nil; Fw=10 hrs; Pw=10 hrs equiv.
M, SUBCONTRACT TO XHw, XHw=3+1=4
H, HOURS INCREASE (% of MEDIAN), XHw=125%
CHAPTER 14  
EMPLOYMENT AND INCOME STABILITIES 

Production requirements = 3000 batches/week

Sm = 10 workers manning 12 machines each over one shift per day
Output requirements per Sm = 3000/10 = 300 batches/week
Output at median pace with 12 machines and no short time is 320 batches/wk
Wages  Sm = 300 x £0.204 (no shift premia) = £61.20

Output requirements per Fm = 3000/4 = 750 batches per week
Output at median pace with no short time is 750 batches per week
Wages  Fm (time paid) = 40 x £1.95 = £78.00

Fw equivalent = 32 + (0.70 x 20) = 46
Output requirements per Fw equivalent = 3000/46 = 65.22 batches per week
which can be produced at slow pace with short-time of 10 hours
Wages:  Fw = 65.22 x £0.625 + (10-4) hours @ £0.90
= £40.76 (piece rates) + £5.40 (guaranteed) = £46.16
Pw = £46.16 x 0.70 = £32.31
XHw = (3000/4) x £0.0333 = £25.00

BAND SIX
N, SHIFT-WORK PATTERN VARIATION, single shift to double shift x 13 Sm
P, REPLACEMENT RECRUITMENT, Sm=10+3=13; Fm=4+1=5
M, SUBCONTRACT TO XHw, XHw 4+6=10
E, SHORT-TIME WORKING, removed
C, PACE INCREASE (% of MEDIAN), Sm=96%; Fm=107%; Dw=91%
H, HOURS REDUCTION (% of MEDIAN), XHw=67%
J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=1%; Dw=2%

Production requirements = 4000 batches/week

Sm = 13 workers manning 12 machines each over two shifts per day
Output requirements per Sm = 4000/13 = 307.692 batches/week
Output at median pace with 12 machines is 320 batches per week
Wages  Sm = 307.692 x £0.25 (with shift premia) = £76.92

Output requirements per Fm = 4000/5 = 800 batches per week
Output at fast pace is 825 batches per week
Wages  Fm (time paid) = 40 x £1.95 = £78.00

Fw equivalent = 32 + (0.70 x 20) = 46
Output requirements per Fw equivalent = 4000/46 = 86.96 batches per week
which can be produced at slow pace (no short-time working)
Absence at 2% is absorbed by the daytime workers
Wages:  Fw = 86.96 x £0.625 = £54.35
Pw = £54.35 x 0.70 = £38.04
XHw = (4000/10) x £0.0333 = £13.33

BAND SEVEN
P, RE-RECRUITMENT, Sm=13+2=15; Fm=5+2=7; Fw 32+4=36; Pw 20+2=22
R, ADDITIONAL RECRUITMENT, Sm=15+1=16; Fw 36+7=43
C, PACE VARIATION (% of MEDIAN), Sm=98%; Fm=95%; Dw=89%
H, HOURS INCREASE (% of MEDIAN), XHw=83%
J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=1.5%; Dw=2%
Production requirements = 5000 batches/week
Sm = 16 workers manning 12 machines each over two shifts per day
Output requirements per Sm = 5000/16 = 312.5 batches per week
Output at median pace with 12 machines is 320 batches per week; thus 1.5% absenteeism is absorbable by each Sm
Wages
\[ \text{Sm} = 312.5 \times \£0.25 = \£78.13 \]

Output requirements per Fm = 5000/7 = 714.286 batches per week
Output at median pace is 750 batches per week; thus, 1.5% absenteeism is absorbable by each Fm
Wages
\[ \text{Fm (time paid)} = 40 \times \£1.95 = \£78.00 \]

Fw equivalent = 43 + (0.70 \times 22) = 58.4
Output requirements per Fw equivalent = 5000/58.4 = 85.62 batches/wk which can be produced at slow pace (no short-time working)
Absenteeism at 2% is absorbable by the daytime workers
Wages:
\[ \text{Fw} = 85.62 \times \£0.625 = \£53.51 \]
\[ \text{Pw} = 53.51 \times 0.70 = \£37.46 \]
\[ \text{XHw} = (5000/10) \times \£0.0333 = \£16.67 \]

BAND EIGHT
K, MACHINE/WORKER RATIO VARIATION, 12 machines to 15 machines x 16 Sm
S, SKILL COMPROMISE, RECRUITMENT OF SCHOOL LEAVERS, 10 \@ 10% Fw efficiency
H, HOURS INCREASE (% of MEDIAN), XHw=100%
C, PACE VARIATION (% of MEDIAN), Sm=94%; Fm=100%; Dw=102%
O, VOLUNTARY TURNOVER, Sm 16-2=14; Fm 7-1=6; Fw 43-2=41; Pw 22-3=19
P, RE-RECRUITMENT, Fm=6+1=7; Pw 19+1=20
R, ADDITIONAL RECRUITMENT, Sm 14+2=16; Fm 7+1=8; Fw 41+5=46
J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=2%; Dw=2.5%

Production requirements = 6000 batches/week
Sm = 16 workers manning 15 machines each over two shifts per day
Output requirements per Sm = 6000/16 = 375 batches per week
Output at median pace with 15 machines is 400 batches per week; thus 2% absenteeism is absorbable by each Sm
Wages
\[ \text{Sm} = 375 \times \£0.25 = \£93.75 \]

Output requirements per Fm = 6000/8 = 750 batches per week
Output at fast pace is 825 batches per week; thus 2% absenteeism is readily absorbable by each Fm
Wages
\[ \text{Fm (time paid)} = 40 \times \£1.95 = \£78.00 \]

Fw equivalent = 46 + (10 \times 0.10) + (0.70 \times 20) = 61
Output requirements per Fw equivalent = 6000/61 = 98.36 batches per week which can be produced at slightly above median pace
Absenteeism at 2.5% is absorbed by the daytime workers
Wages:
\[ \text{Fw} = 98.36 \times \£0.625 = \£61.47 \]
\[ \text{Pw} = 61.47 \times 0.70 = \£43.03 \]
\[ \text{XHw} = (6000/10) \times \£0.0333 = \£20.00 \]

BAND NINE
O, VOLUNTARY TURNOVER, Sm 16-1=15; Fw trainees 10-5=5; Fw 46-2=44; Pw 20-1-19
S, SKILL IMPROVEMENT, Fw trainees, 5 \@ 50% efficiency (i.e. 2.5 Fw equiv)
U, MODIFICATION OF HOURS STIPULATION, Pw=Fw x 75%
R, ADDITIONAL RECRUITMENT, Sm 15+1=16; Fm 8+1=9; Fw 44+3=47; Pw 19+5=24
CHAPTER 14

EMPLOYMENT AND INCOME STABILITIES

M, SUBCONTRACTING TO XHw, XHw 10+2=12

C, PACE INCREASE (% of MEDIAN), Sm=110%; Fm=104%; Dw=110%

H, HOURS REDUCTION (% of MEDIAN), XHw=97%

J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=2%; Dw=3%

F, OVERTIME INCREASE TO COVER ABSENTEEISM, 1hr x 16 Sm; 0.5 hr x 1 Fw

Production requirements = 7000 batches/week

Sm = 16 workers manning 15 machines each over two shifts per day

Output requirements per Sm = 7000/16 = 437.5 batches per week

Output at fast pace with 15 machines is 440 batches per week; thus

2% absenteeism (8.8 batches) is not absorbable by each Sm

Overtime of 1 hr per Sm required to cover for absenteeism (i.e. 6.3 batches)

shortfall (bottleneck) per Sm

Wages

Sm = 431.2 x £0.25 (weekly piecerate earnings) = £107.80

+ 6.3 x £0.25 (overtime piecerate earnings) = £1.58

+ 1hr x £0.36 (overtime premium) = £0.36

Total weekly earnings = £109.74

Output requirements per Fm = 7000/9 = 777.8 batches per week

Output at fast pace is 825 batches per week; thus 2% absenteeism is readily

absorbable by each Fm

Wages

Fm (time paid) = 40 x £1.95 = £78.00

Fw equivalent = 47 + (5 x 0.5) + (0.75 x 24) = 67.5

Output requirements per Fw equivalent = 7000/67.5 = 103.70 batches per week

The fastest possible pace is 105.60 batches per week; thus absenteeism

(3% x 103.70 = 3.11 batches) is largely absorbed by the daytime

workers

Bottleneck = 103.70 + 3.11 - 105.60 = 1.21 batches

Bottleneck is removed by 0.5 hour overtime by 1 person

Wages:

Fw = 103.70 x £0.625 (weekly piecerate earnings) = £64.81

+ 1.21 x £0.625 (overtime piecerate earnings) = £0.76

+ 0.5 x £0.36 (overtime premium) = £0.18

Total weekly Fw earnings = £65.75

Pw = £64.81 x 0.75 = £48.61

XHw = (7000/12) x £0.0333 = £19.44

BAND TEN

R, ADDITIONAL RECRUITMENT, Fm 9+2=11; Fw 47+2=49; Pw 24+10=34

U, RESTIPULATION OF PART-TIME HOURS, Pw = Fw x 76%

M, SUBCONTRACTING TO XHw, XHw 12+6=18

O, VOLUNTARY TURNOVER, Fw trainees5-1=4; Fw49-2=47; Pw34-2=32; XHw18-3=15

S, SKILL IMPROVEMENT, Fw trainees4 @ 80% Fw efficiency (i.e. 3.2 Fw equiv)

G, WORKGROUP SWITCH, Fw 47+1=48; Pw 32+1=31

H, HOURS VARIATION (% of MEDIAN), NHw=117%; XHw=89%

C, PACE VARIATION (% of MEDIAN), Sm+Dm=110% maximum pace; Fm=97%

F, OVERTIME, 6.5hrs x 16Sm; 2 hours x 8Fw=16hrs

J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=2%; Dw = 3%

W, PLACE OF WORK RE-STIPULATION, NHw 0+8=8 and NHw=fw x 45.5%

Production requirements = 8000 batches/week

Sm = 16 workers manning 15 machines each over two shifts per day

Output requirements per Sm = 8000/16 = 500 batches per week

Output at fast pace with 15 machines is 440 batches per week; thus

2% absenteeism (8.8 batches) is not absorbable by each Sm
CHAPTER 14- EMPLOYMENT AND INCOME STABILITIES

Overtime of 6.5 hrs per Sm required to clear the bottleneck (i.e.68.8 batches per Sm)

\[
\text{Wages} \quad \text{Sm} = 431.2 \times £0.25 \text{ (weekly piecerate earnings)} = £107.80 \\
+ 68.8 \times £0.25 \text{ (overtime piecerate earnings)} = £17.20 \\
+ 6.5 \times £0.36 \text{ (overtime premium)} = £2.34 \\
\text{Total weekly earnings} = £127.34
\]

Output requirements per Fm = 8000/11 = 727.273 batches per week
Output at median pace is 750 batches per week; thus 2% absenteeism is readily absorbable by each Fm

\[
\text{Wages} \quad \text{Fm (time paid)} = 40 \times £1.95 = £78.00
\]

Output requirements per Fw equivalent = 8000/74.76 = 107.01 batches per week
The fastest possible pace is 105.60 batches per week; thus absenteeism (3% x 105.60 = 3.17 batches) adds to the bottleneck

Actual production per Fw equivalent = (105.60 - 3.17) = 102.43
Total bottleneck = 8000 - (102.43 x 74.76) = 342.33 batches
Bottleneck is partially removed by 2 hours overtime by 8 Fw
i.e. 2 hours x 2.64 batches per hour = 5.28 batches (for 8 Fw)
Remaining bottleneck = 342.33 - 42.24 = 299.98 batches; removed by NHw
i.e. NHw = 299.98/8 = 37.50 batches per NHw

\[
\text{Wages: Fw} = 102.43 \times £0.625 \text{ (weekly piecerate earnings)} = £64.02 \\
+ 5.28 \times £0.625 \text{ (overtime piecerate earnings)} = £3.30 \\
+ 2 \times £0.36 \text{ (overtime premium)} = £0.72 \\
\text{Total weekly Fw earnings} = £68.04
\]

\[
\text{Pw} = £64.02 \times 0.76 = £48.66 \\
\text{NHw} = (299.98/8) \times £0.625 = £23.44 \\
\text{XHw} = (8000/15) \times £0.0333 = £17.78
\]

BAND ELEVEN
F, OVERTIME, 6.5hrs x 16 Sm; ceased for Fw
R, ADDITIONAL RECRUITMENT, Pw 31+6=37
O, VOLUNTARY TURNOVER, Fw 48-5=43; Pw 37-3=34; XHw 15-2=13
S, SKILL IMPROVEMENT, Fw trainees 4 @ 100% efficiency(i.e.4Fw equiv+43=47)
A, STOCK CONSUMPTION, 1,000 BATCHES per week
J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=2%; Dw=3%
W, PLACE OF WORK RE-STIPULATION, NHw 8+2=10
V, TIME OF WORK RE-STIPULATION, Tw 0+6=6 and Tw=Fw×50%
H,HOURSVARIATION (% of MEDIAN),NHw=72% (reduction);XHw=103% (increase)
C, PACE VARIATION (% of MEDIAN), Sm+Iw=110% maximum pace; Fm=97% unchanged

Production requirements = 9000 batches/week - 1000 stock consumption = 8000

Sm = 16 workers manning 15 machines each over two shifts per day
Output requirements per Sm = 8000/16 = 500 batches per week
Output at fast pace with 15 machines is 440 batches per week; thus 2% absenteeism (8.8 batches) is not absorbable by each Sm
Overtime of 6.5 hrs per Sm required to clear the bottleneck (i.e.68.8 batches per Sm)

\[
\text{Wages} \quad \text{Sm} = 431.2 \times £0.25 \text{ (weekly piecerate earnings)} = £107.80 \\
+ 68.8 \times £0.25 \text{ (overtime piecerate earnings)} = £17.20 \\
+ 6.5 \times £0.36 \text{ (overtime premium)} = £2.34 \\
\text{Total weekly earnings} = £127.34
\]

Output requirements per Fm = 8000/11 = 727.273 batches per week
Output at median pace is 750 batches per week; thus 2% absenteeism is readily absorbable by each Fm
CHAPTER 14  EMPLOYMENT AND INCOME STABILITIES

absorbable by each Fm

Wages  
Fm (time paid) = 40 x £1.95  
= £78.00

Fw equivalent = 43 + (4 x 1.0) + (0.76 x 34) + (6 x 0.5) = 75.84

Output requirements per Fw equivalent = 8000/75.84=105.49 batches per week
The fastest possible pace is 105.60 batches per week, but absenteeism at 3% x 105.60 = 3.17 batches adds to the bottleneck

Actual production per Fw equivalent = (105.60 - 3.17) = 102.43

Total bottleneck = 8000 - (102.43 x 75.84) = 231.71 batches; removed by NHw

i.e. NHw = 231.71/10 = 23.17 batches per NHw

Wages:
Fw = 102.43 x £0.625  
= £64.02
Pw = £64.02 x 0.76  
= £48.66
Tw = £64.02 x 0.50  
= £32.01
NHw = (231.71/10) x £0.625  
= £14.48
XHw = (8000/13) x £0.0333  
= £20.51

BAND TWELVE (first half of band)

A, STOCK CONSUMPTION, 500 BATCHES per week
K, MACHINE/WORKER RATIO VARIATION, 15 machines to 18 machines x 16 Sm
N, SHIFT WORK PATTERN VARIATION, 2 shifts to 3 shifts x 16 Sm
F, OVERTIME, 4hrs X 16
L, SUBCONTRACTING TO HOMEWORKER AGENT, 500 batches per week
U, HOURS RE-STIPULATION, Tw=Fw x 60%
V, TIME OF WORK RE-STIPULATION, Tw 6+6=12
O, VOLUNTARY TURNOVER, Fw 47-2=45; Pw 34-4=30; Tw 12-2=10
M, SUBCONTRACT TO XHw, XHw 13+7=20
H, HOURS VARIATION (% of MEDIAN), NHw=137% (increase); XHw=75% (reduction)
R, ADDITIONAL RECRUITMENT, Fm=11+1=12; Pw 30+7=37
J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=2%; Pw=3.5%
C, PACE VARIATION (% of MEDIAN), Sm+Iw=110% maximum pace; Fm=100%

Production requirements = 9500 batches/week - 500 stock consumption = 9000

Sm = 16 workers manning 18 machines each over three shifts per day
Output requirements per Sm = 9000/16 = 562.5 batches per week
Output at fast pace with 18 machines is 528 batches per week; thus 2% absenteeism (10.56 batches) is not absorbable by each Sm
Overtime of 4 hrs per Sm required to clear the bottleneck (i.e.45.06 batches per Sm)

Wages  
Sm = 517.44 x £0.25 (weekly piecerate earnings)  
= £129.36
+ 45.06 x £0.25 (overtime piecerate earnings)  
= £11.27
+ 4 x £0.36 (overtime premium)  
= £1.44
Total weekly earnings  
= £142.07

Output requirements per Fm = 9000/12 = 750 batches per week
Output at fast pace is 825 batches per week; thus 2% absenteeism is readily absorbable by each Fm

Wages  
Fm (time paid) = 40 x £1.95  
= £78.00

Fw equivalent = 45 + (0.76 x 37) + (10 x 0.6) = 79.12
Output requirements per Fw equivalent = 9000/79.12=113.75 batches per week
The fastest possible pace is 105.60 batches per week, but absenteeism at 3.5% x 105.60 = 3.70 batches adds to the bottleneck

Actual production per Fw equivalent = (105.60 - 3.70) = 101.904 batches
Total bottleneck = 9000 - (101.904 x 79.12) = 937.36 batches
Bottleneck after subcontracting 500 batches to Hw agent = 437.36 batches
CHAPTER 14 EMPLOYMENT AND INCOME STABILITIES

Therefore \( NHw = \frac{437.36}{10} = 43.736 \) batches per \( NHw \)

Wages:
- \( Fw = 101.904 \times 0.625 = £63.69 \)
- \( Pw = 63.69 \times 0.76 = £48.40 \)
- \( Tw = 63.69 \times 0.60 = £38.21 \)
- \( NHw = (437.36/10) \times 0.625 = £27.33 \)
- \( XHw = \frac{9000}{20} \times 0.0333 = £15.00 \)

BAND TWELVE (second half of band)

L. SUBCONTRACTING; TO FIRM, 1000 BATCHES p.w; TO Hw AGENT, 1000 BATCHES p.wk

O. VOLUNTARY TURNOVER, \( Fm = 15-2=13; Fw = 45-2=43; Pw = 37-2=35; Tw = 10-1=9 \)

R. ADDITIONAL RECRUITMENT, \( Sm=15+1=16 \)

F. OVERTIME, 4hrs x 16 Sm

V. TIME OF WORK RE-STIPULATION, \( Tw = 9+1=10 \)

J. ABSENTEEISM/UNPunctuality, \( Sm+Fm=2\%; Iw=3.5\% \)

H. HOURS VARIATION (% of MEDIAN), \( NHw=93\% \) (reduction); \( XHw=75\% \) (unchanged)

C. PACE VARIATION (% of MEDIAN), \( Sm+Iw=110\% \) (maximum); \( Fm=100\% \) (unchanged)

Production requirements = 10000 batches/wk - 1000 subcontracted = 9000

\( Sm = 16 \) workers manning 18 machines each over three shifts per day

Output requirements per \( Sm = 9000/16 = 562.5 \) batches/week

Output at fast pace with 18 machines is 528 batches per week; thus

2% absenteeism (10.56 batches) is not absorbable by each \( Sm \)

Overtime of 4 hrs per \( Sm \) required to clear the bottleneck (i.e. 45.06 batches per \( Sm \))

Wages
- \( Sm = 517.44 \times 0.25 \) (weekly piece rate earnings) = £129.36
- \( + 45.06 \times 0.25 \) (overtime piece rate earnings) = £11.27
- \( + 4 \times 0.36 \) (overtime premium) = £1.44
- Totalweekly earnings = £142.07

Output requirements per \( Fm = 9000/12 = 750 \) batches per week

Output at fast pace is 825 batches per week; thus 2% absenteeism is readily absorbable by each \( Fm \)

Wages
- \( Fm \) (time paid) = 40 x £1.95 = £78.00

\( Fw \) equivalent = 43 + (0.76 x 35) + (10 x 0.6) = 75.60

Output requirements per \( Fw \) equivalent = 9000/75.60 = 119.05 batches per week

The fastest possible pace is 105.60 batches per week, but absenteeism at 3.5% x 105.60 = 3.70 batches adds to the bottleneck

Actual production per \( Fw \) equivalent = (105.60 - 3.70) = 101.904 batches

Total bottleneck = 9000 - (101.904 x 75.60) = 1296.06 batches

Bottleneck after subcontracting 1000 batches to \( ahw \) agent = 296.06

Therefore \( NHw = 296.06/10 = 29.606 \) batches per \( NHw \)

Wages:
- \( Fw = 101.904 \times 0.625 = £63.69 \)
- \( Pw = 63.69 \times 0.76 = £48.40 \)
- \( Tw = 63.69 \times 0.60 = £38.21 \)
- \( NHw = (296.06/10) \times 0.625 = £18.50 \)
- \( XHw = (9000/20) \times 0.0333 = £15.00 \)

BAND THIRTEEN

L. SUBCONTRACTING TO OTHER FIRMS, 1500 BATCHES p.w.

O. VOL TURNOVER, \( Fm = 12-2=10; Fw = 43-2=41; Pw = 35-4=31; Tw = 10-2=8; NHw = 10-1=9 \)

W. PLACE OF WORK RE-STIPULATION, \( NHw = 9+1=10 \)

H. HOURS VARIATION (% of MEDIAN), \( NHw=135\% \) (increase); \( XHw=75\% \) (unchanged)

J. ABSENTEEISM/UNPUNCTUALITY, \( Sm+Fm=2\%; Iw=3.5\% \)

C. PACE VARIATION (% of MEDIAN), \( Iw=110\% \) (maximum); \( Sm=98\%; Fm=100\% \)
Production requirements = 9000 batches/wk - 1500 subcontracted = 7500

Sm = 16 workers manning 18 machines each over three shifts per day
Output requirements per Sm = 7500/16 = 468.75 batches per week
Output at fast pace with 18 machines is 528 batches per week; thus 2% absenteeism (9.38 batches) is absorbable without overtime
Wages: Sm = 468.76 x £0.25 (weekly piecerate earnings) = £117.19

Output requirements per Fm = 7500/10 = 750 batches per week
Output at fast pace is 825 batches per week; thus 2% absenteeism is readily absorbable by each Fm
Wages: Fm (time paid) = 40 x £1.95 = £78.00

Fw equivalent = 41 + (0.76 x 31) + (8 x 0.6) = 69.36
Output requirements per Fw equivalent = 7500/69.36 = 108.13 batches per week
The fastest possible pace is 105.60 batches per week, but absenteeism at 3.5% x 105.60 = 3.70 batches adds to the bottleneck
Actual production per Fw equivalent = (105.60 - 3.70) = 101.904 batches
Total bottleneck = 7500 - (101.904 x 69.36) = 431.94 batches
Therefore NHw = 431.94/10 = 43.194 batches per NHw

Wages: Fw = 101.904 x £0.625 = £63.69
Pw = £63.69 x 0.76 = £48.40
Tw = £63.69 x 0.60 = £38.21
NHw = (431.94/10) x £0.625 = £27.00
XHw = (9000/20) x £0.0333 = £15.00

BAND FOURTEEN
L, SUBCONTRACTING TO OTHER FIRMS, 1000 BATCHES per week
K, MACHINE/WORKER RATIO VARIATION, 18 machines to 15 machines x 15 Sm
N, SHIFT WORK PATTERN VARIATION, three shifts to two shifts x 15 Sm
O, VOL TURNOVER, Sm 16-1=15; Fm 10-1=9; Fw 41-4=37; Pw 31-2=29; Tw 8-2=6
F, OVERTIME, 10hrs x 15 Sm
Q, REDUNDANCIES, XHw 20-8=12
P, REPLACEMENT, Fw 37+2=39; Pw 29+2=31
H, HOURS VARIATION (% of MEDIAN), NHw=81% (reduction); XHw=97% (increase)
J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=2%; Iw=3.5%
C, PACE VARIATION (% of MEDIAN), Sm+Iw=110% maximum pace; Fm=104%

Production requirements = 8000 batches/wk - 1000 subcontracted = 7000

Sm = 15 workers manning 15 machines each over two shifts per day
Output requirements per Sm = 8000/15 = 533.33 batches per week
Output at fast pace with 15 machines is 440 batches per week; thus 2% absenteeism (8.8 batches) is not absorbable by each Sm
Overtime of 10hrs per Sm required to clear the bottleneck (i.e.102.13 batches per Sm)
Wages: Sm = 431.2 x £0.25 (weekly piecerate earnings) = £107.80
+ 102.13 x £0.25 (overtime piecerate earnings) = £25.53
+ 10 x £0.36 (overtime premium) = £3.60
Total weekly earnings = £133.33

Output requirements per Fm = 7000/9 = 777.78 batches per week
Output at fast pace is 825 batches per week; thus 2% absenteeism is readily absorbable by each Fm
Wages: Fm (time paid) = 40 x £1.95 = £78.00
Fw equivalent = 39 + (0.76 x 31) + (6 x 0.6) = 66.16
Output requirements per Fw equivalent = 7000/66.16 = 105.804 batches per wk
The fastest possible pace is 105.60 batches per week, but absenteeism at
3.5% x 105.60 = 3.70 batches adds to the bottleneck
Actual production per Fw equivalent = (105.60 - 3.70) = 101.904 batches
Total bottleneck = 7000 - (101.904 x 66.16) = 258.03 batches
Therefore NHw = 258.03/10 = 25.803 batches per NHw

Wages:
- Fw = 101.904 x £0.625 = £63.69
- Pw = £63.69 x 0.76 = £48.40
- Tw = £63.69 x 0.60 = £38.21
- NHw = (258.03/10) x £0.625 = £16.13
- XHw = (7000/12) x £0.0333 = £19.44

BAND FIFTEEN
F, OVERTIME, 4 hrs X 15 Sm
C, PACE VARIATION (% of MEDIAN), Sm+Iw=110% maximum; Fm=104% unchanged
D, VOLUNTARY TURNOVER, Fm 9-1=8; Fw 39-1=38; Pw 31-1=30; Tw 6-2=4
P, REPLACEMENT, Fm 8+1=9; Fw 38+1=39; Pw 30+2=32
U, HOURS RE-STIPULATION, Pw=Fw x 75%; Tw=Fw x 50%
H, HOURS VARIATION (% of MEDIAN), NHw=118% (increase); XHw=97% (unchanged)
J, ABSENTEEISM/UNPUNCTUALITY, Sm+Fm=2%; Tw=3.5%

Production requirements = 7000 batches per week (no subcontracting)
Sm = 15 workers manning 15 machines each over two shifts per day
Output requirements per Sm = 7000/15 = 466.67 batches per week
Output at fast pace with 15 machines is 440 batches per week; thus 2% absenteeism (8.8 batches) is not absorbable by each Sm
Overtime of 4 hrs per Sm required to clear the bottleneck (i.e. 35.47 batches per Sm)
Wages:
- Sm = 431.2 x £0.25 (weekly piecerate earnings) = £107.80
- + 35.47 x £0.25 (overtime piecerate earnings) = £8.87
- + 4 x £0.36 (overtime premium) = £1.44
- Total weekly earnings = £118.11

Output requirements per Fm = 7000/9 = 777.78 batches per week
Output at fast pace is 825 batches per week; thus 2% absenteeism is readily absorbable by each Fm
Wages:
- Fm (time paid) = 40 x £1.95 = £78.00
- Fw equivalent = 39 + (0.75 x 32) + (4 x 0.5) = 65.00
Output requirements per Fw equivalent = 7000/65 = 107.692 batches per week
The fastest possible pace is 105.60 batches per week, but absenteeism at
3.5% x 105.60 = 3.70 batches adds to the bottleneck
Actual production per Fw equivalent = (105.60 - 3.70) = 101.904 batches
Total bottleneck = 7000 - (101.904 x 65) = 376.24 batches
Therefore NHw = 376.24/10 = 37.624 batches per NHw
Wages:
- Fw = 101.904 x £0.625 = £63.69
- Pw = £63.69 x 0.75 = £47.77
- Tw = £63.69 x 0.50 = £31.84
- NHw = (376.24/10) x £0.625 = £23.52
- XHw = (7000/12) x £0.0333 = £19.44

BAND SIXTEEN
F, OVERTIME WORKING, ceased for Sm
Q, REDUNDANCIES, Tw 4-4=0; NHw 10-10=0
O, VOLUNTARY TURNOVER, Sm 15-1=14; Fm 9-1=8; Fw 39-1=38; Pw 32-1=31
CHAPTER 14

EMPLOYMENT AND INCOME STABILITIES

P, REPLACEMENT, \(Pw = 31 + 2 = 33\)

H, HOURS REDUCTION (% of MEDIAN), \(XHw = 83\%\)

C, PACE REDUCTION (% of MEDIAN), \(Sm = 107\%; Fm = 100\%; Dw = 100\%\)

J, ABSENTEEISM/UNPUNCTUALITY, \(Sm + Fm = 2\%; Dw = 2.5\%\)

Production requirements = 6000 batches per week
Sm = 14 workers manning 15 machines each over two shifts per day
Output requirements per Sm = \(6000 / 14 = 428.57\) batches per week
Output at fast pace with 15 machines is 440 batches per week; thus 2% absenteeism (0.88 batches) is absorbable without overtime

Wages
\(Sm = 428.57 \times £0.25\) (weekly piece rate earnings) = £107.14

Output requirements per Fm = \(6000 / 8 = 750\) batches per week
Output at fast pace is 825 batches per week; thus 2% absenteeism is readily absorbable by each Fm

Wages
\(Fm \text{ (time paid)} = 40 \times £1.95\) = £78.00

Fw equivalent = \(38 + (0.75 \times 33) = 62.75\)
Output requirements per Fw equivalent = \(6000 / 62.75 = 95.618\) batches per wk
The fastest possible pace is 105.60 batches per week; thus absenteeism at 2.5% x 95.618 = 2.390 batches per Fw equivalent can be absorbed by Dw
Actual production/Fw equivalent = 95.618 batches; therefore no bottleneck

Wages:
\(Fw = 95.6184 \times £0.625\) = £59.76
\(Pw = £59.76 \times 0.75\) = £44.82
\(XHw = (6000 / 12) \times £0.0333\) = £16.67

STATISTICAL SUMMARY

EMPLOYMENT

<table>
<thead>
<tr>
<th></th>
<th>Sm</th>
<th>Fm</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>NHw</th>
<th>XHw</th>
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<td>s.d.</td>
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<td>2.39</td>
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<td>28.00</td>
<td>2.32</td>
<td>3.58</td>
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INCOME

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<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>NHw</th>
<th>XHw</th>
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</thead>
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<td>3.25</td>
<td>5.15</td>
<td>3.02</td>
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<tr>
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<td>75.14</td>
<td>57.03</td>
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<td>36.12</td>
<td>21.49</td>
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<tr>
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<td>8.03</td>
<td>14.70</td>
<td>16.63</td>
<td>8.99</td>
<td>23.97</td>
<td>16.29</td>
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</table>
14.3 COMMENTARY ON THE ADJUSTMENT DECISIONS

In the first quadrant, starting at band 1 with output continuing to fall from the median level of 6,000 batches per week, voluntary turnover, absenteeism and unpunctuality still occur since a time lag is assumed in employees' awareness of the oncoming recession. The employer being more conscious of order books conveniently uses this occurrence as natural wastage. At moderately low levels of output, it is possible for employees to take advantage of absenteeism without affecting income by working faster while at the factory for only part of the week, but as production levels fall further, fear of redundancy and possible severance of unreliable workers produces lower absenteeism rates. In band 1, no non-exclusive homeworkers are employed and two exclusive homeworkers are made redundant which increases the hourly requirement from those retained. Pace slowdown is an effective adjustment at this level of activity. In band 2, one full-timer switches to the part-time group, and other part-timers are permitted to reduce their weekly hours input which reduces the groups' average to 72.5% of full-time hours. Absenteeism and unpunctuality receive less criticism and pace slowdown continues, but 8 hours of short-time working are nevertheless required from which, according to the scheme operating in sample firms, 4 hours guaranteed payment will accrue. In band 3 output is falling below the usually expected levels; there is less absenteeism, unpunctuality and voluntary turnover, although full-timers, as the preferred workgroup, can occasionally obtain alternative employment when competitive employers are rationalizing their workforces. This hypothetical employer is assumed to be willing to accumulate stock at the rate of 1000 batches per week because, being at the turning point of his normally expected cycle, he considers that a reversal will quickly occur. Nevertheless, he is unwilling to hoard exclusive homeworkers, 2 of whom are severed. At the onset of band 4 the employer is assumed to accumulate stocks, but when he reaches the midpoint (band 4B) confidence deserts him and as a last resort he makes core employees redundant as well as further exclusive homeworkers. The pace of work has reduced throughout the first quadrant; part-timers, having previously been working more hours than they preferred, have been permitted to reduce them, but short-time working is still necessary.

When the upturn begins (band 5), adjustment is primarily via the removal of short-time working and faster pace, and work is again subcontracted to a previously redundant exclusive homeworker.
Unpunctuality/absenteeism which disappeared at the bottom of the trough start to reappear when the upturn is apparent. This employer adopts a 'wait and see' attitude towards replacing workers, because to recruit early would depress wages. Not until band 6 does he adopt forward planning strategies and re-recruit some of his redundant core workers. In band 8 he introduces school leavers for training on a full-time basis so that by the time the peak is reached those retained will have had sufficient time to become proficient. Skill improvement occurs in successive bands until their abilities are equivalent to those of existing full-timers, but they have relatively high turnover rates. In band 11, the employer takes the opportunity of stock consumption, but still needs to add non-exclusive twilight workers and homeworkers. In the first part of band 12, he additionally has to subcontract some work to a homeworker agent, but the shortfall is so large between bands 12B and 14, after stocks have been cleared, that subcontracting to other firms becomes necessary.

In the fourth quadrant, after the peak has been passed, downward adjustment takes place by some natural wastage, but replacement is occasionally necessary; the ability to attract full-timers is assumed to be unsuccessful because all similar firms in the industry are still working at above average levels. Non-exclusive twilight workers and homeworkers are phased out between bands 12 and 16 and exclusive homeworker numbers begin to be reduced in band 14. Absenteeism and unpunctuality, which reached high levels during the boom, begin to fall as the median output is again approached.

14.4 OVER-SIMPLIFICATION IN THE WORKED EXAMPLE

Whilst depicting an extremely complex, protracted and piecemeal decision-making process, the worked example nevertheless represents a very simplified version of adjustment as it is actually applied within firms of the H&K industry. For instance, the calculations treat output as if it comprised uniform operations having identical degrees of shortage and surplus simultaneously. In reality there are numerous operations, to each of which are attached varying amounts of adaptability. The example treats voluntary turnover, absenteeism, recruitment as though these were evenly spread across all operations, but within real firms it is more likely that such adjustments will have varying incidence and success rates. Thus the income and employment schedules of each workgroup as depicted in Figures 14:1 and 14:2 represent the aggregated effects of numerous and different adjustment sequences applied to the various operations constituting the
manufacturing processes. Furthermore, certain instruments such as redeployment of personnel have been disregarded because, being an aggregation, it was unclear at what stage in the cycle relocation might be required. Work creation schemes, such as machinery maintenance, factory cleaning, stock-taking, and job or process redesign, might additionally be undertaken during periods of labour hoarding, especially for workers who absorb all the adjustment themselves, but these possibilities have been deliberately disregarded in order to concentrate on the income and employment implications arising solely from product market changes. Thus the worked example, although complex, is a simplified version of an operational adjustment sequence.

14.5 CONCLUSIONS REGARDING THE WORKED EXAMPLE

In order to permit comparisons of the effects of adjustment calculations on the various workgroups it has been necessary, because of the wide differentials between mean values, to examine coefficients of variations (CV%) rather than standard deviations which take no account of means. A statistical summary showing the CV% for each workgroup's employment and income concluded section 14.2.

In this worked example of adjustments in a hypothetical company it is recognised that outcomes will naturally depend on assumptions, but it is asserted that both the assumptions and outcomes realistically reflect the actual circumstances of H&K employment (albeit simplified) as they were identified by the extensive overview obtained from the research project.

The employment instability discussed below is judged solely by number variations including periods of non-use, but excluding periods of short-time working. The most stable workgroup to emerge at the end of the cycle is shift workers, and this arises from the hoarding of specifically skilled workers on capital intensive, highly productive operations. This employment stability has implications for income stability as will be seen below. Daytime women, as the core of the female segment, have the second best employment stability. Because full-time males are time-paid and often semi-skilled, they are less likely to be hoarded during periods of low activity and therefore have less stable employment. Although the employment of exclusive homeworkers is less stable than is that of the above-mentioned workgroups, the employer relies on them for specific operations and consequently their employment is substantially more stable than those of non-exclusive homeworkers and twilight workers. Thus, even at the bottom of the business trough some exclusive homeworkers are retained. The worked
example clearly illustrates the instability of employment of non-exclusive homeworkers who are commonly seen as being used to provide production flexibility. The size of bottleneck remaining after all core worker adjustments have been achieved largely determines the numbers of twilight workers and non-exclusive homeworkers used. Therefore their levels of employment are affected by the voluntary turnover of core workers and the other instruments used to adjust core labour input. Turnover rates typical of the H&K industry have been fed into the calculation, see 9.6.6. Figure 14:1 shows that, taken together, exclusive and non-exclusive homeworkers are used more frequently than twilight workers and this demonstrates the extreme employment instability of twilight workers who tend to be introduced in bulk, naturally wasted and then terminated abruptly when the major part of the work backlog has been cleared.

Income stability is judged by earnings while in employment. It takes into account the effects of short-time working but excludes periods of non-use. Because most workers are paid by piecerates, their income stability is affected by the numbers employed. Hence the time-paid full-time men have the most stable income because it remains unchanged regardless of employment changes unless short-time working is introduced. Twilight workers have the next best income stability, but this arises from their highly unstable employment pattern in which numbers are regulated by the amounts of work available. Although non-exclusive homeworkers are used in similar circumstances to twilight workers, they have much more fluctuating incomes because they are invariably given the residual work that cannot be performed by the factory workforce, including twilight workers. Conversely, exclusive homeworkers have relatively more stable incomes because they are not given residual amounts of work, although as production falls their services are not hoarded so that those retained receive moderately stable payments. Shift workers, having the most stable employment, inevitably have the highest variation in income, and this is compounded by the fact that they shoulder the whole of the adjustment process by their own efforts, i.e., by short-time and overtime working, see dotted sections of their income schedule. In contrast, daytime women work little overtime and have secondary workers to absorb some labour input adjustment. Consequently, they have considerably more stable earnings over the cycle than do shift workers and non-exclusive homeworkers, and this is accentuated because their incomes plateau at that level derived from the maximum pace achievable.

This worked example of adjustment decisions has shown how, starting
from the median output, workgroup compositions have changed via a combination of positive active strategies and reactive responses, even though the employer has attempted to hold together an experienced core of his employees. The calculations have illustrated that under piece rate payments, earnings of workers in all workgroups vary positively with production and negatively with numbers employed, and that these relations act simultaneously. Consequently piecework earnings variations, below the fastest paced work rates, depend on both deliberate employment strategies and unplanned number variations as well as variations in workloads. Some instability of weekly earnings is therefore to be expected for workers in all workgroups as is shown in Figure 14:2. The calculations demonstrate that work-sharing occurs when labour is hoarded and consequently that workers become risk-bearing factors of production as suggested by Jonsson\textsuperscript{243}. Implicit contracts are demonstrated by labour hoarding and by secondary workers being progressively discarded during falling production schedules as will be discussed in chapter 16.
CHAPTER FIFTEEN - A MODEL OF THE LOCAL LABOUR MARKET

15.1 A MODEL OF THE SUPPLY OF, AND DEMAND FOR, LABOUR IN THE EXTERNAL LOCAL LABOUR MARKET

The foregoing chapters have presented a picture in which women and men face different, but linked, family constraints that cause them to have, or appear to have, different LM characteristics. Different female workgroups are used for the same range of jobs, but are not in competition for male jobs. It is contended that this pattern of labour demand and supply is not confined the the H&K LM, but is common to other industries and LLMs that have numerous labour-intensive, low-output jobs. The model presented below of the workings of the LM is appropriate to such circumstances and is an attempt to link together different branches of social science learning into a comprehensive overview of a local labour market.

The terms 'supply' and 'demand' each encompass stock and flow elements: stocks are the workers already in employment and the equivalent jobs already filled; flows are the parties in the market place seeking either employment, or workers to fill vacancies. The paradigm presented in this section refers mainly to flow elements, although inferences can be drawn about changes in stocks under dynamic market conditions.

It is contended that the flow elements of labour supplies and demands have two components: firstly, initial specifications, or 'preferences'; secondly, subsequent observed outcomes, or 'effective' supplies and demands that follow from realistic appraisals of LM conditions. Flow elements of supplies and demands are perhaps most appropriately considered as requirements stemming from interactions of 'needs' and 'wants'. These requirements prompt specifications of preferred jobs, or preferred workers, but initial specifications may not be satisfied due to insufficiencies of searched-for jobs and workers. Compromise strategies have to be adopted and these modify initial specifications and cause subsequent searches for jobs or workers which differ from those of original intentions. Second-best, or even third-best concepts of supplies and demands are thus envisaged.

On the supply side, the initial formulation of the specification for the sought-after job (i.e. intended supply) is generated by an interaction and balancing of the individual's needs and wants. The needs of each potential worker stem from a blend of economic, social and psychic pressures that can conflict by simultaneously encouraging and discouraging
LM participation and eventually prescribing the possible amount of LM activity. Wants are usually a matter of taste for a particular form of LM involvement; although these tastes usually have economically rational bases they might appear to be irrational. An individual first balances his/her needs and wants to produce a specification of the preferred job, but when an approach to the market place reveals that job to be unobtainable, then reformulation takes place by a review of needs and wants to develop a compromise job specification. Two basic options are left; either further forays into the market can take place, or the potential worker becomes discouraged and ceases to search. Usually only the want element of a specification can be modified because needs tend to be rigid. Success or failure in finding employment that complies with the initial specification determines whether preferences and effective supplies are identical.

Similar situations arise on the demand side of the LM. An employer's needs stem from technical or production requirements, or they are dictated by the nature of capital equipment. Wants are again related to tastes, in this case, for a particular type of worker; although such tastes are usually economically rational, they might be prejudiced. Thus, the want influences of supplies and demands can lead to segregation and segmentation of the labour force.

Figure 15:1 illustrates a paradigm devised by the author incorporating the above-mentioned two-component concepts of labour supply (upper left) and labour demand (lower right) and their interactions in the market place (centre). The arrowed lines serve to exemplify a typical decision process undergone by one potential employee and one potential employer. The bar charts of workgroups (centre left) and vacant jobs (centre right) summarize the aggregate of all such decision processes. The central bar chart indicates the net supplies and demands which are the excesses or shortages that remain after satisfied employees and employers have left the external market; such outcomes being depicted as pools of potential workers or vacant jobs above or below the equilibrium line EE respectively.

It can be seen that there are seven conflict areas, three on each side of the LM and one centrally at the interaction of supply and demand in the market place. On the supply side, conflict area one arises internally for the individual and is concerned with incompatible needs and wants. In a typical example, shown by the arrowed lines, economic pressures create a need for a young mother to undertake paid market work and she wishes to attend the factory for the companionship that it provides, although she is
concerned about her children’s welfare. However, her decision is strongly influenced by social and psychic pressures to remain at home with her young family. The initial specification is therefore shown to be for a homeworking job because it optimizes her achievable needs and wants. Conflict area 2 arises upon entering the LM arena where her initial intentions are frustrated by insufficient homeworker demand. Conflict area 3 is a repeat internal conflict regarding the choice of a compromise solution. For instance, should she re-enter the market arena in a different form, say as a part-timer, and if so, what strategy should she adopt to care for her children? Some individuals will successfully make suitable compromise arrangements, but others will not; the latter will have to decide whether to remain hopefully in the homeworker pool, or to move to a different occupation, industry, or sector of the economy, or to withdraw from LM participation altogether.

There are three comparable conflict areas on the demand side of the market. Conflict area 4 arises internally for the employer between the need and want elements of the initial recruitment ‘job’ and ‘man’ specifications. A typical example of this internal conflict would be where the needs of technology and of equipment conflict with LM goals and the requirements of legislation. For example, shift operations might be necessary to make the use of high-cost equipment viable and the employer is tempted to employ a woman or a member of a minority group because he anticipates the acceptance of lower pay; however, equal pay legislation forbids lower pay for ‘work of equal value’, and furthermore he considers the legal formality of obtaining an exemption certificate to employ a woman at night as tiresome. Conflict area 5 arises from frustrated intentions when initial specification cannot be met by the available supply so that a compromise strategy becomes necessary; e.g. this illustration depicts a shortage of full-time females. Conflict area 6 is again a repeat internal conflict which stems from the choice of a suitable compromise strategy. A variety of tactics might be possible: for example, the substitute recruitment for full-time of part-time, twilight or homework labour; the subcontracting of work to other firms; relocating existing personnel; the introduction of overtime working; or combinations of such alternatives.

The position of each bar in the central chart shows the LM conditions facing all employers and each group of potential workers, and gives an indication of prospects of their having intentions satisfied. Equilibrium line EE denotes the complete clearing of the LM by suitable workers exactly matching job vacancies. Bars above line EE depict potential worker over-
supplies, whereas bars below indicate excess demand for workgroup members. The height of each bar illustrates that group's market strength relative to the employer and every other workgroup from the viewpoint of job-competition, the groups in greatest excess being regarded as having comparatively little market strength. Thus, full-time females are depicted in strong positions vis-a-vis the employer and all other male and female workgroups. However, in LLMs segregated by gender, females are not in job-competition with males and so the male and female segments can be considered as two distinct LMs. Part-timers although slightly stronger than the twilight workers and homeworkers are shown as weak vis-a-vis the employer since there is a surplus supply of potential part-timers.

The final conflict area arises from the meeting of effective supplies and demands and is concerned with the impacts of employment law and the negotiation of terms and conditions for the contract of employment. In institutionally organized LLMs, the line EE itself represents the roles played by law, trade unions and employers' associations in 'coming between' employees and employers by setting the climate for collective bargaining and the clearing process.

When product markets change and output levels need to be varied, the model shows that each employer could select from the varied pools of potential workers those who will provide appropriate amounts of labour input. For large increases in output he could seek to recruit shift or full-time employees, but only when slight increments are called for, part-time, twilight or homeworkers might be more appropriately selected. Suggestions of second and third-best choices indicate that a dynamic environment will favour employees and employers alternately. As shortages and excesses of potential workers accumulate, relative bargaining strengths will vary and existing workforces will be in a state of flux as one side of the market, and then the other, compromises in the processes of replacement and new recruitment. In worker over-supply situations employers will not need to make compromises because intended demands will be achievable; relative proportions of the workgroups in each employer's labour force will thus change to more closely resemble preferences, and this will be observable over time as modifications to worker stocks.

This model thus provides a framework that draws together and shows the relationships of many aspects of LM behaviour that have occupied the thinking of economists, sociologists, psychologists, organisational theorists and lawyers. Not only does the model incorporate notions of the internal psychic and external social pressures impelling employees and
employers as they approach the market, it also allows for the impact of technology and methods of organization on the choice of workgroup. It incorporates unemployment, discouraged workers, allows for discrimination, job-segregation, segmentation and provides an arena for the collective bargaining process. It thus offers an overview of how the many theories developed in the different branches of social science can hang together and complement rather than conflict with each other so as to form a comprehensive, although complex, picture of labour market operation. Indeed, this multi-disciplinary research has demonstrated that without the expansion offered by sociological insights into the impact of marriage and family and the social relations of the workplace, economic concepts are severely limited in their ability to accurately describe labour market relations. It is contended that should any researcher attempt to construct a testable econometric model of LM operation it would need to include all the constituent social and psychological dimensions implied by this paradigm in order to approximate to reality and be of any value.
16.1 THEORETICAL IMPLICATIONS

Reference has already been made to some of the theories outlined in section 2.1, but this section examines many of them in detail for their relevance to the LLM studied, and links them together where possible.

Studies have found that the wage mechanism, as predicted by the neo-classical price/auction model of adjustment to equilibrium, plays an insignificant role in the functioning of the LLM. Evidence from this socio-economic study also suggests that overt earnings manipulations form only a minute part of a much more complex and varied adjustment process, but that is not to say that the price mechanism is unimportant. Indeed, Thomas & Deaton contend that, with flesh added to the skeletal framework:

"the cost minimisation model is one of the fundamental building blocks of adjustment theory".

It is concluded that H&K employers are cost-minimisers, and the findings further suggest that the price mechanism influences LLM functioning less directly, but more sensitively, than is possible by the wage mechanism. Moreover, it is contended that wage adjustment is a high cost instrument, especially for labour intensive operations, uncertain product-markets, and when collective action precludes the downward revision of rates.

Nevertheless, inter-firm wage differentials exist alongside perceptions of high and low paying companies and inter-firm mobility; indeed a few companies prided themselves on being high payers and intended to remain so. These inter-firm differentials are the residual effects of previous wage policies which, given imperfect knowledge of product and LMs, might have resulted from errors of judgement. Alternatively, they could have arisen from different positive approaches to LM adjustment, or as this author would argue, have been deliberate attempts to overcome qualitative disadvantages (e.g. poor location, old premises, poor catchment area, or bad reputation). Whilst the persistence of such differentials might be interpreted from a neo-classical viewpoint as a sign of inefficiency, it is contended that they are consistent with long-term efficiency, for what logic is there in an employer imitating his competitor's wage increases if he finds it unnecessary? It is not surprising that such deliberate inter-firm differentials are not competed away, given the extremely wide range of instruments available for adjustment, long-term employment relations, downward wage stickiness, and competitor caution about permanent costly
responses. In such conditions, inter-firm differentials could be expected. Neo-classical economists concede that wage differentials can persist due to skill differences because training for general transferable skills will be funded by the employee via the acceptance of lower earnings, while specific skill will be paid for by the employer when higher earnings will result. Øi185 first realized that labour was hoarded by employers, especially the specifically skilled, because of the 'fixed costs' of training investment in the person. That skills are 'general' in character in the H&K and Footwear industries is indisputable, and they are widely perceived as low wage industries which is consistent with this neo-classical view of training. Notwithstanding this, considerable elements of specificity are attached to most jobs since each company has its individual methods of manufacture and its products are unique. It is essential to recognize that skill is a multi-faceted quality with specificness being generated by different elements in the work situation (e.g. by the work performed and by company ethos). In the H&K industry, work specificity changes with each new style; as designs are superseded those elements of specificity become obsolete. Thus, the relative importance of the different elements of skill specificity can change over time; it will be crucially necessary to hoard individuals with work-specific skills during production bottlenecks, but less important to hoard all of them after that design has been terminated. Some voluntary turnover when peak production has passed is therefore a useful downward adjustment, while the loss of some investment in work specific skills can be seen as unimportant because even well established workers need new work-specific skills for the next season's styles. Notwithstanding this loss for adjustment purposes, employers still find it advisable to hoard 'good' operatives in periods of low activity who will quickly learn specific 'new style' skills because they are well versed in the specificity accruing from knowledge of the company and its practices, i.e. they are Blackburn & Mann's9 habituated workers. Little wonder therefore that attempts to explain wage differences by a simple perception of specific skill have proved unsuccessful, because a judicious blend of hoarding, turnover and lay-off are often the preferred mechanisms of adjustment, the hoarding element of this sequence creating the long-term employment relations highlighted in ILM and IC theories. An understanding of this sequence links together several LM theories from different schools of thought and demonstrates the benefits obtainable from socio-economic research combining quantitative and qualitative data. An important theme of labour process debate also relates to skill, it
being argued that a protracted de-skilling process occurs. Certainly, H&K employers have desires for de-skilling particularly on labour intensive operations (8.2.2a(i)), although it has been limited by insufficient progress towards automatic control in finishing machinery design. Such new machines as have been introduced are costly, thereby offering the operative more power via the threat of stoppage. This confirms the claim that labour cannot be entirely dominated by capital, see 2.1. Neither has the total degradation of labour taken place, since personal acquaintances of the author clearly enjoyed their work. However, twilight workers and homeworkers approximated more closely than other workgroups to a degraded workforce by being used as a 'reserve army' often on low-skill operations.

Williamson's and Ouchi's suggestions that employers resort to market mechanisms of control when performance is unambiguous and easily supervised, and Bresnen's, that market and bureaucratic control forms overlap in conditions of uncertainty, have gained support in that incentive payment methods (seen as market-type control devices) were used only for easily monitored, repetitive operations whereas highly skilled, easily spoiled work was paid by time rates and closely supervised.

Critical stages in life-cycles are shown to have important influences on aspirations from which spring motivations, instrumental orientations to employment, and ultimately, varying levels of productivity. These insights underline the importance of qualitative data and wider non-work issues, particularly the inter-dependence of family members, for obtaining clear understandings of the structure and functioning of LMs.

The ILMs of the H&K industry had ports of entry at each job and so were completely open. Thus, functioning markets did not exist, and there were generally no job clusters, recruitment often being via the strongly developed links of the extended internal market. ILM theorists contend that institutional rules govern conditions of service and the allocation of rewards, while job allocation is seen as being less-competitive than as postulated by neo-classical theorists. Certainly, this appeared to be true of the H&K industry, but as Part B shows, many of these rules had cost-minimising overtones, e.g. redundancies based on age and "last in, first out" practices; recruitment via the far less-costly and apparently more effective informal channel; and workforce segregation by gender into capital and labour intensive production elements which permitted different skill and wage setting standards and took advantage of women's desires, given poor childcare facilities, for a wide range of employment patterns. Furthermore, with respect to lay-offs, employers often adopted a dual
sequence of strategies: (i) employees were temporarily placed on short-time working when they received state-subsidized guaranteed payments; and (ii) if demand did not recover they were then made redundant and received dole payments, although some were later re-recruited. In both instances the state picked up the earnings bill and thereby subsidised the employer's hoarding strategies. The former (i) was the more popular adjustment, and it can be seen as a long-run cost-minimising strategy in that it hoarded specifically skilled labour at the State's expense. Employers acted in economically rational ways in these respects and custom appeared to strongly reinforce such strategies. Invisible handshake\textsuperscript{222} theories also place cost-minimising interpretations on empirical observations of ILMs previously seen as non-economic in origin, i.e. seniority rules and lay-off procedures imposed by employers and trade unions.

Beardsworth's\textsuperscript{200} conceptualization of workers as established, unestablished, less-established and dis-established is an advance on the use of terms such as primary, secondary, marginal, casual, fringe or peripheral since his terms incorporate notions of change. Established, unestablished, less-established and dis-established workers can be seen to result from the operation of 'hybrid' ICS (see below) as employers use twilight, homework and subcontract workers (generally the unestablished) and the most recent recruits, senior citizens and low-hour part-timers (the less-established) as instruments to facilitate the hoarding of long-serving core workers (the established) during the adjustment process. Nevertheless Beardsworth's terms are still somewhat imprecise since varying degrees of establishment and unestablishment exist as is evidenced by the different types of labour; present terminology is insufficiently sensitive to permit accurate, succinct discussion. Consequently, although difficult, a vocabulary must be developed to distinguish between both individual workers and different workgroups having varying levels of employment security, thereby permitting simultaneous, precise discussion in changing circumstances.

This thesis has carefully documented degrees of segmentation and mobility between workgroups; its findings indicate that segmentation exists at various levels. The author concludes that cost-minimisation is a stronger motivating force behind the creation of the segmented structure than is a desire for worker control, although employers will take advantage of the enhanced control it offers. Homeworkers in general, and non-exclusive homeworkers used solely for flexibility in particular, are shown to rest at the bottom of the segmented structure.

Although domestic production is often associated with informal
economic sectors, this research has shown homeworking to be a major and wide-spread strategy for providing flexibility in the formal manufacturing sector of the British economy (see also\(^229\),\(^245\)). This is also in line with Allen's\(^29\),\(^69\) observations. Indeed the use of twilight workers and homeworkers is judged to be a crucial linkage in the mechanism of adjustment in LLMs with high levels of female employment on labour intensive operations. It could not be established whether homeworking formed part of the irregular sector\(^70\) through tax avoidance, but it is thought unlikely since the low average earnings reported revealed that wages would rarely reach tax thresholds.

H&K employers clearly enter implicit contracts with their workers, and of the two basic models, the cost-minimizing model (i.e Okun's\(^222\) invisible handshake) is judged to be the most appropriate since employers were cost-minimizers in many of their actions and demonstrated other features of the model. Notions of fairness associated with fixity of wages are an important element in such ICs. That H&K employers recognize the importance of fair dealings is demonstrated by fixed piecerates, long-term stability in skill differentials and by rate reductions to restore skill differentials following wage-drift, see 8.3.4a. Whilst the latter can be seen as an impingement of market forces, it is nevertheless consistent with 'fairness' as embodied in the cost-minimising IC model.

Debates continue regarding the types of contracts entered, i.e. whether they are of the fixed wage or fixed employment type. The long-run cost-minimising motive for holding together a core of experienced workers suggests that H&K employers might wish to enter implicit employment-type contracts to encourage long-term relations rather than fixed wage-type contracts. As Thuro\(^198\) recognized, variability of the wage bill can permit a degree of employment fixity since hoarding of specifically trained, highly skilled core workers can proceed at little cost.

In practice, contracts entered varied by workgroup, and those for core workers were peculiarly different from the ICs of theoretical debate which centre around wage fixity, the theory having been specifically developed to explain downward wage rigidity and involuntary unemployment. Indeed, the characteristics of the ICs of the H&K industry can be understood within the context of experienced oscillations between labour hoarding, turnover and lay-offs (see above). Re-recruitment was necessary and was facilitated by a good reputation while labour hoarding within limits was desirable to reduce long term fixed costs. By adopting the piecerate method of payment H&K employers could offer wage rate fixity in
all phases of the cycle to all workgroups to create an aura of fairness, but this nevertheless allowed wage expenditure to vary without breaking the contract. The use of numerous adjustment instruments, including unestablished worker shedding, could permit core labour to be hoarded to achieve a degree of employment fixity for those workers the employer wished to hoard. Strategies that use different sections of the work force to bear varying degrees of risk are thus adopted because an important function of H&K labour is to absorb instability both for employer and core employees. Consequently, the concept of labour as a risk-bearing factor of production is highly pertinent to the findings of this research, not only from Jonsson's\textsuperscript{243} viewpoint of co-determination but also with respect to flexibility. Two separate buffer techniques can be identified: firstly, all employees are used to cushion the employer's total wage bill by absorbing many of the costs of falling output. In this respect, fixed employment/variable wage ICs are appropriate since weekly earnings need to vary. Secondly, unestablished and less-established workers are used to cushion the employment of the more established and this suggests that for the former categories fixed wage/variable employment ICs will be most appropriate. Hence, a combination of the features of the two types of contract is the most pragmatic solution and thereby the ICs of the H&K industry develop a hybrid character.

Although it is understood that even the most established worker risks redundancy when product market conditions are sufficiently unfavourable, it is clearly evident that twilight workers and homeworkers are subjected to much more variability than daytime females. This results from the structuring of hybrid contracts such that the amplitude of both wage and employment fluctuations are limited for established core workers, whereas these are exaggerated for un- and less-established workers. Since many mature women in the H&K industry show themselves to be willing, even to prefer, working fewer than full-time hours, employers find they can operate within and make the most of existing environments by taking advantage of women's domestic role constraints to sustain the ICs of established core employees at low cost. Thus twilight workers and homeworkers, who are used to absorb instability, are a cost-minimising means of honouring the elements of wage and employment fixity embodied in the hybrid ICs of the hoarded core employees. Moreover, payment method mobility (8.2.2a (iii)) is another specific strategy for stabilizing the wages and employment of established core workers.

The extent of fixity of employment is however, conditioned by product
demand variations, for hoarding will occur only to the extent considered 'safe' from a financial viewpoint. Beyond that limit (which varies according to the risk-averseness of the employer) core workers are shed. Nevertheless, the shedding process is itself a two-stage temporary/permanent, cost-minimising procedure designed to throw much of the cost onto the state. Firstly, short-time working is introduced as a means of temporary shedding; although employers actually pay guaranteed rates, some of the hoarding expenditure can be recouped from the state via the Short-time Compensation Scheme. When confidence in product demand recovery is lost, redundancy occurs and this reduces the amplitude of variations in both wages and employment for retained piece-rate individuals. Involuntary unemployment, dole payments and subsequent re-recruitment of redundant employees are overt indications of state-subsidized transacting on the basis of identity designed to create long term employment relations. Hence it is concluded that H&K employers structure the various implicit contracts they offer to their established, less-established and unestablished workers such that they get the 'best of all worlds'.

The various contracts encountered in the H&K industry can be characterized in a simplified way, similar to Beardsworth's characterization of established/unestablished workers, by two intersecting continua, see Figure 16:1. Contracts adopted for core female workers would be situated in quadrant A where both employment and wages are stable relative to those of most other workgroups. Full-time men would be in quadrant B where wages are largely fixed but employment is variable. Shift workers, and the core element of the exclusive homeworker group, would be in quadrant C with unstable earnings but fairly fixed employment. Non-exclusive twilight and homeworkers who are deliberately used as short-term adjustments would be in quadrant D which represents variability in both employment and wages and highlights the extreme secondariness of these jobs.

'Equity and fairness' are also seen as important for promoting motivation and co-operation, especially where teamwork is required. Certainly, teamwork is an essential feature of H&K production due to sequencing of operations while skill transference is by on-the-job training. Skill transfer is seen as unlikely unless employees feel secure in their own employment and hence this strengthens the incentive to offer greater employment and wage stability to workers it is hoped to hoard. Teamwork tends to be an under-researched area of LM behaviour, but these findings indicate that reliability and an ability to fit into the team are important selection criteria (9.3.1).
IC writers suggest that imperfect information coupled with workers' ability to vary performance (moral hazard) is a grave risk especially on the 'spot' market and that consequently, employers are prompted to transact on the basis of identity to secure more predictable performances. While this is undoubtedly true, it is nevertheless contended that pace variation is a valuable adjustment instrument. Thus, piecerates are the vehicle for transferring adjustment costs to employees who thereby become variable factors of production and risk bearers in the process, see Jonsson. Moreover, Health and Safety Act protection, denied to most homeworkers, causes this group to become extreme examples of risk-taking factors of production, as also perceived by Jonsson. In short, H&K labour is manipulated as a risk-bearing, risk-taking, variable factor of production.

Another important assumption of IC theory relates to the value of unemployment as it derives from the utility obtained from leisure. Firms can offer more attractive contracts to retained workers if they select for lay-off those workers with high leisure utility. This issue again highlights economic rationality; by segregating women into the labour-intensive operations employers throw the major part of labour reduction onto women who, by their dual roles in the home and LM, have higher degrees of 'leisure' utility (or rather, utility for non-market-work time) than men with generally fewer time commitments in the home. There is a mistaken implicit assumption in IC theories that the risk of lay-off is spread evenly across all workers, but it is common to have 'last in, first out' company ILM rules and for workers with more specific skills to be retained as suggested by Oi. Grossman's finding that unreliable workers have longer spells of unemployment has been given further support by unreliable full- and part-timers recognizing the risk of lay-off and varying their absenteeism and unpunctuality negatively with economic activity.

Sloan and Wooden indicate that IC models do not explicitly incorporate aggregate demand and other economic indicators, nor do they explain why underemployed and unemployed persons are not hired by other firms. In the latter context, it should be noted that although long-term employment relations are the norm, there is considerable inter-firm mobility in the H&K industry. However, mobility tends to occur during seasonal peaks when it is easiest because many firms are experiencing labour shortages and it is less common during seasonal troughs when transfer is most difficult. Seasonability in demand is thus the most likely reason for lack of labour poaching during temporary lay-off. The overlooking of aggregate demand is an important flaw, particularly since...
work-sharing can be predicted as a likely outcome, but Beardsworth's model of workforce mix variation is a conceptualization that, whilst being consistent with IC theory, remedies this omission.

The need for flexibility and the adoption of temporary solutions has been recognised (see 2.1) but it is not surprising that employers have a propensity for temporary adjustments and react on a day-to-day basis rather than adopting long-term manpower planning given a paucity of reliable information. In conditions of uncertainty, instrument reversibility is an essential feature of sensible adjustment, while long-term strategic planning is generally inappropriate unless a strong indication of future movement is evident. Only in very low economic states with demand rising strongly will employers adopt such strategies. As Thomas & Deaton point out, reversibility of adjustment is especially useful because the efficiency of instruments can change over time and thus an adopted strategy might prove more effective than anticipated and create the opposite type of disequilibrium (e.g. a shortage when responding to surplus). Hence short-term temporary and reversible responses are economically rational long-term strategies, whereas permanent adjustments such as the highering of wages (with downward stickiness) or additional recruitment (with low or no voluntary turnover) can be very costly.

Temporary adjustments have important implications for theoretical debate and for policy prescriptions, see 16.2. As Loveridge & Mok point out, the implication of neo-classical theory is that a general expansion of demand will cause employers in the primary sector who have exhausted their supplies of primary workers to add additional labour by reducing hiring standards so as to recruit from previously rejected workers. Subsequently, they will introduce training and upgrading schemes to improve quality. Inevitably, the secondary sector is the source of this additional labour, but they argue, when employers prefer temporary solutions, this prediction is unfounded because secondary workers will not be permanently absorbed into the primary sector. Rather, the increased overtime payments given to existing workers to keep the marginal costs of production down will improve primary workers' earnings relative to those of the casualized workers. This research has shown employers use a judicious blend of outsourcing, overtime, subcontract, temporary or casualized workers and that the outcome is a widening of differentials between, say, shift workers and full-time women who have permanent relations, and non-exclusive secondary workers who have merely obtained casual employment. Consequently, a national expansion of aggregate demand designed to absorb
secondary workers into the primary sector is likely to be counterproductive in the presence of temporary responses. Thomas & Deaton argue that the more precise the coverage of an instrument the less costly it will be. Seen from this perspective differentiation of workers into many job classifications lowers the marginal costs of piece rate increases and this can facilitate piece rate adjustments. Job differentiation is therefore another cost minimising strategy. Although Thomas & Deaton's model illustrates an adjustment sequence incorporating both permanent and temporary instruments, it presents a view of manning equilibrium interspersed by periods of disequilibrium. It is contended that this is unrealistic with respect to the H&K industry for it is rare for equilibrium ever to be achieved because of the constantly changing characters of both product and labour markets and the time lags between instrument introduction and effectiveness. Indeed as a result of uncertainty about product market movements and the efficiency of temporary adjustments already in use it is probable that desired labour stocks cannot be determined. Thus the author's Figure 14.2 illustrates a totally fluid situation in which equilibrium is never reached even though employers are continually adopting both reactive and active positive actions. As discussed in 14.4, although the worked example offers an insight into the complexities of adjustment, the schedules depicted in Figures 14.1 and 14.2 are indeed over-simplifications.

By considering the use of twilight workers and homeworkers as a means of obtaining flexibility the author has replicated employers' perceptions of them as adjustment instruments. In this context, Beardsworth's200 perception of stocks of established and unestablished workers being varied with economic states has much to commend it, but as with Thomas & Deaton's model, this is too simplistic in that it presents only a partial view of the much more complex and varied sequences used by employers.

Thus, the simple short-term price/auction model of wage increases/decreases and hire and fire must be rejected for the H&K industry, and possibly for other industries also. Nevertheless, the price mechanism exerts a powerful influence and it can be concluded that rather than wage changes acting directly, openly and in the short-term, the price mechanism operates on the adjustment process over the long-term in a hidden and indirect way. Male/female segregation and segmentation, further segmentation among female workgroups, and a propensity to use non-wage instruments can all be seen in terms of a complex and varied mechanism of adjustment that is economically viable over the long-term. Long-standing differen-
tials between workgroups replace 'spot' wage adjustment, while non-wage adjustments (i.e. overtime, short-time, voluntary and involuntary turnover, hiring and firing of secondary workgroups) are used to avoid both the costs and risks of giving primary market status to additional workers. If this wide-ranging long-term perspective of the price/auction model is adopted it is consistent with many LM theories, e.g. those for SLM and adjustment.

Thus the research has demonstrated that labour is heterogeneous and that traditional neo-classical economics has severe limitation in dealing with this, particularly the dynamics of LM adjustment. In particular it has shown that both twilight workers and homeworkers can be a central and crucial feature in LM dynamics and Part C has highlighted the manner and mechanisms by which twilight workers and homeworkers are used to create the flexibility that other writers have ascribed to them. What has also been illustrated is an extremely complex picture. Economists and sociologists have long examined and theorized about various aspects of this confusing jumble, but now is perhaps the time to begin fitting together the various pieces of the jigsaw of LM operation. This section has been the author's attempt to do just that, but as Sloan and Wooden199 recognize, by its very nature the labour market "is more difficult to analyse than other markets because both jobs and workers can be differentiated along a number of dimensions". Consequently, it not surprising that socio-economists have been unable to develop "a completely robust and comprehensive analytical framework for explaining all aspects of labour market behaviour and indeed such attempts may be too ambitious"199.

16.2 POLICY PRESCRIPTIONS

The thesis has emphasised the ways in which firms organise production and has provided an account of the ways in which employers respond to constraints at a particular time in a particular labour market. It should not be read as implying approval for particular practices. In fact there is currently a series of debates in train about the wider context of the social relationships of employment. In particular there are debates about policies which might protect workers in such markets, with most of the discussion being about the protection of homeworkers. The thesis has emphasised the processes of production but it is relevant to the full understanding of such processes to be aware of the framework of social and contractual relationships within which any production takes place.

The demand side of the market has been the primary focus of this thesis and it has been clearly shown that the use of secondary workers,
alongside other adjustment instruments, are valuable to employers in adjustment sequences. Supply-oriented advocates would argue that, since flexibility is so valuable to employers, adjustment costs ought to be borne by employers rather than by the weakest members of the workforce. Demand-oriented advocates would argue that any attempts to improve conditions for secondary workers are likely to influence employers' perceptions of the advantages of employing them. Thus, supply-oriented policies aimed at changing bargaining strengths can be strongly linked to demand side issues since they might influence labour demands.

However, sub-section 12.7.4 argues that the acquisition of employee status would not result in the phasing out of homework employment and therefore many of the published policy suggestions that are linked to the improvement of status need not be seen as removing labour flexibility.

Many issues emerge from the homeworker protection debate, e.g. difficulties in defining them as employees. Ewing considers the suggestion of a statutory declaration about the status of homeworkers is an excellent one, even though there is a difficulty in excluding the genuinely self-employed such as those who design and market their own produce, but this should not be an insurmountable problem. As employees, homeworkers would then be liable for, and be able to benefit from, class 1 social security contributions. However, it might be possible for them to be treated as employees for the limited purpose of employment protection and the common law remedies arising from it, as was suggested by the Departmental Committee on the Position of Outworkers in Relation to Unemployment Insurance, 1923. Many problems for determining employment status are caused by homeworkers' flexible and irregular work patterns over which they generally have little control; they usually have to take the amounts and types of work available. Irregularity of employment presents further difficulties in proving continuity of employment for most of the provision of the EPCA, and there is little point in being employees if they cannot prove they have continuity of employment. A contract could therefore be inferred if they have worked for 16 hours or more in the majority of weeks in which they have worked, and penalties for not complying could be greatly increased. In line with many other researchers and interested organisations therefore, the author suggests that new legislation in the form of a Homeworkers' Protection Act could be specifically designed to cover the traditional homeworking situation without impeding employer flexibility. Such legislation could be drafted to prevent work irregularity, imposed against their wishes, from disqualifying homeworkers from receipt of benefits.
CHAPTER 16

IMPLICATIONS FOR THEORY, POLICY AND RESEARCH

The outcome of such protection might slightly lower total homework employment since there are many adjustment instruments to be used as alternatives, but it is likely to be the worst forms of such employment that would be removed, and the author cannot recommend that these be retained. However, because homeworkers provide essential flexibility it is predicted that most homeworking jobs would be unaffected.

With respect to homeworker wages, and in view of the 1985 announcement of the intended Wages Councils abolition, a possibility exists other than that offered by the 1981 Select Committee. A Homeworkers' Council could now be specially created to set and effectively monitor fair wages in every industry for traditional homeworkers. It could also ensure that working conditions conform to existing health and safety regulations for employees. This could indeed be a large task and for this reason it might be impracticable for twilight workers to be also covered by such a body. However, lessons need to be learned from past experience, for it is important that the system of regulation should succeed. To proceed alongside such a Council there could be widely available publicity so that homeworkers themselves are not ignorant of their rights. An efficient policing system may be needed and to this end a properly maintained register with very high penalties for non-compliance might be required as a further safeguard.

In this respect, original suppliers of work could be required to register all homeworkers, whatever their length of service so as to prevent circumvention by constantly changing personnel, although clearly an adequate number of inspectors would be required to investigate cases. Access to the register's basic information could be unrestricted. Trade unions and pressure groups could make further efforts to persuade more Local Councils to employ Homeworking Officers to monitor Equal Pay and Health and Safety regulations.

It would be preferable for the market position of secondary workgroups to be improved by collective bargaining, but isolation, dispersion, changing personnel and part-time employment militate against incorporation regardless of trade union diligence. Thus, statutory regulation appears to be the most effective solution. Raising the level of low wages is an important element in removing any compulsion to participate in homework. To achieve this, the establishment of a national minimum wage for all workers could be of assistance, but given the present government's apparent intention to lower the general level of wages this seems extremely unlikely. Thus, reformers repeat persistent demands from the 1890s that
Homeworker earnings should be improved, and this could be achieved by a **minimum wage only for homeworkers**. While these suggestions may seem extremely unrealistic in the present political climate, it should be remembered that governments do not remain for ever and that a change of economic and political emphasis could place the protection of some of the weakest members of society high on the agenda of social reforms.

It was concluded on page 12-18 that the worst deprivations of the homeworking arrangement are to be found where supplying companies hire homeworker agents or middlemen to administer collections and deliveries and set conditions of service and remuneration. Such supplying companies could be held legally responsible for the remuneration and employment conditions of the homeworkers undertaking work originally supplied by them, but penalties (which might be as high as several thousands of pounds per homeworker) for poor standards could be borne by both supplying company and agent, thereby imposing a requirement on the supplying company to use only reputable agents, and monitor their actions.

As discussed in 16.1, monetary and fiscal policies aimed at eroding primary and secondary employment differentials by being designed to stimulate aggregate demand will be doomed to failure because employers' use temporary adjustment strategies. There is therefore little use in adopting such policies with these objectives; nevertheless, high levels of aggregated demand support more primary market jobs, per se, than do low levels. Thus, with the appropriate back-up facilities discussed below to place women on a more equal footing with men, and the legal modifications suggested above to eliminate discriminatory practices, substantial forward steps could be taken towards the removal of secondary market status from many women. Consequently, expansionary and reflationary measures are now urgently needed to stimulate the flagging British economy.

Widespread availability of nursery schools could significantly improve the LM position of those women who prefer employment away from home by creating conditions conducive to full-time participation, although it is recognised that some homeworkers have such strong commitments to their families that they wish to work at home. Greater access to nursery provision could enable women to compete on a more equal footing by relieving them of child-minding activities, but to be effective, it would need to be widely dispersed and either free or viably priced since both travelling time and costs can act as constraints on nursery use. An important consideration for effectiveness is the matching of work and nursery times; full-time factory working times rarely match nursery or
primary school opening times and where this cannot be achieved, an additional formal well-ordered child-minding facility could be provided. Another answer lies in employer-provided nurseries but current taxation policy places these under threat. A move to stop the Government taxing workers for their children's use of employer-provided nurseries was made by the Labour Party during the report stage of the 1985 Finance Bill, but should this legal change materialize, it would penalize mothers desiring employment and be a backward step with respect to equal opportunity since other perks, often enjoyed by men (i.e. car parks, canteens and social clubs), are to remain untaxed.  

However, such discussion of nursery education implies that the major responsibility for child care now falls, and should continue to fall upon women rather than men. This situation exists at present, but circumstances could change if more enlightened education created less sex-typing. Although nursery facilities and the other policy prescriptions discussed above will immediately help to achieve equality of opportunity, it is contended that true equality will only result from an equal division of work and responsibility within the home, a condition that cannot be regulated or forced if individual liberties are to be honoured. To break down LM divisions it is clearly important to raise the esteem of household work so that the barrier that dissuades men from voluntarily participating in these activities can be penetrated. Women also need to have heightened interests in their own careers. Obviously, these aims will not be easily achieved, particularly after maturity when attitudes and values are well-established. Nevertheless, an initial step could be taken by more frequently teaching the sociology of work and family in schools in order to dissipate traditional gender roles. However, the process, discussed by Dex, of examining economic and sociological theories for sexism and then re-evaluating these theories needs to continue apace. Most importantly, women need to bring about the basis of their own equality by being more assertive in personal relationships with their partners, but even so, improved nursery facilities will be needed to allow both partners to have equal access to full-time employment.

16.3 FURTHER RESEARCH

This research has presented a comprehensive overview thereby creating much scope for further work by examining in greater depth specific aspects of the employment relations outlined. For instance, the use of twilight workers and homeworkers needs to be examined further to disentangle the
extent to which they are employed deliberately for flexibility, or as substitutes for short-supply core workers. Diversity of usage in other outwork industries needs to be examined in order to assess the overall economic significance of twilight and homework labour to the British economy. Theories of adjustment are still in their infancy such that the usage and prevalence of specific adjustment instruments are imperfectly understood. Therefore, more work could usefully follow these lines of enquiry. Specially designed research is needed to test adjustment mechanisms such as that outlined in chapter 14, and to determine values for calculating the average degree of flexibility provided by each instrument. IC theorists have pointed to perceptions of 'equity and fairness' as being important in promoting motivation and co-operation. These conceptualizations provide a theoretical framework for the study of teamwork, work-sharing and the transference of firm-specific skills. However, there is a widespread idea that women's work is unskilled, and thus the meaning of skill classifications needs to be questioned. Women's skills, both in the home and in their employments, appear to go unrecognized and under-valued, and thus the parameters of the social construction of skill divisions are only now being formulated. The extent to which women's lower pay, and the present job-segregated nature of manual labour markets, influence female participation, absenteeism, turnover and other dimensions of performance needs further investigation, see page 12-2. Thus, further research is needed in all these areas and the findings will need to be integrated into labour market analyses. Consequently, there is still a long way to go in analysing the whole structure before a thorough dynamic understanding of labour markets is obtained. The author agrees with Dex's recent work which concludes that many more economic and sociological concepts will have to be re-evaluated in the light of women's participation. The importance of women's part-time work and part-time wage rates have received scant theoretical attention prior to this thesis even though the growth in women's part-time work has been the most dramatic employment change in the post war era. Furthermore, the issues of what roles women's participation is playing in industrial change, and in the structuring of the British national economy, is another area awaiting through analysis.

Women are therefore at the centre of societal and conceptual changes as Dex's book illustrates, and the issues raised in this thesis are now at the forefront of current research and debates.
APPENDIX I

RESEARCH INSTRUMENT
APPENDIX I
RESEARCH INSTRUMENT

SECTION A - IDENTIFICATION OF THE COMPANY:

Q1. Name of respondent: Position held:
   Length of time in this position:

Q2. Name and address of establishment/company:
   Date commenced business:

Q3. Type of company: Private/Public Ltd/Partnership

Q4. Principal product: Subsidiary products:

Q5. Number of other branches:

Q6. Name of Group of which the company is a part:

Q7. Membership of employers' association:

Q8. Names of trade unions representing employees:
   Is it a 'closed shop'? Yes No DK

SECTION B - IDENTIFICATION OF THE WORKFORCE GROUPS:

Q9. Completion of boxes as shown in Figure 4.3 regarding the number of workers in each workgroup. Identification of previous use of twilight and homeworkers and the duration of their usage during the previous 5 years.

<table>
<thead>
<tr>
<th>Question</th>
<th>*Typical Answer Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q10. Age distribution:</td>
<td>No</td>
</tr>
<tr>
<td>Under 20 years</td>
<td></td>
</tr>
<tr>
<td>Over 20 but under 30 years</td>
<td></td>
</tr>
<tr>
<td>Over 30 but under 40 years</td>
<td></td>
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<tr>
<td>Over 40 but under 50 years</td>
<td></td>
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<tr>
<td>Over 50 but under 60 years</td>
<td></td>
</tr>
<tr>
<td>Over 60 but under 70 years</td>
<td></td>
</tr>
<tr>
<td>Over 70 years</td>
<td></td>
</tr>
<tr>
<td>Q11. Family commitment:</td>
<td>No</td>
</tr>
<tr>
<td>A. Married or single without children</td>
<td>A.</td>
</tr>
<tr>
<td>B. Married, widowed etc. with dependent children</td>
<td>B.</td>
</tr>
<tr>
<td>C. Married, widowed, etc. with self-reliant, independent children</td>
<td>C.</td>
</tr>
</tbody>
</table>

* Footnote: In order to save space, questions 10 et seq show only a typical answer column; in the actual schedule such columns were provided for each group.
Q12. Ethnic origin:
   A. British
   B. Other European
   C. Asian
   D. Other nationalities (specify)

Q13. Multiple job holder:
   A. Workers with your job only
   B. Workers with a second job
   C. Workers where such details are unknown

Q14. Travelling distance:
   Less than 1 mile
   Over 1 mile but less than 3 miles
   Over 3 miles but less than 5 miles
   Over 5 miles but less than 7 miles
   Over 7 miles but less than 10 miles
   Over 10 miles

Q15. Type and location of residence:
   A. Owner-occupier
   B. Rented accommodation
   C. Unknown
   Where were they located?

SECTION C - CONDITIONS OF SERVICE:

Recruitment

Q16. How many workers were recruited by each of the following channels?
   A. D.E. Job Centre
   B. Private employment agency
   C. Private advertising agency
   D. Own newspaper advertisements
   E. Ex-employees
   F. Waiting list
   G. Other (specify)

   How was the waiting list compiled?

Level of Supply

Q17. What is the level of supply of potential workers?
   A. Excess  B. Adequate  C. Short

   (circle as appropriate)

Q18. a) What is the mean number of applicants for each vacancy advertised?

   Mean No.__ per ___ adverts.

   b) Number of unsolicited applications?

   No.__ per week
Selection and Preference

Q19. a) What characteristics do you seek when selecting workers?
   b) What is your workgroup preference?
   c) Does it vary with circumstances? If so, how?

Q20. Have TUs been involved in the recruitment or selection of workers?
     Please specify for 5 years

Job Allocation

Q21. a) How many operations are performed exclusively by males and females?
     (specify)
   b) What are these operations?

Q22. a) How many operations are performed exclusively by each group? (specify)
   b) What are these operations?

Q23. Have TUs been involved in job allocation? Please specify for 5 years

Training

Q24. How many of your workers were trained by each of the following methods?
     A. No training, experienced
     B. Demonstration only
     C. On the job
     D. Factory school
     E. Other (specify)

Supervision/Inspection

Q25. How many workers does 1 supervisor control?

Q26. Who controls homeworkers?

Q27. Is there a loss of control over homeworker production? If so, what is the maximum number you would employ?

Q28. Do twilight supervisors work only on the twilight shift?

Q29. Do twilight supervisors receive a shift premium? If so, how much?
Q30. Do you have an inspection of work procedure? Please describe it.
Typical Answer Column
Yes  No  DK

Q31. Are workers paid for the work done on spoiled items?
Yes  No  DK

Q32. Have TUs been involved in supervision or inspection procedures? Please specify for 5 years.
Supervision: Yes  No  DK
Inspection: Yes  No  DK

Promotion

Q33. How would you describe the promotion opportunities?
A. Very good; B. Good; C. Slight; D. None

Q34. Please describe the promotion and upgrading procedures.

Q35. Have TUs been involved in the promotion or upgrading of your workers? Please specify for 5 years.
Yes  No  DK (promotion)
Yes  No  DK (upgrading)

Holiday Benefits

Q36. How many days holiday per year do your workers receive?
No. of days __

Q37. Do the workers receive holiday pay for all the days leave?
Yes  No  DK

Q38. What form do the holidays take?
A. Factory closedown
B. Standardised length taken at various times
C. Additional days for long service
D. Special 'school holiday scheme' for mothers (specify)
E. Other (specify)

Q39. How is the holiday pay calculated?

Q40. Have TUs been involved with the holidays or holiday pay of your workers? Please specify for 5 years
Yes  No  DK holidays
Yes  No  DK pay

Sickness Benefit

Q41. Do you operate a sick pay scheme?
Yes  No  DK

Q42. Are there special arrangements for mothers of sick children? Please specify
Yes  No  DK
Q43. Have TUs been involved with sickness benefits? Please specify for 5 years

Maternity Benefit

Q44. How many times per year do jobs have to be held open for maternity reasons?

Q45. What strategy do you adopt to maintain production when jobs have to be held open?

Q46. Have TUs been involved in maternity benefits? Please specify for 5 years

Factory Facilities

Q47. Do you provide a canteen, and if so, what is its cost?

Q48. Describe your medical facilities. What is the cost?

Q49. Do you provide transport assistance for your workers, and if so, what is its cost?

Q50. Who delivers and collects homeworkers' work?

Q51. Who pays for delivery and collection?

Q52. What is the cost of delivery?

Q53. Who provides homeworkers' machinery/equipment?

Q54. Who pays for machinery or equipment?

Q55. Who maintains homeworkers' machinery?

Q56. Who pays for maintenance?

Q57. Are homeworkers' overheads of heat, power, and lighting reimbursed?

Bonuses

Q58. How many bonus schemes do you operate? Please specify.

Q59. Have TUs been involved with bonus schemes? Please specify for 5 years.

<table>
<thead>
<tr>
<th>Typical Answer Column</th>
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<tbody>
<tr>
<td>Yes</td>
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<table>
<thead>
<tr>
<th>Maternity Benefit</th>
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<tbody>
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<td>Average number per year ___</td>
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<table>
<thead>
<tr>
<th>Factory Facilities</th>
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<tbody>
<tr>
<td>Yes</td>
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<tr>
<td>Cost: £ ____ per ____ mth/yr</td>
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<table>
<thead>
<tr>
<th>Bonuses</th>
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<tbody>
<tr>
<td>Number of schemes:</td>
</tr>
<tr>
<td>Cost: £ ____ per ____ mth/yr</td>
</tr>
</tbody>
</table>

Yes No DK
Concessions

Q60. Are the workers allowed to listen to the radio, and if so, who provides it?

Q61. Do you operate a concessionary goods scheme?

Q62. Is a loss incurred on spoiled items, and if so, what is the cost?

Q63. Please describe other benefits offered to your employees and state their cost.

Q64. Have TUs been involved with the concessions? Please specify for 5 years

Pension Scheme

Q65. Do you operate a private pension scheme, and if so, what is its cost?

Q66. Have TUs been involved with the scheme? Please specify for 5 years

Dismissals

Q67. What is the dismissal procedure?

Q68. What is the average number of dismissals per year?

Q69. Have TUs been involved in the dismissal of workers? Please specify for 5 years

Supply of Work/Redundancy

Q70. How regular is the volume of work supplied to the workgroups?
   A. Regular
   B. Varies annually
   C. Varies seasonally
   D. Varies weekly

Q71. Please rank the groups in the order of your desire to supply work when it is in short supply.

Q72. What is the procedure to decide 'WHO' should be made redundant?

Q73. What is the level of redundancy pay?
Q74. How many redundancies have there been in 10 years?

Q75. Have TUs been involved in determining which group should be made redundant? Please specify.

Q76. Please rank the groups in the order that the TUs have indicated they should be made redundant.

Q77. Have TUs been involved in negotiating redundancy pay? Please specify for 5 years.

SECTION D - REMUNERATION:

Tax Deductions

Q78. For how many of your workers do you deduct full, reduced or no national insurance contributions?

Q79. For how many of your workers do you deduct PAYE?

Methods of Payment

Q80. By what method are your workers paid?
   A. Times rates
   B. Piece rates
   C. A combination of A and B
   D. Other (specify)

Q81. What is the procedure for the revision of pay rates?

Q82. How frequently are pay rates revised?

Earnings

Q83. What are the gross average hourly earnings of your workers?

Q84. What are the gross average weekly earnings of your workers?

Q85. Have TUs been involved with workers' pay? Please specify for 5 years.
Hours Worked

Q86. What is the basic 'normal' week at your factory?

Q87. How many hours do your workers work on average per week, without overtime?

Q88. How many hours overtime do your workers work on average per week?

Q89. When do they work the overtime?

Premia

Q90. What are the overtime rates?

Q91. What are the shift premia rates?

Q92. What are the rates of pay of supervisors?

Q93. Have TUs been involved in premia rates?

SECTION E - PERFORMANCE:

KEY: Rank 1 is the superior performance rank when viewed from the perspective of the employer.

Q94. How would you rank the groups in terms of units produced per hour?

Q95. Which are the most competent group of workers?

Q96. Please rank the groups in the order of the quality of the work produced.

Q97. What is the absenteeism rate of your workers?

Q98. How frequently do homeworkers refuse work?

Q99. Please rank the groups according to their personal ill-health.

Q100. Which group of workers is the most reliable for producing the output?
Q101. What is the voluntary turnover rate of your workers? If unknown please rank in order of turnover.

Q102. How frequently do employees in one group switch to another group?

Q103. How many workers are members of the union?

Q104. How many disputes have you had with your workers?
   A. Strikes  
   B. Work to rules  
   C. Overtime bans  
   D. Sit-ins  
   E. Other (specify)

Q105. What was the average length of each dispute?

Q106. What measure do homeworkers adopt to further their interests?

Q107. What is the weekly cost of factory overheads?

Q108. What is the average cost of the various types of machinery you use?

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<td>Pt to Ft: No ___ per year</td>
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<td>Tw to Pt: No ___ per year</td>
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<td>Tw to Hw: No ___ per year (e</td>
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<table>
<thead>
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<td>B.</td>
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<td>C.</td>
<td></td>
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<tr>
<td>D.</td>
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<tr>
<td>E.</td>
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| Length: ___ |

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<tr>
<td>Type:</td>
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<tr>
<td>Cost: £ ___ per week</td>
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</table>
Terms and Definitions of the Establishment and Worker Samples

Across the 25 main study establishments, 24 different collections of workers were identified and it was therefore imperative that standardized terminology for identifying workers and establishments should be adopted to facilitate precise exposition throughout text, tables and illustrations.

The term establishment has been used to avoid confusion where companies had more than one set of premises. The term company was justified where only one set of premises existed, and then establishment, factory, firm, and company were synonymous. Since many sample establishments were of the latter type, terms have been generally interchangeable although care has been exercised in usage. Subdivisions of the establishment sample were made according to membership of employers' associations and trade unionization of the workforce. Establishments that were employer association members and were thereby affiliated to the Knitting Industries Federation (KIF), were termed affiliated, and those that were not, non-affiliated; those that recognised the trade union were termed unionized, and those that did not, non-unionized, see Chapter 11. Establishments that undertook the two stages of manufacture were termed integrated establishments, and those that performed only one stage, were called segregated establishments, see section 4.2.

The empirical research was concerned with practices related only to direct production workers and thus the full workforce sample comprised only those workers who were directly engaged in the production process, and excluded all clerical workers and managements. As is indicated schematically in Figure II:1, the total direct production workforce could be divided into two segments, i.e. men and women. It could also be divided into 2 components, i.e. the indoor, in-factory, or on-site component and the outdoor, outworker, or homeworker component. The indoor component was subdivided into workgroups, or groups for brevity, which could be male, female or both male and female, and which differed according to the times of day or number of hours which their members worked. With the benefit of hindsight it is known that shift and full-time men, and the full- and part-time women formed the core of each workforce. Male part-time, and female twilight and homework workgroups were composed of relatively few members who were often temporarily attached to the workforce; these have occasionally been referred to collectively as the secondary or the
unestablished workgroups (see Figure 4:2), although it is recognised that these terms are somewhat imprecise since different degrees of secondariness or unestablishment were subsequently shown to be attached to workers and workgroups. The terms casual, marginal, peripheral and fringe workers were largely avoided because it was not wished to imply that the workers concerned exhibited unstable work habits, or had voluntarily 'casual' employment patterns or were linked to the informal sector, see 12.7.3.

Each workgroup could contain sub-groups whose members had characteristic features, e.g. the manner in which they had been recruited. Collections of workers who cut across all workgroups, e.g. senior citizens, were termed categories. A schematic representation of the terminology and workforce structure is given in Figure II:1.

Normal daily times (or normal daytime hours) were usually from 7.30 a.m. to 4.30 p.m., but of course they could vary by establishment. Basic weekly hours were usually 40 hours per week, but again varied slightly. Unsociable hours were usually considered to be between 6.0 p.m. and 7.0 a.m. Shift premia were usually paid for work during these times.

To facilitate communication and avoid confusion, workgroup titles were chosen to conform to the names used by employers and these were descriptive of each group's work pattern. These titles can be misleading: for example, shift workers worked the same basic weekly hours as full-timers although their title perhaps implies a longer working period, and twilight workers could have been classed either as part-timers or shift workers, but each of these definitions would have caused the separate group identity of twilighters to be lost. Figure II:2 illustrates the constituent parts of the full sample of direct production workers.

The shift worker group comprised workers who replaced each other on the same jobs or machines to enable continuous production. Each employee worked the basic weekly hours. A double-day shift comprised a 'crew' of two workers, the first usually working from 6.0 a.m. to 2.0 p.m. followed immediately by the second who took over machinery at 2.0 p.m. and worked until 10.0 p.m. In a three-shift system a third person took over the machinery at 10.0 p.m. and worked until 6.0 a.m. when the cycle recommenced. Double-day shifts were the most commonly used in surveyed establishments, but a few firms operated a 3-shift system. The full-time day workgroup (or full-timers or single shift workers) comprised those workers who were contracted to work the basic weekly hours during normal daily times, i.e. 40 hours per week between 7.30 a.m. and 4.30 p.m. daily. The part-time workgroup (or part-timers) was composed of those workers who
were contracted to work fewer than the basic weekly hours of their establishment, but whose work times fell within normal daytime hours. Part-timers had individually variable start and finish times depending on their commitments, preferences and employers' permission. They averaged 30 hours per week. The daytime workgroup was composed jointly of the full-time and part-time workgroups who worked during normal daily times. The in-factory workgroup (indoor workers) worked inside the factory, i.e. all the groups except homeworkers. The twilight worker workgroup (twilighters) worked in the evening on a part-time basis. They could thus be variously termed the twilight shift, or the evening shift because employees took over machines from daytime workers. Attendance ranged between 3 and 4 hours at times between 5.0 p.m. and 10.0 p.m. These workers did not receive a shift premium although they were employed during unsocial hours. The homeworker group (outdoor workers) worked in their own homes at variable times of day for variable weekly hours. The terms exclusive homeworkers and exclusive twilight workers are used to denote that all other workgroups except the twilight workers and homeworkers were excluded from performing the operation of the workers concerned, i.e. it was not undertaken by a member of any other workgroup in the same factory. The term exclusive certainly does not carry any implications of "up-market" workmanship or output. Non-exclusive homeworkers and non-exclusive twilight workers are those who perform work that is also done inside their factories by members of another workgroup.

The homemaker role refers to the adoption of all the tasks associated with the maintenance of a home, i.e. it includes the performance of all the usual houskeeping tasks. The family-carer role concerns the upbringing of young children and the physical care of the sick, the handicapped and the elderly. The latter can thus be the most demanding of these roles in terms of time and effort. When the two roles are combined, they are collectively defined as the domestic role.

A socialitistic orientation is used to describe workers with instrumental attitudes to employment in which the main approach and focus of interest is centred around social relationships, see 10.5.2. The term is derived from the noun sociality, meaning the quality or state of being social. An economistic orientation is used to describe workers with instrumental attitudes to employment that centre around financial rewards.

For clarity, the technical terms involved in knitting and finishing (or making-up) have been defined in the text on pages 4-5 and 4-6. For definitions of first- and second-phase rationalisations see page 4-9.
APPENDIX III

ABBREVIATIONS
Abbreviations Relating to the Worker Sample

Abbreviations, never exceeding two letters, have been adopted to identify the worker sample. The first letter of each abbreviation denotes the work pattern characteristic, and the second letter, if required, denotes the gender of the workers. The full sample is abbreviated to DP to denote the grand total of all direct production workers. The male segment, i.e. all male direct production workers, is abbreviated to M, while the women's segment is indicated by W. Abbreviations for work patterns (which are always upper case) are as follows:

**Indoor Component:**

I = indoor, in-factory or factory workers;
F = full-time workers;
P = part-time workers;
D = daytime workers, i.e. full- and part-timers;
S = shift workers;
T = twilight workers;

**Outdoor Component:**

H = homeworkers.

The second letter of each abbreviation (which is always lower case) denotes gender, m for men and w for women. Where it is wished to refer to men and women collectively, the second letter of the abbreviation is omitted. Thus:

F = all full-timers, both men and women;
Fm = all men working full-time days;
Fw = all women working full-time days.

In practice, it was discovered that certain theoretically possible groups were non-existent, and these have been encircled in Figure III:1.

**Quotation marks:** A standardized method of using quotation marks has been adhered to: double quotation marks indicate a verbatim report of a respondent's statement, phrase or word; single quotation marks have been used only for emphasis. Abbreviations used in section 9.2 have been defined in the text since it was seen as more appropriate.
APPENDIX III

ABBREVIATIONS

ADDITIONAL ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
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<tbody>
<tr>
<td>AER</td>
<td>American Economic Review</td>
</tr>
<tr>
<td>BJIR</td>
<td>British Journal of Industrial Relations</td>
</tr>
<tr>
<td>CIR</td>
<td>Commission on Industrial Relations</td>
</tr>
<tr>
<td>cre</td>
<td>continuous reckonable service</td>
</tr>
<tr>
<td>DL</td>
<td>demand for labour</td>
</tr>
<tr>
<td>DE</td>
<td>Department of Employment</td>
</tr>
<tr>
<td>DLM</td>
<td>Dual labour market</td>
</tr>
<tr>
<td>EAT</td>
<td>Employment Appeals Tribunal</td>
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<tr>
<td>EEC</td>
<td>European Economic Community</td>
</tr>
<tr>
<td>EILM</td>
<td>Extended internal labour market</td>
</tr>
<tr>
<td>ELLM</td>
<td>External local labour market</td>
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<tr>
<td>ELM</td>
<td>External labour market</td>
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<td>EOC</td>
<td>Equal opportunities commission</td>
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<tr>
<td>EPA</td>
<td>Equal Pay Act</td>
</tr>
<tr>
<td>EPCA or EP(C)A</td>
<td>Employment Protection (Consolidation) Act</td>
</tr>
<tr>
<td>H&amp;K</td>
<td>Hosiery and knitwear</td>
</tr>
<tr>
<td>IJSE</td>
<td>International Journal of Social Economics</td>
</tr>
<tr>
<td>ILM</td>
<td>Internal labour market</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>IRJ</td>
<td>Industrial Relations Journal</td>
</tr>
<tr>
<td>IC</td>
<td>Implicit contract</td>
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<td>IS</td>
<td>Informal Sector</td>
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<tr>
<td>JPE</td>
<td>Journal of Political Economy</td>
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<tr>
<td>KIF</td>
<td>Knitting Industries Federation</td>
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<td>LA</td>
<td>Local Authority</td>
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<td>LLM</td>
<td>Local labour market</td>
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<tr>
<td>LM</td>
<td>Labour market</td>
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<tr>
<td>TUE</td>
<td>Trade unionized establishment</td>
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<tr>
<td>MFA</td>
<td>Multi-fibre Agreement</td>
</tr>
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<td>NBPI</td>
<td>National Board of Prices and Incomes</td>
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<td>NEDO</td>
<td>National Economic Development Organisation</td>
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<td>NHw</td>
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<td>NJIC</td>
<td>National Joint Industrial Council</td>
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<td>NUE</td>
<td>Non-unionized establishment</td>
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<tr>
<td>NUHKW</td>
<td>National Union of Hosiery and Knitwear Workers</td>
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<tr>
<td>SL</td>
<td>Supply of labour</td>
</tr>
<tr>
<td>SDA</td>
<td>Sex Discrimination Act</td>
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<td>SLM</td>
<td>Segmented labour market</td>
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<td>SMR</td>
<td>Statutory minimum remuneration</td>
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<td>TUC</td>
<td>Trades Union Congress</td>
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<td>XHw</td>
<td>Exclusive homeworker</td>
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APPENDIX IV

TABLES
TABLE 1.1  Local Industries Believed to be Employing Twilight Workers and Homeworkers (by Numbers of Companies)

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<th>Inside the LLM</th>
<th>Outside the LMM</th>
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<td>Twilighter Employer</td>
<td>Worker Employer</td>
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<td>Engineering</td>
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<td>2</td>
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<td>Leather goods</td>
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<td>0</td>
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<td>manufacture</td>
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<td>Pharmaceuticals</td>
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<td>Publishing</td>
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<td>Boot and shoe</td>
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<td>Textiles</td>
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</tr>
<tr>
<td>Wallpaper manufacture</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Tertiary Sector of the Economy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleaning services</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Clerical services</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Distribution</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Entertainment</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Food and drinks</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automobile servicing</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Sales agencies</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Technical services</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
### TABLE 2.1 Demand Characteristics

**Primary Enterprises**
1. Medium to large public companies
2. Resilient to economic fluctuations
3. Good credit facilities
4. Users of modern technology
5. In need of a specialized and stable workforce
6. Likely to be multi-product firms

**Secondary Enterprises**
1. Many small competitive private firms
2. Prone to economic fluctuations
3. Poor and expensive credit terms
4. Users of old-fashioned technology
5. Single product or on-off manufacture
6. Little or poor capital equipment
7. Has declining or fluctuating product demand.

**Primary Internal Labour Market**
1. Mobility via long job clusters containing hierarchical career ladders
2. Well defined internal wage structures
3. Few entry ports
4. Organised workforce

**Secondary Internal Labour Markets**
1. Short or no 'mobility clusters'
2. Little or no internal wage structure
3. Many entry ports
4. Little workforce organisation

**Primary Jobs**
1. Employment stability
2. High wages
3. Good fringe benefits
4. Good working conditions
5. On-the-job training
6. Equitable work rules and supervision
7. Needs for high entry standards

**Secondary Jobs**
1. Job insecurity
2. Low wages
3. Few fringe benefits
4. Poor working conditions and environments
5. Little or no training
6. Arbitrary supervision
7. Low pre-entry requirements
8. Repetitive or unpleasant tasks
9. Low skill requirements
<table>
<thead>
<tr>
<th>Primary Workers</th>
<th>Secondary Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Good formal education</td>
<td>1. Low level of educational attainment</td>
</tr>
<tr>
<td>2. High level of skill and IQ</td>
<td>2. Low level of skill and IQ</td>
</tr>
<tr>
<td>4. Strong motivation for advancement</td>
<td>4. Few career aspirations</td>
</tr>
<tr>
<td>5. Low turnover rates</td>
<td>5. High turnover rates</td>
</tr>
<tr>
<td>6. Punctuality</td>
<td>6. Unpunctuality</td>
</tr>
<tr>
<td>7. Low absenteeism</td>
<td>7. High levels of absenteeism</td>
</tr>
<tr>
<td>8. Good residence in popular neighbourhood</td>
<td>8. Poor residence in a low income neighbourhood</td>
</tr>
<tr>
<td>9. Well unionised</td>
<td>9. Low level of unionisation</td>
</tr>
<tr>
<td>10. Good health</td>
<td>10. Relatively high level of illness</td>
</tr>
<tr>
<td>11. Likely to be white, male and not belonging to a minority group</td>
<td>11. Member of a minority group</td>
</tr>
<tr>
<td>12. Well-developed social graces and adaption skills</td>
<td>12. Female, particularly young or elderly</td>
</tr>
<tr>
<td></td>
<td>13. More likely to pilfer</td>
</tr>
<tr>
<td></td>
<td>14. More likely to cause breakages</td>
</tr>
<tr>
<td></td>
<td>15. Associated with declining industries, occupations or enterprises</td>
</tr>
<tr>
<td></td>
<td>Factory working a six-day week</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Maximum period of employment</td>
<td>Weekday other than Saturday: 11 hours</td>
</tr>
<tr>
<td></td>
<td>Saturday: 6 hours</td>
</tr>
<tr>
<td>Maximum daily working hours (excluding intervals)</td>
<td>9 hours</td>
</tr>
<tr>
<td>Maximum weekly working hours</td>
<td>48 hours (44 hours for young persons under 16)</td>
</tr>
<tr>
<td>Maximum continuous spell</td>
<td>4½ hours (may be increased to 5 hours if a 10-minute break is allowed)</td>
</tr>
<tr>
<td>Earliest starting time</td>
<td>7 am (the Secretary of State may under certain conditions make regulations or orders permitting a starting time before 7 am but not before 6 am)</td>
</tr>
<tr>
<td>Latest finishing time</td>
<td>Weekday other than Saturday: 8 am for women and young persons of 16 or over; 6 pm for young persons under 16</td>
</tr>
</tbody>
</table>

(Source: Department of Employment)
TABLE 2.4 Limits of Overtime Employment for Women and Young Persons

<table>
<thead>
<tr>
<th>(a)</th>
<th>For the whole factory</th>
<th>Factory working a six-day week</th>
<th>Factory working a five-day week</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b)</td>
<td>For individual women and young persons</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Maximum amount of overtime in any week (counted from midnight on Saturday night)

- Factory working a six-day week: 6 hours
- Factory working a five-day week: 6 hours

Maximum amount of overtime in any calendar year beginning with 1 January

- Factory working a six-day week: 100 hours during not more than 25 weeks
- Factory working a five-day week: 100 hours during not more than 25 weeks

Maximum spread of employment i.e. normal period of employment as shown on form F11 - see para. 15 - as extended by permissible overtime

- Weekday other than Saturday: 12 hours
- Saturday: 6 hours
- Weekday other than Saturday: 12 hours
- Saturday: 6 hours (provided no other overtime is worked in that week)

Maximum daily working hours (excluding intervals)

- Weekday other than Saturday: 10 hours
- Saturday: 5½ hours
- Weekday other than Saturday: 10 hours
- Saturday: 5½ hours (provided no Saturday overtime is worked)
- 4½ hours (provided no other overtime is worked in that week)

Earliest starting time: 7 am
Latest finishing time: Weekday other than Saturday: 9 pm for women; 8 pm for young persons; Saturday: 1 pm

(Source: Department of Employment)
### TABLE 2.5: Women as a Percentage of Total Unemployed

<table>
<thead>
<tr>
<th></th>
<th>Europe</th>
<th>Belgium</th>
<th>Denmark</th>
<th>France</th>
<th>Germany</th>
<th>Ireland</th>
<th>Italy</th>
<th>Luxembourg</th>
<th>Netherlands</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>45.0</td>
<td>62.4</td>
<td>45.7</td>
<td>54.6</td>
<td>52.0</td>
<td>23.9</td>
<td>46.1</td>
<td>51.9</td>
<td>35.5</td>
<td>31.3</td>
</tr>
<tr>
<td>1981</td>
<td>42.2</td>
<td>57.9</td>
<td>41.8</td>
<td>51.5</td>
<td>23.5</td>
<td>48.7</td>
<td>47.6</td>
<td>46.8</td>
<td>32.0</td>
<td>28.9</td>
</tr>
</tbody>
</table>

(Source: EEC 255)

### TABLE 2.6: Employed UK Population in 1981 by Economic Activity in 1980 (thousands)

<table>
<thead>
<tr>
<th>Activity in 1980</th>
<th>Employed in 1981</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Employed</td>
<td>13136</td>
</tr>
<tr>
<td>Unemployed</td>
<td>189</td>
</tr>
<tr>
<td>Economically Inactive</td>
<td>448</td>
</tr>
<tr>
<td>Total (including non responses)</td>
<td>13952</td>
</tr>
</tbody>
</table>

(Sources: 1981 Labour Force Survey and Manpower Services Commission 254)
TABLE 2.7: Women's Employment in the European Economic Community

**PERCENTAGE OF WOMEN WHOSE MAIN EMPLOYMENT IS IN AGRICULTURE - 1977**

<table>
<thead>
<tr>
<th>Country</th>
<th>% of working women</th>
<th>% of agricultural labour force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>2.6</td>
<td>22.2</td>
</tr>
<tr>
<td>Denmark</td>
<td>4</td>
<td>19.5</td>
</tr>
<tr>
<td>France</td>
<td>8.6</td>
<td>33.9</td>
</tr>
<tr>
<td>Germany</td>
<td>7.7</td>
<td>49.0</td>
</tr>
<tr>
<td>Ireland</td>
<td>6.9</td>
<td>17.6</td>
</tr>
<tr>
<td>Italy</td>
<td>8.6</td>
<td>33.9</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>5.3</td>
<td>25.2</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.7</td>
<td>8.0</td>
</tr>
<tr>
<td>Average for Europe of 9</td>
<td>6.6</td>
<td>31.6</td>
</tr>
</tbody>
</table>

**PERCENTAGE OF WOMEN WHOSE MAIN EMPLOYMENT IS IN INDUSTRY - 1977**

<table>
<thead>
<tr>
<th>Country</th>
<th>% of working women</th>
<th>% of industrial labour force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>23.6</td>
<td>19.1</td>
</tr>
<tr>
<td>Denmark</td>
<td>18.2</td>
<td>21.8</td>
</tr>
<tr>
<td>France</td>
<td>24.4</td>
<td>25.0</td>
</tr>
<tr>
<td>Germany</td>
<td>29.9</td>
<td>24.2</td>
</tr>
<tr>
<td>Ireland</td>
<td>24.4</td>
<td>19.8</td>
</tr>
<tr>
<td>Italy</td>
<td>31.2</td>
<td>22.7</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>13.9</td>
<td>9.8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>14.8</td>
<td>10.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>25.7</td>
<td>24.0</td>
</tr>
<tr>
<td>Average for Europe of 9</td>
<td>26.7</td>
<td>23.4</td>
</tr>
</tbody>
</table>

**PERCENTAGE OF WOMEN WHOSE MAIN EMPLOYMENT IS IN THE SERVICE SECTOR - 1977**

<table>
<thead>
<tr>
<th>Country</th>
<th>% of working women</th>
<th>% of service sector labour force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>73.7</td>
<td>40.2</td>
</tr>
<tr>
<td>Denmark</td>
<td>77.3</td>
<td>52.0</td>
</tr>
<tr>
<td>France</td>
<td>67.0</td>
<td>49.0</td>
</tr>
<tr>
<td>Germany</td>
<td>62.5</td>
<td>46.0</td>
</tr>
<tr>
<td>Ireland</td>
<td>68.7</td>
<td>39.3</td>
</tr>
<tr>
<td>Italy</td>
<td>55.6</td>
<td>33.7</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>80.8</td>
<td>44.1</td>
</tr>
<tr>
<td>Netherlands</td>
<td>83.4</td>
<td>36.2</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>73.0</td>
<td>50.8</td>
</tr>
<tr>
<td>Average for Europe of 9</td>
<td>66.7</td>
<td>45.2</td>
</tr>
</tbody>
</table>

(Source: EEC255)
TABLE 2.8 Women's Earnings (expressed as percentages of Men's Earnings) in Three Sectors of the EEC Economy

### COMPARISON OF MEN'S AND WOMEN'S EARNINGS IN AGRICULTURE 1975

Women's earnings as a percentage of men's earnings based on average hourly wage for skilled and unskilled workers:

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>88.2</td>
</tr>
<tr>
<td>Denmark</td>
<td>106.0</td>
</tr>
<tr>
<td>France</td>
<td>95.3</td>
</tr>
<tr>
<td>Germany</td>
<td>78.5</td>
</tr>
<tr>
<td>Ireland</td>
<td>87.7</td>
</tr>
<tr>
<td>Italy</td>
<td>91.8</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>82.7</td>
</tr>
<tr>
<td>Netherlands</td>
<td>77.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>87.0</td>
</tr>
</tbody>
</table>

### COMPARISON OF EARNINGS OF MALE AND FEMALE BLUE-COLLAR WORKERS IN INDUSTRY - APRIL 1978

Women's earnings as a percentage of men's earnings:

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>70.9</td>
</tr>
<tr>
<td>France</td>
<td>77.4</td>
</tr>
<tr>
<td>Germany</td>
<td>73.4</td>
</tr>
<tr>
<td>Italy</td>
<td>74.1</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>62.4</td>
</tr>
<tr>
<td>Netherlands</td>
<td>73.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>71.0</td>
</tr>
</tbody>
</table>

### COMPARISON OF EARNINGS OF MALE AND FEMALE OFFICE WORKERS IN INDUSTRY - 1972

Women's earnings as a percentage of men's earnings:

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>60.5</td>
</tr>
<tr>
<td>France</td>
<td>58.0</td>
</tr>
<tr>
<td>Germany</td>
<td>61.8</td>
</tr>
<tr>
<td>Italy</td>
<td>51.0</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>54.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>61.9</td>
</tr>
</tbody>
</table>

(Source: EEC 255)
TABLE 2.9  Average Number of Hours Worked by Women – Breakdown by Economic Sector – 1977

<table>
<thead>
<tr>
<th>Country</th>
<th>Agriculture</th>
<th>Industry</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>76.8</td>
<td>93.9</td>
<td>87.8</td>
</tr>
<tr>
<td>Denmark</td>
<td>69.7</td>
<td>84.4</td>
<td>75.5</td>
</tr>
<tr>
<td>France</td>
<td>78.9</td>
<td>92.3</td>
<td>86.0</td>
</tr>
<tr>
<td>Germany</td>
<td>84.2</td>
<td>87.1</td>
<td>82.2</td>
</tr>
<tr>
<td>Ireland</td>
<td>73.4</td>
<td>90.7</td>
<td>87.6</td>
</tr>
<tr>
<td>Italy</td>
<td>88.7</td>
<td>95</td>
<td>88.9</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>69.6</td>
<td>95.6</td>
<td>92.7</td>
</tr>
<tr>
<td>Netherlands</td>
<td>66.6</td>
<td>85.4</td>
<td>77.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>61.5</td>
<td>77.7</td>
<td>66.7</td>
</tr>
<tr>
<td>Average - Europe of 9</td>
<td>82.0</td>
<td>87.5</td>
<td>79.6</td>
</tr>
</tbody>
</table>

(Source: EEC255)
TABLE 2.10. Part-time Employees in the Service Sector; Great Britain (thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1978</td>
<td>577.6</td>
<td>3108.6</td>
</tr>
<tr>
<td>Sept 1981</td>
<td>597.0</td>
<td>3294.0</td>
</tr>
</tbody>
</table>

(Sources: Census of Employment and Manpower Services Commission²⁵⁴)

TABLE 2.11 The Incidence and Reasons for Loss of Pay, All Manual Categories

<table>
<thead>
<tr>
<th>Reason</th>
<th>Fm %</th>
<th>Fw %</th>
<th>Pw %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late arrival/early finish</td>
<td>4.6</td>
<td>7.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Voluntary absence</td>
<td>3.5</td>
<td>7.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Uncertified sickness</td>
<td>1.3</td>
<td>2.6</td>
<td>1.3</td>
</tr>
</tbody>
</table>

(Source: Compiled from DE²⁶⁰)

TABLE 2.12 Average Hours Lost, all Manual Categories

<table>
<thead>
<tr>
<th>Reason</th>
<th>Fm %</th>
<th>Fw %</th>
<th>Pw %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late arrival/early finish</td>
<td>1.6</td>
<td>1.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Voluntary absence</td>
<td>9.2</td>
<td>9.2</td>
<td>6.1</td>
</tr>
<tr>
<td>Uncertified sickness</td>
<td>10.1</td>
<td>10.0</td>
<td>6.3</td>
</tr>
</tbody>
</table>

(Source: Compiled from DE²⁶⁰)
### TABLE 2.13: Changes in Shift Working Since 1945: All Manufacturing Industries

<table>
<thead>
<tr>
<th>Source of Date</th>
<th>Year</th>
<th>Number of Manual Workers</th>
<th>No. and % of Shift Workers Relative to all Manual Workers</th>
<th>No and % of Twilight Workers Relative to all Shift Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>In Population 000's</td>
<td>In Shift Working Establishments 000's</td>
<td>Number</td>
</tr>
<tr>
<td>DE data</td>
<td>1954</td>
<td>4946.2</td>
<td>2536.7</td>
<td>66.3</td>
</tr>
<tr>
<td>DE data</td>
<td>1964</td>
<td>4833.0</td>
<td>3266.2</td>
<td>967.7</td>
</tr>
<tr>
<td>IFF data</td>
<td>1978</td>
<td>4266.2</td>
<td>2811.1</td>
<td>1469.6</td>
</tr>
</tbody>
</table>

(Source: IFF 79)

### TABLE 2.14 Numbers of Twilight Workers in Particular Industries

<table>
<thead>
<tr>
<th>Industries</th>
<th>Nos. 000's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food, Drink and Tobacco</td>
<td>27.5</td>
</tr>
<tr>
<td>Engineering</td>
<td>12.2</td>
</tr>
<tr>
<td>Vehicles</td>
<td>10.2</td>
</tr>
<tr>
<td>Textiles</td>
<td>9.3</td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>6.7</td>
</tr>
<tr>
<td>All others</td>
<td>14.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80.5</strong></td>
</tr>
</tbody>
</table>

(Source: IFF 79)
TABLE 2.15 Use of Twilight Working with Other Shift Systems

<table>
<thead>
<tr>
<th>System in Use</th>
<th>% of group working twilight shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous rotating 3 shifts</td>
<td>10</td>
</tr>
<tr>
<td>Other continuous</td>
<td>34</td>
</tr>
<tr>
<td>Semi-continuous rotating 3 shifts</td>
<td>24</td>
</tr>
<tr>
<td>Other semi-continuous</td>
<td>27</td>
</tr>
<tr>
<td>Discontinuous</td>
<td>20</td>
</tr>
</tbody>
</table>

(Source: IFF79)

TABLE 2.16 Acreages and Electors in the Principal Settlements of the Local Labour Market

<table>
<thead>
<tr>
<th>Settlement</th>
<th>Acreages</th>
<th>Number of Electors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loughborough</td>
<td>9211</td>
<td>37,826</td>
</tr>
<tr>
<td>Barrow-upon-Soar</td>
<td>2497</td>
<td>3,424</td>
</tr>
<tr>
<td>Mountsorrel</td>
<td>922</td>
<td>3,143</td>
</tr>
<tr>
<td>Quorndon</td>
<td>2116</td>
<td>2,860</td>
</tr>
<tr>
<td>Shepshed</td>
<td>4479</td>
<td>8,345</td>
</tr>
<tr>
<td>Sileby</td>
<td>2295</td>
<td>4,758</td>
</tr>
</tbody>
</table>

(Source: Charnwood Borough Council163)
TABLE 2.17 Industrial Production and Employees in Employment, Hosiery and Knitwear (MLH 417) (GB)

<table>
<thead>
<tr>
<th>Year</th>
<th>Industrial Production 1975 = 100 Index</th>
<th>Employees in Employment thousands</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>102.0</td>
<td>-</td>
</tr>
<tr>
<td>1971</td>
<td>101.4</td>
<td>127</td>
</tr>
<tr>
<td>1975</td>
<td>100.0</td>
<td>115</td>
</tr>
<tr>
<td>1980</td>
<td>93.2</td>
<td>102</td>
</tr>
</tbody>
</table>


TABLE 2.18 Sales and Trade of UK Hosiery and Knitwear Industry (at 1975 constant prices)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total sales by UK manufacturers, £million</th>
<th>Exports, £ million</th>
<th>Imports, £ million</th>
<th>Home consumption, £ million</th>
<th>Home deliveries, £ million</th>
<th>Imports/home consumption, %</th>
<th>Exports/total sales, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>715.2</td>
<td>121.7</td>
<td>143.1</td>
<td>736.6</td>
<td>593.5</td>
<td>19.4</td>
<td>17.0</td>
</tr>
<tr>
<td>1976</td>
<td>749.7</td>
<td>162.8</td>
<td>158.4</td>
<td>745.3</td>
<td>586.9</td>
<td>21.2</td>
<td>21.7</td>
</tr>
<tr>
<td>1977</td>
<td>750.8</td>
<td>176.3</td>
<td>162.6</td>
<td>737.1</td>
<td>574.5</td>
<td>22.1</td>
<td>23.5</td>
</tr>
<tr>
<td>1978</td>
<td>735.9</td>
<td>164.3</td>
<td>179.9</td>
<td>751.5</td>
<td>571.6</td>
<td>23.9</td>
<td>22.3</td>
</tr>
</tbody>
</table>

(Source: NEDO)

TABLE 2.19 Establishment Size in the GB Textile Industry, 1978 (by Number of Employees)

<table>
<thead>
<tr>
<th>Order XIII Number of Units</th>
<th>1-10</th>
<th>11-19</th>
<th>20-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-499</th>
<th>500-999</th>
<th>1000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>2249</td>
<td>927</td>
<td>1006</td>
<td>731</td>
<td>658</td>
<td>458</td>
<td>90</td>
<td>35</td>
</tr>
</tbody>
</table>

### TABLE 3.1 Data Collection Programme

<table>
<thead>
<tr>
<th></th>
<th>Pre-Pilot Study</th>
<th>Pilot Study</th>
<th>Main Study</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference in text</td>
<td>Subsection 3.3</td>
<td>Subsections 3.4 to 3.7</td>
<td>Chapter 4</td>
<td></td>
</tr>
<tr>
<td>Date of Interviews</td>
<td>June 1979</td>
<td>October 1979</td>
<td>March 1980</td>
<td></td>
</tr>
<tr>
<td>No. of companies</td>
<td>1</td>
<td>7</td>
<td>35</td>
<td>43</td>
</tr>
</tbody>
</table>

where interviews were completed

### TABLE 3.2 Workforce Composition in Sample Footwear Companies

<table>
<thead>
<tr>
<th>Shift</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Shift</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Full-time day</td>
<td>379</td>
<td>40.23</td>
<td>356</td>
</tr>
<tr>
<td>Part-time day</td>
<td>12</td>
<td>1.27</td>
<td>140</td>
</tr>
<tr>
<td>Twilight</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Homeworkers</td>
<td>0</td>
<td>0.0</td>
<td>55</td>
</tr>
<tr>
<td>Totals</td>
<td>391</td>
<td>41.50</td>
<td>551</td>
</tr>
</tbody>
</table>

IV - 14
<table>
<thead>
<tr>
<th>Skill Levels of Footwear Workers</th>
<th>Skilled</th>
<th>Semi-Skilled</th>
<th>Unskilled</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. % of</td>
<td>No. % of</td>
<td>No. % of</td>
<td>No. %</td>
</tr>
<tr>
<td></td>
<td>the total</td>
<td>the total</td>
<td>the total</td>
<td>total</td>
</tr>
<tr>
<td>group workforce</td>
<td>workforce</td>
<td>workforce</td>
<td>workforce</td>
<td>workforce</td>
</tr>
<tr>
<td>FULL-TIME</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>248 65.44 26.33</td>
<td>102 26.91 10.83</td>
<td>29 7.65 3.08</td>
<td>379 40.23</td>
</tr>
<tr>
<td>Females</td>
<td>186 52.25 19.75</td>
<td>118 33.15 12.53</td>
<td>52 14.60 5.52</td>
<td>356 37.79</td>
</tr>
<tr>
<td>PART-TIME</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>7 58.33 0.74</td>
<td>5 41.67 0.53</td>
<td>0 0.0 0.0</td>
<td>12 1.27</td>
</tr>
<tr>
<td>Females</td>
<td>113 80.72 12.00</td>
<td>22 15.71 2.33</td>
<td>5 3.57 0.53</td>
<td>140 14.86</td>
</tr>
<tr>
<td>HOMEWORKERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>16 29.09 1.70</td>
<td>39 70.91 4.14</td>
<td>0 0.0 0.0</td>
<td>55 5.84</td>
</tr>
<tr>
<td>TOTALS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>255 65.22 27.07</td>
<td>107 27.36 11.36</td>
<td>29 7.42 3.08</td>
<td>391 41.51</td>
</tr>
<tr>
<td>Females</td>
<td>315 57.17 33.44</td>
<td>179 32.49 19.00</td>
<td>57 10.34 6.05</td>
<td>551 58.49</td>
</tr>
</tbody>
</table>
TABLE 4.1 The Respondents' Positions and Experience

<table>
<thead>
<tr>
<th>Position</th>
<th>Number of Respondents</th>
<th>Years in Current Position</th>
<th>Total</th>
<th>Average</th>
<th>s.d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner/Manager</td>
<td>9</td>
<td>67</td>
<td>7.44</td>
<td>6.15</td>
<td></td>
</tr>
<tr>
<td>Director</td>
<td>4</td>
<td>56</td>
<td>14.00</td>
<td>4.24</td>
<td></td>
</tr>
<tr>
<td>Manager (i.e. General, Factory or Production)</td>
<td>8</td>
<td>82</td>
<td>10.25</td>
<td>7.27</td>
<td></td>
</tr>
<tr>
<td>Office Manager</td>
<td>2</td>
<td>20</td>
<td>10.00</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Supervisor (of all director production workers)</td>
<td>2</td>
<td>20</td>
<td>10.00</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>All respondents</strong></td>
<td><strong>25</strong></td>
<td><strong>245</strong></td>
<td><strong>9.80</strong></td>
<td><strong>6.22</strong></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 4.3 Methods of Accommodating the Segments

<table>
<thead>
<tr>
<th>Establishments</th>
<th>Segregated Company on Multiple Sites</th>
<th>Segregated Workforce on same site</th>
<th>Segregated Area of the same Building</th>
<th>Integrated Workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Establishments (Sample size =25)</td>
<td>1</td>
<td>6</td>
<td>11</td>
<td>6</td>
</tr>
</tbody>
</table>

TABLE 4.4 Payment Methods by Workforce Group

<table>
<thead>
<tr>
<th>Workforce Group</th>
<th>Piece-rate Methods</th>
<th>Time-rate Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Worker Numbers</td>
<td>Percentage of Group</td>
</tr>
<tr>
<td>Sm</td>
<td>163</td>
<td>81%</td>
</tr>
<tr>
<td>Fm</td>
<td>54</td>
<td>38%</td>
</tr>
<tr>
<td>Pm</td>
<td>1</td>
<td>17%</td>
</tr>
<tr>
<td>Fw</td>
<td>528</td>
<td>93%</td>
</tr>
<tr>
<td>Pw</td>
<td>406</td>
<td>85%</td>
</tr>
<tr>
<td>Tw</td>
<td>12</td>
<td>86%</td>
</tr>
<tr>
<td>Hw</td>
<td>127</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Totals</strong>:</td>
<td><strong>1292</strong></td>
<td><strong>84%</strong></td>
</tr>
</tbody>
</table>
TABLE 4.2 Workforce Composition (by Size of Establishment)
(a) Large Establishment Sector (Establishments ≥ 30 total employees)

<table>
<thead>
<tr>
<th>DP No.</th>
<th>M No.</th>
<th>Sm No. %</th>
<th>Fm No. %</th>
<th>Pm No. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>236K</td>
<td>48</td>
<td>-</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>146</td>
<td>28</td>
<td>28</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>144</td>
<td>75</td>
<td>58</td>
<td>77.3</td>
</tr>
<tr>
<td></td>
<td>136</td>
<td>28</td>
<td>24</td>
<td>85.7</td>
</tr>
<tr>
<td></td>
<td>129</td>
<td>49</td>
<td>29</td>
<td>59.2</td>
</tr>
<tr>
<td></td>
<td>93**</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Statistics</td>
<td>86</td>
<td>25</td>
<td>16</td>
<td>64.0</td>
</tr>
<tr>
<td></td>
<td>71</td>
<td>33</td>
<td>27</td>
<td>81.8</td>
</tr>
<tr>
<td></td>
<td>61K</td>
<td>19</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(n = 14)</td>
<td>53</td>
<td>4</td>
<td>4</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>48**</td>
<td>4</td>
<td>1</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>4</td>
<td>4</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Employees % of Segment</th>
<th>1333</th>
<th>319</th>
<th>190</th>
<th>124</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishments using group % of 'large' sector</td>
<td>100</td>
<td>59.5</td>
<td>38.9</td>
<td>1.6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DP No.</th>
<th>W No.</th>
<th>Fw No. %</th>
<th>Pw No. %</th>
<th>Tw No. %</th>
<th>Hw No. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>188</td>
<td>114</td>
<td>60.7</td>
<td>73</td>
<td>38.8</td>
</tr>
<tr>
<td></td>
<td>118</td>
<td>80</td>
<td>67.0</td>
<td>32</td>
<td>27.1</td>
</tr>
<tr>
<td></td>
<td>69</td>
<td>39</td>
<td>56.5</td>
<td>12</td>
<td>17.4</td>
</tr>
<tr>
<td></td>
<td>108</td>
<td>59</td>
<td>54.6</td>
<td>43</td>
<td>39.8</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>49</td>
<td>61.2</td>
<td>24</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td>91</td>
<td>42</td>
<td>46.2</td>
<td>49</td>
<td>53.8</td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>16</td>
<td>26.2</td>
<td>38</td>
<td>62.3</td>
</tr>
<tr>
<td></td>
<td>42</td>
<td>10</td>
<td>23.8</td>
<td>21</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>27</td>
<td>48.2</td>
<td>29</td>
<td>51.8</td>
</tr>
<tr>
<td></td>
<td>49</td>
<td>13</td>
<td>26.5</td>
<td>34</td>
<td>69.4</td>
</tr>
<tr>
<td></td>
<td>47</td>
<td>28</td>
<td>59.6</td>
<td>19</td>
<td>40.4</td>
</tr>
<tr>
<td></td>
<td>33</td>
<td>24</td>
<td>72.7</td>
<td>6</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>34</td>
<td>8</td>
<td>23.5</td>
<td>26</td>
<td>76.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Employees % of Segment</th>
<th>1014</th>
<th>534</th>
<th>413</th>
<th>12</th>
<th>55</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishments using group % of 'large' sector</td>
<td>100</td>
<td>52.7</td>
<td>40.7</td>
<td>1.2</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Key:  
K = Knitting on a full-time day work pattern  
* = Specialisation on 1st stage of products  
** = Specialisation on 2nd stage of products

...continued over
(b) Small Establishment Sector (Establishments < 30 total employees)

<table>
<thead>
<tr>
<th>DP No.</th>
<th>M No.</th>
<th>M</th>
<th>Sm</th>
<th>Sm</th>
<th>Fm</th>
<th>Fm</th>
<th>Pm</th>
<th>Pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>66.7</td>
<td>2</td>
<td>33.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>26K</td>
<td></td>
<td>2</td>
<td></td>
<td>100.0</td>
<td>2</td>
<td>100.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>23K</td>
<td></td>
<td>3</td>
<td></td>
<td>100.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>22K</td>
<td></td>
<td>3</td>
<td></td>
<td>100.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>21</td>
<td>4</td>
<td>3</td>
<td>100.0</td>
<td>1</td>
<td>25.0</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>4</td>
<td>3</td>
<td>75.0</td>
<td>1</td>
<td>25.0</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>(n = 11)</td>
<td>12**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fm</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>6**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4*K</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishments using group % of 'small' sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Employees % of segment</td>
<td>199</td>
<td>30</td>
<td>11</td>
<td>18</td>
<td>1</td>
<td>36.7</td>
<td>60.0</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Key:  
K = Knitting on a full-time day work pattern  
* = Specialisation on 1st stage of products  
** = Specialisation on 2nd stage of products  

...continued over
Table 4.2 (continued)

(c) All Establishments

<table>
<thead>
<tr>
<th>DP No.</th>
<th>M</th>
<th>Sm</th>
<th>Fm</th>
<th>Pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employees % of Segment</td>
<td>1532</td>
<td>349</td>
<td>201</td>
<td>142</td>
</tr>
<tr>
<td>Establishments using group % of all establishments</td>
<td>100</td>
<td>23</td>
<td>11</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>W</th>
<th>Fw</th>
<th>Fw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>1183</td>
<td>565</td>
<td>477</td>
<td>14</td>
<td>127</td>
</tr>
<tr>
<td>100</td>
<td>47.8</td>
<td>40.3</td>
<td>1.2</td>
<td>10.7</td>
</tr>
<tr>
<td>25</td>
<td>22</td>
<td>24</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>100</td>
<td>88.0</td>
<td>96.0</td>
<td>20.0</td>
<td>68.0</td>
</tr>
</tbody>
</table>

Key:  
K = Knitting on a full-time day work pattern  
* = Specialisation on 1st stage of products  
** = Specialisation on 2nd stage of products
TABLE 5.1  Number of Workers Residing Within Specified Distance Bands from the Factory (by Workforce Groups)

<table>
<thead>
<tr>
<th>Workforce Group</th>
<th>Total Workforce</th>
<th>Distance from Factory (miles)</th>
<th>1</th>
<th>1 to &lt;3</th>
<th>3 to &lt;5</th>
<th>5 to &lt;7</th>
<th>7 to &lt;10</th>
<th>10 to &lt;15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fw</td>
<td>402</td>
<td></td>
<td>197</td>
<td>132</td>
<td>56</td>
<td>13</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Pw</td>
<td>380</td>
<td></td>
<td>236</td>
<td>107</td>
<td>32</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Tw</td>
<td>11</td>
<td></td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hw</td>
<td>117</td>
<td></td>
<td>31</td>
<td>33</td>
<td>23</td>
<td>23</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>M</td>
<td>65</td>
<td></td>
<td>15</td>
<td>18</td>
<td>17</td>
<td>8</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

TABLE 5.2  Average Number of Applicants per Advertised Vacancy

<table>
<thead>
<tr>
<th>Workforce Group</th>
<th>No. of Factories Responding</th>
<th>Mean No. Applicants per Vacancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fw</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td>Pw</td>
<td>3</td>
<td>5.0</td>
</tr>
</tbody>
</table>

TABLE 5.3  Average Weekly Number of Unsolicited Applications

<table>
<thead>
<tr>
<th>Workforce Group</th>
<th>No. of Factories Responding</th>
<th>Mean No. Unsolicited Applications per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fw</td>
<td>6</td>
<td>0.6</td>
</tr>
<tr>
<td>Pw</td>
<td>11</td>
<td>1.9</td>
</tr>
<tr>
<td>Tw</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>H</td>
<td>9</td>
<td>1.0</td>
</tr>
</tbody>
</table>
### TABLE 5.4 Total Transport Assistance (4 companies)

<table>
<thead>
<tr>
<th>No. of In-Factory Workers (Iw)</th>
<th>Average Female Earnings (£)</th>
<th>Type of Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>140</td>
<td>58.00 (semi-skilled)</td>
<td>Free private bus</td>
</tr>
<tr>
<td>130</td>
<td>67.70 (skilled)</td>
<td>Free private bus</td>
</tr>
<tr>
<td>58</td>
<td>58.80 (semi-skilled)</td>
<td>Free private bus</td>
</tr>
<tr>
<td>50</td>
<td>54.00 (semi-skilled)</td>
<td>Mileage allowance</td>
</tr>
</tbody>
</table>

Average earnings across all 25 interviewed establishments:
- 70.10 (skilled)
- 55.70 (semi-skilled)

### TABLE 5.5 Proportion of Full-time Females (Fw) in the Female Daytime Workforce (Dw) in Relation to Free Transport Provision

<table>
<thead>
<tr>
<th>Transport Assistance</th>
<th>Companies No.</th>
<th>Full-time Females (Fw) No.</th>
<th>Daytime Females (Dw) No.</th>
<th>Percentage of Full-time Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Free private bus</td>
<td>3</td>
<td>166</td>
<td>270</td>
<td>61%</td>
</tr>
<tr>
<td>(B) No transport assistance - (all other companies)</td>
<td>22</td>
<td>399</td>
<td>772</td>
<td>52%</td>
</tr>
<tr>
<td>(C) No transport assistance - (companies of similar size to (A))</td>
<td>7</td>
<td>295</td>
<td>519</td>
<td>57%</td>
</tr>
</tbody>
</table>

### TABLE 5.6 Numbers of Full-time Females Travelling Specified Distances to Factories in Relation to Transport Provision

<table>
<thead>
<tr>
<th>Transport Assistance</th>
<th>Total Workers</th>
<th>Distance from Factory (miles)</th>
<th>&lt;1</th>
<th>1 to &lt;3</th>
<th>3 to &lt;5</th>
<th>5 to &lt;7</th>
<th>7 to &lt;10</th>
<th>10 to &lt;15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample A</td>
<td>166</td>
<td></td>
<td>86</td>
<td>41</td>
<td>32</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Sample B</td>
<td>236</td>
<td></td>
<td>111</td>
<td>91</td>
<td>24</td>
<td>9</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Sample C</td>
<td>132</td>
<td></td>
<td>46</td>
<td>66</td>
<td>19</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
TABLE 6.1 Age Distribution

<table>
<thead>
<tr>
<th>Workgroup</th>
<th>16 to &lt;20</th>
<th>20 to &lt;30</th>
<th>30 to &lt;40</th>
<th>40 to &lt;50</th>
<th>50 to &lt;60</th>
<th>60 to &lt;70</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Fw</td>
<td>98</td>
<td>24</td>
<td>93</td>
<td>23</td>
<td>57</td>
<td>14</td>
<td>67</td>
</tr>
<tr>
<td>Pw</td>
<td>0</td>
<td>0</td>
<td>39</td>
<td>11</td>
<td>123</td>
<td>35</td>
<td>91</td>
</tr>
<tr>
<td>Tw</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>6</td>
<td>55</td>
<td>4</td>
</tr>
<tr>
<td>Hw</td>
<td>3</td>
<td>3</td>
<td>31</td>
<td>28</td>
<td>31</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>W</td>
<td>101</td>
<td>12</td>
<td>164</td>
<td>19</td>
<td>217</td>
<td>25</td>
<td>187</td>
</tr>
</tbody>
</table>

TABLE 6.2 Family Commitments:

<table>
<thead>
<tr>
<th>Workgroup</th>
<th>Without Children</th>
<th>With Dependent Children</th>
<th>With Non-dependent Children</th>
<th>Don't Know</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Adj%</td>
<td>Rel%</td>
<td>No.</td>
<td>Adj%</td>
</tr>
<tr>
<td>Fw</td>
<td>121</td>
<td>47</td>
<td>30</td>
<td>78</td>
<td>31</td>
</tr>
<tr>
<td>Pw</td>
<td>25</td>
<td>9</td>
<td>7</td>
<td>165</td>
<td>56</td>
</tr>
<tr>
<td>Tw</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>Hw</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>76</td>
<td>68</td>
</tr>
<tr>
<td>W</td>
<td>150</td>
<td>23</td>
<td>17</td>
<td>330</td>
<td>49</td>
</tr>
</tbody>
</table>
### TABLE 6.3 Ethnic Origin

<table>
<thead>
<tr>
<th>Workgroup</th>
<th>British</th>
<th>Other European</th>
<th>Asian</th>
<th>African/ West Indian</th>
<th>Missing Data</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Adj.% Rel.%</td>
<td>No.</td>
<td>Adj.% Rel.%</td>
<td>No. Rel.%</td>
<td>No. Rel.%</td>
</tr>
<tr>
<td>Fw</td>
<td>337</td>
<td>89 84</td>
<td>4</td>
<td>1 1</td>
<td>33 9 8</td>
<td>3 1 1 25 6</td>
</tr>
<tr>
<td>Pw</td>
<td>336</td>
<td>96 96</td>
<td>2</td>
<td>1 1</td>
<td>10 3 3</td>
<td>0 0 0 0 0 0</td>
</tr>
<tr>
<td>Tw</td>
<td>11</td>
<td>100 100</td>
<td>1</td>
<td>1 1</td>
<td>2 2 2</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>Hw</td>
<td>108</td>
<td>97 97</td>
<td>1</td>
<td>1 1</td>
<td>2 2 2</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>W</td>
<td>792</td>
<td>94 91</td>
<td>7</td>
<td>1 1</td>
<td>45 5 5</td>
<td>3 0 0</td>
</tr>
</tbody>
</table>

### TABLE 6.4 Type of Residence

<table>
<thead>
<tr>
<th>Workgroup</th>
<th>Owner/Occupied</th>
<th>Rented Accommodation</th>
<th>Don't Know</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. Adj.% Rel.%</td>
<td>No. Adj.% Rel.%</td>
<td>No. Re1.%</td>
<td>No. Re1.%</td>
</tr>
<tr>
<td>Fw</td>
<td>130 53 32</td>
<td>116 47 29</td>
<td>156 39</td>
<td>402 100</td>
</tr>
<tr>
<td>Pw</td>
<td>139 67 40</td>
<td>70 33 20</td>
<td>139 40</td>
<td>348 100</td>
</tr>
<tr>
<td>Tw</td>
<td>0 0 0</td>
<td>0 0 0</td>
<td>11 100</td>
<td>11 100</td>
</tr>
<tr>
<td>Hw</td>
<td>53 83 48</td>
<td>11 17 10</td>
<td>47 42</td>
<td>111 100</td>
</tr>
<tr>
<td>W</td>
<td>322 62 37</td>
<td>197 38 23</td>
<td>353 40</td>
<td>872 100</td>
</tr>
</tbody>
</table>
TABLE 6.5 Average Ages

<table>
<thead>
<tr>
<th>Workforce Group</th>
<th>Type of Distribution</th>
<th>Average Ages (Years)</th>
<th>Type of Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time (Fw)</td>
<td>Bi-modal</td>
<td>34.8 31.8 37.8</td>
<td>19.8 First peak</td>
</tr>
<tr>
<td>(n = 402)</td>
<td></td>
<td></td>
<td>19.8 First peak</td>
</tr>
<tr>
<td>Part-time (Pw)</td>
<td>Positively skewed model</td>
<td>42.9 42.3 37.2</td>
<td>51.2 Second peak</td>
</tr>
<tr>
<td>(n = 348)</td>
<td></td>
<td></td>
<td>51.2 Second peak</td>
</tr>
<tr>
<td>Twilight (Tw)</td>
<td>Approximately normal</td>
<td>37.7 37.5 37.1</td>
<td>Single peak</td>
</tr>
<tr>
<td>(n = 11)</td>
<td></td>
<td></td>
<td>Single peak</td>
</tr>
<tr>
<td>Homeworker (Hw)</td>
<td>Positively skewed modal</td>
<td>38.1 36.9 36.5</td>
<td>Single peak</td>
</tr>
<tr>
<td>(n = 111)</td>
<td></td>
<td></td>
<td>Single peak</td>
</tr>
<tr>
<td>All females (W)</td>
<td>Positively skewed modal</td>
<td>39.4 37.4 36.4</td>
<td>Single peak</td>
</tr>
<tr>
<td>(n = 852)</td>
<td></td>
<td></td>
<td>Single peak</td>
</tr>
</tbody>
</table>
### TABLE 7.1 Methods of Recruitment

<table>
<thead>
<tr>
<th>Workforce Group</th>
<th>Total Workers</th>
<th>THE FORMAL CHANNEL</th>
<th>THE INFORMAL CHANNEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>The Job Centre</td>
<td>Private Employment Agencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>MALES:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sm + Fm</td>
<td>270</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Missing data</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEMALES:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fw</td>
<td>565</td>
<td>34</td>
<td>6.0</td>
</tr>
<tr>
<td>Pw</td>
<td>477</td>
<td>5</td>
<td>1.0</td>
</tr>
<tr>
<td>Tw</td>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hw</td>
<td>127</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Totals:</td>
<td>1453</td>
<td>39</td>
<td>2.7</td>
</tr>
<tr>
<td>IV - 25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Descriptions of the Operations

#### A. Females in 'Male' Operations

<table>
<thead>
<tr>
<th>Operation</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
<th>Total DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knitting of circular interlock fabric for underwear</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Heavy-gauge hand-machine knitted sweaters</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Hand-machine knitted patterned socks</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Warehouse duties</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTALS:**

<table>
<thead>
<tr>
<th></th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
<th>Total DP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>20</td>
</tr>
</tbody>
</table>

#### B. Males in 'Female' Operations

<table>
<thead>
<tr>
<th>Operation</th>
<th>Fm</th>
<th>Pm</th>
<th>Sm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair and fold socks</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Box assembly</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Inspection and quality control</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>'Running-on' of welts onto bars</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pressing of garments</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTALS:**

<table>
<thead>
<tr>
<th></th>
<th>Fm</th>
<th>Pm</th>
<th>Sm</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>9</td>
</tr>
</tbody>
</table>

**TABLE 8.1 Job Mobility (by Gender)**
<table>
<thead>
<tr>
<th>Occupation Descriptions</th>
<th>Sm</th>
<th></th>
<th>Fm</th>
<th></th>
<th>Pm</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td><strong>First Stage of Manufacture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knitter, mechanic, or knitter and supervisor or mechanic combined</td>
<td>199</td>
<td>99.0</td>
<td>48</td>
<td>33.8</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Bar loaders</td>
<td>2</td>
<td>1.0</td>
<td>2</td>
<td>1.4</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Second Stage of Manufacture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanics for female machines</td>
<td>0</td>
<td>0.0</td>
<td>11</td>
<td>7.7</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Supervisors of females</td>
<td>0</td>
<td>0.0</td>
<td>8</td>
<td>5.7</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Warehouse, dispatch, internal distribution and dyehouse duties</td>
<td>0</td>
<td>0.0</td>
<td>68</td>
<td>47.9</td>
<td>2</td>
<td>33.3</td>
</tr>
<tr>
<td>Women's operations (see Table 8.1)</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
<td>3.5</td>
<td>4</td>
<td>66.7</td>
</tr>
<tr>
<td><strong>TOTALS:</strong></td>
<td>201</td>
<td>100%</td>
<td>142</td>
<td>100%</td>
<td>6</td>
<td>100%</td>
</tr>
</tbody>
</table>

TABLE 8.2 Male Occupations (by Workgroup)

<table>
<thead>
<tr>
<th>Workgroup</th>
<th>Exclusive Operations</th>
<th>Workers</th>
<th>Establishments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Fw n=565</td>
<td>Hand-machine knitting of heavy-knit sweaters</td>
<td>9</td>
<td>1.6</td>
</tr>
<tr>
<td>Pw n=477</td>
<td>None</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Tw n=14</td>
<td>None</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Hw n=127</td>
<td>Hand-finishing of garments</td>
<td>33</td>
<td>26.0</td>
</tr>
<tr>
<td></td>
<td>Linking of garment pieces</td>
<td>35</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>Hand-machine knitting of socks</td>
<td>7</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>Total Hw in exclusive jobs</td>
<td>75</td>
<td>59.0</td>
</tr>
</tbody>
</table>

TABLE 8.3 Exclusive Jobs (by Female Workgroup)
<table>
<thead>
<tr>
<th>Male Segment</th>
<th>Sm</th>
<th>Fm</th>
<th>Pm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Skilled jobs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>199</td>
<td>99.0</td>
<td>98</td>
<td>69.0</td>
</tr>
<tr>
<td>2</td>
<td>1.0</td>
<td>44</td>
<td>31.0</td>
</tr>
<tr>
<td>2</td>
<td>33.0</td>
<td>4</td>
<td>67.0</td>
</tr>
<tr>
<td>Semi-skilled jobs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female Segment</td>
<td>Fw</td>
<td>Pw</td>
<td>Tw</td>
</tr>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Skilled jobs</td>
<td>414</td>
<td>73.3</td>
<td>339</td>
</tr>
<tr>
<td>Semi-skilled jobs</td>
<td>151</td>
<td>26.7</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>71.4</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>61</td>
<td>48.0</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 8.4** The Skill Composition of the Workgroups

<table>
<thead>
<tr>
<th>Opportunity Level</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Very good</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Good</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Slight</td>
<td>7</td>
<td>32</td>
<td>2</td>
</tr>
<tr>
<td>None</td>
<td>14</td>
<td>64</td>
<td>22</td>
</tr>
<tr>
<td>Sample sizes</td>
<td>12</td>
<td>100</td>
<td>12</td>
</tr>
</tbody>
</table>

**TABLE 8.5** Female Opportunities for Promotion to Supervisory Capacity (by Establishment Response)
### TABLE 8.6 Direct Female Inter-Group Mobility

<table>
<thead>
<tr>
<th>Types of Employees</th>
<th>Fw to Pw</th>
<th>Pw to Fw</th>
<th>Dw to Tw</th>
<th>Dw to Hw</th>
<th>Tw to Dw</th>
<th>Hw to Dw</th>
<th>Tw to Hw</th>
<th>Hw to Tw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled shift workers</td>
<td>17</td>
<td>24</td>
<td>24</td>
<td>18</td>
<td>12</td>
<td>16</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Skilled full-time day workers</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Semi-skilled full-time day workers</td>
<td>9 in 8 yrs</td>
<td>0</td>
<td>0</td>
<td>8 in 12 yrs</td>
<td>0</td>
<td>7 in 19 yrs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled</td>
<td>1.1 pa</td>
<td>0</td>
<td>0</td>
<td>0.66 pa</td>
<td>0</td>
<td>0.4 pa</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

### TABLE 8.7 Average Weekly Earnings

<table>
<thead>
<tr>
<th>Types of Employees</th>
<th>Basic 40 hr/wk £</th>
<th>Standard Deviation</th>
<th>With Overtime £</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled shift workers</td>
<td>100</td>
<td>11.3</td>
<td>108</td>
<td>8.8</td>
</tr>
<tr>
<td>Skilled full-time day workers</td>
<td>82</td>
<td>2.6</td>
<td>102</td>
<td>14.6</td>
</tr>
<tr>
<td>Semi-skilled full-time day workers</td>
<td>78</td>
<td>8.1</td>
<td>No overtime</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled</td>
<td>65</td>
<td>8.8</td>
<td>No overtime</td>
<td></td>
</tr>
<tr>
<td>Semi-skilled</td>
<td>55</td>
<td>7.7</td>
<td>No overtime</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 8.6 Direct Female Inter-Group Mobility

TABLE 8.7 Average Weekly Earnings
### Comparisons of Homeworkers' Pay Rates

<table>
<thead>
<tr>
<th></th>
<th>n=22</th>
<th>n=139</th>
<th>% Reduction in Rates</th>
<th>Std. Devn.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Establishments</td>
<td>Homeworkers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Lower rates than indoor workers</td>
<td>9</td>
<td>41</td>
<td>35</td>
<td>7.50</td>
</tr>
<tr>
<td>Same rates as indoor workers</td>
<td>8</td>
<td>36</td>
<td>49</td>
<td>-</td>
</tr>
<tr>
<td>Not comparable to indoor workers</td>
<td>9</td>
<td>41</td>
<td>55</td>
<td>DK</td>
</tr>
</tbody>
</table>

NB Establishments do not sum to 100% because 4 establishments employed both comparable and non-comparable homeworkers.

### TABLE 8.8 The Intra-Establishment Comparability of Homeworkers' Piece-Rates

<table>
<thead>
<tr>
<th>Establishments Providing Data</th>
<th>n=22</th>
<th>n=139</th>
<th>Average Weekly Earnings</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>£</td>
</tr>
<tr>
<td>12</td>
<td>55</td>
<td>78</td>
<td>56</td>
<td>20.92</td>
</tr>
</tbody>
</table>

### TABLE 8.9 Homeworkers' Average Weekly Earnings

<table>
<thead>
<tr>
<th>Type of Establishment</th>
<th>Establishments</th>
<th>Indoor Females</th>
<th>Skilled workers</th>
<th>Semiskilled</th>
<th>Skill diff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>No.</td>
<td>£</td>
<td>£</td>
<td>£</td>
</tr>
<tr>
<td>Segregated, any size n=7</td>
<td>7</td>
<td>262</td>
<td>59</td>
<td>-6</td>
<td>48</td>
</tr>
<tr>
<td>Large integrated (over 30 employees) n=10</td>
<td>10</td>
<td>731</td>
<td>68</td>
<td>+3</td>
<td>59</td>
</tr>
<tr>
<td>Small integrated, (under 30 employees) n=8</td>
<td>8</td>
<td>63</td>
<td>66</td>
<td>+1</td>
<td>56</td>
</tr>
<tr>
<td>Totals</td>
<td>25</td>
<td>1056</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean of all establishments</td>
<td>65</td>
<td>8.8</td>
<td>0</td>
<td>55</td>
<td>7.7</td>
</tr>
</tbody>
</table>

### TABLE 8.10 Inter-Establishment Female Wage Structure
### Table 8.11 The Incidence of Benefit Schemes and Facilities (by Establishment Response)

<table>
<thead>
<tr>
<th>Benefit Scheme or Facility</th>
<th>M (n=23)</th>
<th>Fw (n=22)</th>
<th>Tw (n=24)</th>
<th>Tw (n=5)</th>
<th>Hw (n=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Holiday pay</td>
<td>23 100</td>
<td>22 100</td>
<td>24 100</td>
<td>4 80 2</td>
<td>12 4</td>
</tr>
<tr>
<td>Pension scheme</td>
<td>6 26</td>
<td>5 23</td>
<td>3 12</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Bonuses</td>
<td>2 9</td>
<td>2 9</td>
<td>2 8</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Christmas Benefits</td>
<td>14 61</td>
<td>14 64</td>
<td>14 58</td>
<td>DK</td>
<td>DK</td>
</tr>
<tr>
<td>Long service awards</td>
<td>4 17</td>
<td>4 18</td>
<td>4 17</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Medical provisions</td>
<td>23 100</td>
<td>22 100</td>
<td>24 100</td>
<td>4 80</td>
<td>n.a.</td>
</tr>
<tr>
<td>NI deductions</td>
<td>23 100</td>
<td>22 100</td>
<td>24 100</td>
<td>5 100</td>
<td>0 0</td>
</tr>
<tr>
<td>PAYE deductions</td>
<td>23 100</td>
<td>22 100</td>
<td>24 100</td>
<td>5 100</td>
<td>6 35</td>
</tr>
<tr>
<td>Summated Percentages</td>
<td>513</td>
<td>514</td>
<td>495</td>
<td>360</td>
<td>47</td>
</tr>
<tr>
<td>Maximum possible summated percentages</td>
<td>800</td>
<td>800</td>
<td>800</td>
<td>800</td>
<td>700</td>
</tr>
<tr>
<td>Ratio of actual to possible</td>
<td>0.64</td>
<td>0.64</td>
<td>0.62</td>
<td>0.45</td>
<td>0.07</td>
</tr>
<tr>
<td>percentages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rank order of net advantages</td>
<td>=1</td>
<td>=1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**TABLE 8.11 The Incidence of Benefit Schemes and Facilities (by Establishment Response)**
**Key:** sf = self financing  
NA = not applicable  
un = unavailable  
eg = negligible

<table>
<thead>
<tr>
<th>COST ELEMENT</th>
<th>Shift Worker</th>
<th>Male full-time day (skilled)</th>
<th>Female full-time day (skilled)</th>
<th>Female full-time day (pooled skills)</th>
<th>Female part-time day (pooled skills)</th>
<th>Twlilight workers (pooled skills)</th>
<th>Homeworker (pooled skills)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sm</td>
<td>Fm</td>
<td>Fw</td>
<td>Fw</td>
<td>Fw</td>
<td>Fw</td>
<td>Fw</td>
</tr>
<tr>
<td>W 40-hour equivalent of average weekly earnings</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
</tr>
<tr>
<td>Material spoilage</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
</tr>
<tr>
<td>Supervision</td>
<td>5.13</td>
<td>5.13</td>
<td>3.61</td>
<td>3.61</td>
<td>3.61</td>
<td>3.61</td>
<td>0.00</td>
</tr>
<tr>
<td>L National Insurance (March 1980)</td>
<td>13.53</td>
<td>11.65</td>
<td>8.81</td>
<td>8.12</td>
<td>8.12</td>
<td>8.12</td>
<td>8.12</td>
</tr>
<tr>
<td>Holiday pay benefits</td>
<td>11.20</td>
<td>9.64</td>
<td>7.28</td>
<td>6.72</td>
<td>6.72</td>
<td>6.72</td>
<td>6.72</td>
</tr>
<tr>
<td>Redundancy payments</td>
<td>0.06</td>
<td>0.05</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>Dismissals and maternity</td>
<td>neg</td>
<td>neg</td>
<td>0.01</td>
<td>0.01</td>
<td>neg</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>B Sickness, pensions, long-service</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Transport</td>
<td>NA</td>
<td>0.20</td>
<td>0.20</td>
<td>0.20</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Canteen/refreshments</td>
<td>0.18</td>
<td>0.18</td>
<td>0.18</td>
<td>0.18</td>
<td>0.18</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Concessionary goods scheme</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
<td>sf</td>
</tr>
<tr>
<td>Social facilities/celebrations</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>S Recruitment</td>
<td>0.02</td>
<td>0.02</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>Selection</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Training</td>
<td>0.78</td>
<td>0.63</td>
<td>0.58</td>
<td>0.40</td>
<td>0.23</td>
<td>0.34</td>
<td>0.03</td>
</tr>
<tr>
<td>K Capital non-utilisation</td>
<td>135.39</td>
<td>188.48</td>
<td>1.44</td>
<td>1.44</td>
<td>1.55</td>
<td>1.27</td>
<td>1.65</td>
</tr>
<tr>
<td>T Factory overheads (with 8 hours discounted)</td>
<td>un</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>P Place constraint</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Total per capita cost £</td>
<td>266.44</td>
<td>302.21</td>
<td>87.34</td>
<td>80.91</td>
<td>80.63</td>
<td>76.46</td>
<td>56.40</td>
</tr>
</tbody>
</table>

**TABLE 9.1 Summary of the Average Weekly Cost per Workgroup Number**  
(40-hour equivalent basis)
<table>
<thead>
<tr>
<th>Hours Taken No</th>
<th>Wages (per 40 hr week)</th>
<th>Weekly Distance miles</th>
<th>Galls Petrol (per 20 mpg)</th>
<th>Cost of Petrol (£1.27)</th>
<th>Total Cost</th>
<th>Number of Homeworkers No.</th>
<th>Calculated Cost per Homeworker £</th>
<th>Quoted Weekly Cost per Homeworker £</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>20</td>
<td>68</td>
<td>3.40</td>
<td>4.32</td>
<td>24.32</td>
<td>6</td>
<td>4.05</td>
<td>-</td>
</tr>
<tr>
<td>30</td>
<td>60</td>
<td>-</td>
<td>-</td>
<td>37.50</td>
<td>97.50</td>
<td>20</td>
<td>4.88</td>
<td>-</td>
</tr>
<tr>
<td>9</td>
<td>18</td>
<td>65</td>
<td>3.25</td>
<td>4.13</td>
<td>22.13</td>
<td>5</td>
<td>4.42</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>60</td>
<td>3.00</td>
<td>3.81</td>
<td>11.81</td>
<td>6</td>
<td>1.97</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>40</td>
<td>2.00</td>
<td>2.54</td>
<td>12.54</td>
<td>3</td>
<td>4.18</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>12</td>
<td>-</td>
<td>4.00</td>
<td>5.08</td>
<td>17.08</td>
<td>10</td>
<td>1.71</td>
<td>-</td>
</tr>
<tr>
<td>20</td>
<td>40</td>
<td>104</td>
<td>5.20</td>
<td>6.60</td>
<td>46.60</td>
<td>11</td>
<td>4.24</td>
<td>5.00</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>-</td>
<td>2.00</td>
<td>2.54</td>
<td>6.54</td>
<td>3</td>
<td>2.18</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>-</td>
<td>1.00</td>
<td>1.27</td>
<td>11.27</td>
<td>2</td>
<td>5.64</td>
<td>-</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>-</td>
<td>4.17</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>-</td>
<td>1.00</td>
<td>1.27</td>
<td>3.27</td>
<td>4</td>
<td>0.82</td>
<td>-</td>
</tr>
<tr>
<td>20</td>
<td>40</td>
<td>128</td>
<td>6.40</td>
<td>8.13</td>
<td>48.13</td>
<td>9</td>
<td>5.34</td>
<td>7.22</td>
</tr>
<tr>
<td>24</td>
<td>48</td>
<td>216</td>
<td>10.80</td>
<td>13.72</td>
<td>61.72</td>
<td>12</td>
<td>5.14</td>
<td>4.83</td>
</tr>
</tbody>
</table>

Mean cost per homeworker
Standard deviation

TABLE 9.2 Weekly Company Costs for Delivery of Work to Homeworkers
### TABLE 9.3 Characteristics Sought During the Selection Process
(by Establishment Response)

<table>
<thead>
<tr>
<th>Establishment Sample Size</th>
<th>n=24</th>
<th>n=7</th>
<th>n=21</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characteristics</strong></td>
<td>Dw</td>
<td>Tw</td>
<td>Hw</td>
</tr>
<tr>
<td><strong>Previous experience:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Skill; speed; quality workmanship</td>
<td>19</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>79%</td>
<td>43%</td>
<td>62%</td>
</tr>
<tr>
<td><strong>Working hours:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Full-time, or maximum possible</td>
<td>18</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td>0%</td>
<td>71%</td>
</tr>
<tr>
<td>c) Downward flexibility</td>
<td>0</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>29%</td>
<td>48%</td>
</tr>
<tr>
<td><strong>Personal attributes:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Ability to 'fit-in'</td>
<td>14</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>58%</td>
<td>57%</td>
<td>0%</td>
</tr>
<tr>
<td>e) Good employment record</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>42%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>f) Job flexibility</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>12%</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>g) Commitment; motivation</td>
<td>2</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>8%</td>
<td>100%</td>
<td>71%</td>
</tr>
<tr>
<td>h) Honesty; trustworthiness</td>
<td>0</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>100%</td>
<td>90%</td>
</tr>
<tr>
<td>i) Financial need</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>12%</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>j) Age; maturity</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>8%</td>
<td>0%</td>
<td>14%</td>
</tr>
<tr>
<td>k) Married status</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

### TABLE 9.4 Order of Importance of Selection Criteria
(by Establishment Response)

<table>
<thead>
<tr>
<th>Establishment Sample Size</th>
<th>n=27</th>
<th>n=7</th>
<th>n=21</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characteristic</strong></td>
<td>Dw</td>
<td>Tw</td>
<td>Hw</td>
</tr>
<tr>
<td>Previous experience</td>
<td>19</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>79%</td>
<td>43%</td>
<td>62%</td>
</tr>
<tr>
<td>Working hours</td>
<td>18</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td>29%</td>
<td>71%</td>
</tr>
<tr>
<td>Personal attributes</td>
<td>18</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>75%</td>
<td>100%</td>
<td>95%</td>
</tr>
</tbody>
</table>

IV - 34
<table>
<thead>
<tr>
<th>Stated Preference</th>
<th>No. of Establishments Stating the Preference n=25</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-time versus Part-time</strong></td>
<td></td>
</tr>
<tr>
<td>Full-time preferred</td>
<td>23</td>
</tr>
<tr>
<td>Part-time preferred</td>
<td>1</td>
</tr>
<tr>
<td>No preference</td>
<td>1</td>
</tr>
<tr>
<td><strong>Daytime Workers versus Twilight Workers</strong></td>
<td></td>
</tr>
<tr>
<td>Daytime workers preferred</td>
<td>25</td>
</tr>
<tr>
<td>Twilight workers preferred</td>
<td>0</td>
</tr>
<tr>
<td><strong>Daytime Workers versus Homeworkers</strong></td>
<td></td>
</tr>
<tr>
<td>Daytime workers preferred</td>
<td>24</td>
</tr>
<tr>
<td>Homeworkers preferred</td>
<td>1</td>
</tr>
</tbody>
</table>

TABLE 9.5 Stated Workgroup Preferences
<table>
<thead>
<tr>
<th>Employment Pattern</th>
<th>Twilight Workers</th>
<th>Homeworkers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Establishments</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>n=12</td>
<td>100</td>
</tr>
<tr>
<td>Temporary Employment</td>
<td>8</td>
<td>67</td>
</tr>
<tr>
<td>Permanent Employment</td>
<td>4</td>
<td>33</td>
</tr>
</tbody>
</table>

* Responses for homeworkers do not total to the sample size because there were some double, contrasting responses for different homeworker operations, and under different product market conditions.

**TABLE 9.6 Stated Employment Patterns of Twilight Workers and Homeworkers**

<table>
<thead>
<tr>
<th></th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean stated rank</td>
<td>1.12</td>
<td>1.16</td>
<td>3.36</td>
<td>2.60</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.44</td>
<td>0.37</td>
<td>0.91</td>
<td>1.06</td>
</tr>
<tr>
<td>Rank order</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**TABLE 9.7 Stated Preference for the Allocation of Work**
(by Establishment Response, n=25)
<table>
<thead>
<tr>
<th>Training Methods</th>
<th>Experienced Personnel</th>
<th>Inexperienced Personnel</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B&lt;sub&gt;1&lt;/sub&gt;</td>
<td>B&lt;sub&gt;2&lt;/sub&gt;</td>
</tr>
<tr>
<td><strong>All 40-hr/wk Males</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of workers</td>
<td>.70</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Percentage of workers</td>
<td>25%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>% of experienced/inexperienced</td>
<td>25%</td>
<td></td>
<td>75%</td>
</tr>
<tr>
<td><strong>Sm+M Knitters only</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of knitters</td>
<td>33%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>% of experienced/inexperienced</td>
<td>33%</td>
<td></td>
<td>67%</td>
</tr>
<tr>
<td><strong>All other M operators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of workers</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Percentage of workers</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>% of experienced/inexperienced</td>
<td>7%</td>
<td></td>
<td>93%</td>
</tr>
</tbody>
</table>

TABLE 9.8 Methods and Levels of Male Training by Present Employer
### TABLE 9.9 Methods and Levels of Female Training by Present Employer

<table>
<thead>
<tr>
<th>Training Methods</th>
<th>Experienced Personnel</th>
<th>Inexperienced Personnel</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B_1</td>
<td>B_2</td>
</tr>
<tr>
<td><strong>Full-time females (Fw)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of workers</td>
<td>186</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Percentage of workers</td>
<td>33%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>% of experienced/inexperienced</td>
<td>38%</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td><strong>Part-time females (Pw)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of workers</td>
<td>243</td>
<td>37</td>
<td>10</td>
</tr>
<tr>
<td>Percentage of workers</td>
<td>51%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>% of experienced/inexperienced</td>
<td>59%</td>
<td>41%</td>
<td></td>
</tr>
<tr>
<td><strong>Twilight workers (Tw)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of workers</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Percentage of workers</td>
<td>21.5%</td>
<td>21.5%</td>
<td>0%</td>
</tr>
<tr>
<td>% of experienced/inexperienced</td>
<td>43%</td>
<td>57%</td>
<td></td>
</tr>
<tr>
<td><strong>Homeworkers (Hz)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of workers</td>
<td>87</td>
<td>10</td>
<td>34</td>
</tr>
<tr>
<td>Percentage of workers</td>
<td>66%</td>
<td>8%</td>
<td>26%</td>
</tr>
<tr>
<td>% of experienced/inexperienced</td>
<td>74%</td>
<td>26%</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 9.10 Total Investment in Training by Present Employer

<table>
<thead>
<tr>
<th>Workforce Group</th>
<th>No. of Establishments</th>
<th>Present Workforce</th>
<th>No. of Redundancies</th>
<th>Derived Previous Workforce</th>
<th>Mean Annual Redundancy Level (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time and part-time (Dw)</td>
<td>19</td>
<td>547</td>
<td>16</td>
<td>563</td>
<td>2.8</td>
</tr>
<tr>
<td>Twilight workers (Tw)</td>
<td>5</td>
<td>14</td>
<td>0</td>
<td>14</td>
<td>0.0</td>
</tr>
<tr>
<td>Homeworkers (Hw)</td>
<td>17</td>
<td>112</td>
<td>2</td>
<td>114</td>
<td>1.8</td>
</tr>
</tbody>
</table>

### TABLE 9.11 Stated Annual Female Group Redundancy Levels
(by Establishment Response over 10 year period)
<table>
<thead>
<tr>
<th>Establishment Type</th>
<th>Number of Establishments</th>
<th>Present Workforce</th>
<th>Previous Workforce</th>
<th>'Implied' Redundancies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Twilight Workers (Tw)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently using Tw</td>
<td>5</td>
<td>14</td>
<td>24</td>
<td>10</td>
</tr>
<tr>
<td>Had used Tw in the past</td>
<td>7</td>
<td>0</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td><strong>TOTALS:</strong></td>
<td>12</td>
<td>14</td>
<td>52</td>
<td>38</td>
</tr>
<tr>
<td>Mean Percentage Redundancy Rate = 73.1% (over 5 years) = 14.6% (per annum)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Homeworkers (Hw)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently using Hw</td>
<td>17</td>
<td>127</td>
<td>176</td>
<td>49</td>
</tr>
<tr>
<td>Had used Hw in the past</td>
<td>5</td>
<td>0</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td><strong>TOTALS:</strong></td>
<td>22</td>
<td>127</td>
<td>202</td>
<td>75</td>
</tr>
<tr>
<td>Mean Percentage Redundancy Rate = 37.1% (over 5 years) = 7.4% (per annum)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 9.12 'Implied' Redundancies of Twilight Workers and Homeworkers Over a 5 Year Period (by Establishment Response)**
<table>
<thead>
<tr>
<th>Workforce Group</th>
<th>Stated Redundancies per annum (%)</th>
<th>Implied Redundancies per annum (%)</th>
<th>Rank Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time and part-time (Dw)</td>
<td>2.8</td>
<td>-</td>
<td>=1</td>
</tr>
<tr>
<td>Twilight workers (Tw)</td>
<td>0.0</td>
<td>14.6</td>
<td>4</td>
</tr>
<tr>
<td>Homeworkers (Hw)</td>
<td>1.8</td>
<td>7.4</td>
<td>3</td>
</tr>
</tbody>
</table>

**TABLE 9.13 Rank Order of Female Redundancies**

<table>
<thead>
<tr>
<th>Level of Payment</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pm</td>
<td>Sm + Fm</td>
</tr>
<tr>
<td>More than EPCA</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Same as EPCA</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Group &quot;does not work the qualifying period&quot;</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot;Don't known, never arisen&quot;</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>EPCA exempts this group</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Total of Establishments</td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>

**TABLE 9.15 Level of Redundancy Payment Received**
(by number of establishments)
<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>MALES</th>
<th>FEMALES</th>
<th>MALES</th>
<th>FEMALES</th>
<th>MALES</th>
<th>FEMALES</th>
<th>MALES</th>
<th>FEMALES</th>
<th>MALES</th>
<th>FEMALES</th>
<th>MALES</th>
<th>FEMALES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sm + Fm</td>
<td>Fw</td>
<td>Pw</td>
<td>Tw</td>
<td>Hw</td>
<td>Sm + Fm</td>
<td>Fw</td>
<td>Pw</td>
<td>Tw</td>
<td>Hw</td>
<td>Sm + Fm</td>
<td>Fw</td>
</tr>
<tr>
<td>Formal Procedures:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) &quot;last in, first out&quot; plus &quot;performance levels&quot;</td>
<td>3 15</td>
<td>35 10</td>
<td>3 14</td>
<td>109 19</td>
<td>3 13</td>
<td>33 7</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>b) &quot;over retirement age&quot; plus (a) above</td>
<td>5 25</td>
<td>135 39</td>
<td>6 27</td>
<td>246 44</td>
<td>6 25</td>
<td>196 41</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>TOTALS:</td>
<td>8 40</td>
<td>168 49</td>
<td>9 41</td>
<td>355 63</td>
<td>9 38</td>
<td>229 48</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Informal Procedures:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) &quot;Don't know, it has never occurred&quot;</td>
<td>11 55</td>
<td>171 50</td>
<td>12 55</td>
<td>204 36</td>
<td>13 54</td>
<td>213 44</td>
<td>1 20</td>
<td>2 14</td>
<td>1 4</td>
<td>10 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) &quot;Hope for volunteers&quot; plus (c) above</td>
<td>1 5</td>
<td>3 1</td>
<td>1 4</td>
<td>6 1</td>
<td>1 4</td>
<td>3 1</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>e) &quot;Spread the work until none available&quot;</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>2 40</td>
<td>6 43</td>
<td>3 14</td>
<td>25 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) &quot;Switch away from group during general redundancy situations&quot;</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
<td>1 4</td>
<td>32 7</td>
<td>2 40</td>
<td>6 43</td>
<td>18 82</td>
<td>104 75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTALS:</td>
<td>12 60</td>
<td>174 51</td>
<td>13 59</td>
<td>210 37</td>
<td>15 62</td>
<td>248 52</td>
<td>5 100</td>
<td>14 100</td>
<td>22 100</td>
<td>139 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMPLIED FEMALE RANK ORDER:</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 9.14 Procedure to Determine Specific Redundancies (by Numbers of Establishments and Workers)
<table>
<thead>
<tr>
<th>PERMANENT FEATURE</th>
<th>TEMPORARY FEATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Establishments</td>
<td>Number of Establishments</td>
</tr>
<tr>
<td>Durations of Present Shifts (months)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td><strong>Total:</strong> 4</td>
<td>Mean months 17.5</td>
</tr>
<tr>
<td></td>
<td>Std.dev. (15.6)</td>
</tr>
</tbody>
</table>

Sample size of establishments = 12

TABLE 9.16 Duration of Twilight Shift Working (by Establishment Response)
<table>
<thead>
<tr>
<th>Female Workgroup</th>
<th>No. Variation</th>
<th>Annual Variation</th>
<th>Seasonal Variation</th>
<th>Weekly Variation</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td><strong>Full and Part-timers (Dw)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number and % of establishments</td>
<td>12</td>
<td>50</td>
<td>3</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Number and % of workers</td>
<td>296</td>
<td>28</td>
<td>126</td>
<td>12</td>
<td>620</td>
</tr>
<tr>
<td><strong>Twilight Workers (Tw)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number and % of establishments</td>
<td>1</td>
<td>20</td>
<td>1</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Number and % of workers</td>
<td>3</td>
<td>22</td>
<td>2</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td><strong>Homeworkers (Hw)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number and % of establishments</td>
<td>3</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Number and % of workers</td>
<td>29*</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
</tbody>
</table>

* Engaged on operations not being performed inside their factories

**TABLE 9.17 Variability in the Amounts of Work Supplied**
(by establishment response and worker numbers)
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Dw n=24</th>
<th></th>
<th>Tw n=5</th>
<th></th>
<th>Hw n=24</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Same as EPCA</td>
<td>15</td>
<td>62</td>
<td>.5</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More than EPCA</td>
<td>5</td>
<td>21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot;Don't know, never occurred&quot;</td>
<td>4</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>EPCA does not apply</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>86</td>
</tr>
<tr>
<td>Assigned rank order</td>
<td>-1</td>
<td></td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 9.18 Dismissal Procedures (by Establishment Response)
<table>
<thead>
<tr>
<th>Method of Calculation</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall percentage</td>
<td>47.8%</td>
<td>40.3%</td>
<td>1.2%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Rank order</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**Assigned ranks**

Mean assigned rank

<table>
<thead>
<tr>
<th></th>
<th>1.80</th>
<th>1.76</th>
<th>3.44</th>
<th>2.48</th>
</tr>
</thead>
</table>

Standard deviation

<table>
<thead>
<tr>
<th></th>
<th>0.76</th>
<th>0.66</th>
<th>0.58</th>
<th>0.96</th>
</tr>
</thead>
</table>

Rank order

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>1</th>
<th>4</th>
<th>3</th>
</tr>
</thead>
</table>

**TABLE 9.19 Rank Order of Implied Preference Based on Numbers Employed**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of training</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Amount of training investment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Redundancy levels</td>
<td>=1</td>
<td>=1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Redundancy procedure</td>
<td>1</td>
<td>2</td>
<td>=4</td>
<td>=4</td>
</tr>
<tr>
<td>Allocation of work</td>
<td>=1</td>
<td>=1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Dismissal procedure</td>
<td>=1</td>
<td>=1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Transport provision</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Workers employed: overall %</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Workers employed: ranked %</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Mean implied rank

<table>
<thead>
<tr>
<th></th>
<th>1.22</th>
<th>1.78</th>
<th>3.44</th>
<th>3.33</th>
</tr>
</thead>
</table>

Standard deviation

<table>
<thead>
<tr>
<th></th>
<th>0.44</th>
<th>0.83</th>
<th>0.73</th>
<th>1.00</th>
</tr>
</thead>
</table>

Overall rank order of implied group preference

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>4</th>
<th>3</th>
</tr>
</thead>
</table>

**TABLE 9.20 Rank Order of Group Preference Implied by Employer Actions**

IV - 46
<table>
<thead>
<tr>
<th></th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample size</strong></td>
<td>22</td>
<td>24</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>&quot;DK&quot; or &quot;not comparable&quot; or missing responses</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>No. of ranks assigned</td>
<td>20</td>
<td>21</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Mean of assigned ranks</td>
<td>1.45</td>
<td>1.29</td>
<td>1.33</td>
<td>2.33</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.69</td>
<td>0.46</td>
<td>0.82</td>
<td>1.32</td>
</tr>
<tr>
<td>Rank order</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

**TABLE 9.21 Relative Productivity**

<table>
<thead>
<tr>
<th></th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample size</strong></td>
<td>22</td>
<td>24</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>&quot;DK&quot;, &quot;not comparable&quot; or missing responses</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>No. of ranks assigned</td>
<td>17</td>
<td>18</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Mean of assigned ranks</td>
<td>1.35</td>
<td>1.17</td>
<td>1.80</td>
<td>1.69</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.86</td>
<td>0.38</td>
<td>1.10</td>
<td>1.11</td>
</tr>
<tr>
<td>Rank order</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**TABLE 9.22 Relative Competence**

<table>
<thead>
<tr>
<th></th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample size</strong></td>
<td>22</td>
<td>24</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>&quot;DK&quot;, &quot;not comparable&quot; or missing responses</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>No. of ranks assigned</td>
<td>20</td>
<td>21</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>Mean of assigned ranks</td>
<td>1.25</td>
<td>1.19</td>
<td>1.67</td>
<td>1.31</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.79</td>
<td>0.60</td>
<td>1.03</td>
<td>0.75</td>
</tr>
<tr>
<td>Rank order</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**TABLE 9.23 Relative Quality of Workmanship**

IV - 47
### Table 9.24 Absenteeism Rate of Full and Part Time Females (Dw)

<table>
<thead>
<tr>
<th>Sample sizes</th>
<th>% of</th>
<th>No. of</th>
<th>% of</th>
<th>No. of</th>
<th>% of</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never refuses or adjusts</td>
<td>13</td>
<td>59.1</td>
<td>77</td>
<td>55.4</td>
<td></td>
</tr>
<tr>
<td>Never refuses but occasionally reduces volume of work</td>
<td>3</td>
<td>13.6</td>
<td>8</td>
<td>5.8</td>
<td></td>
</tr>
<tr>
<td>Rare refusal or adjustment</td>
<td>3</td>
<td>13.6</td>
<td>25</td>
<td>18.0</td>
<td></td>
</tr>
<tr>
<td>Frequent refusal or late return</td>
<td>2</td>
<td>9.1</td>
<td>23</td>
<td>16.5</td>
<td></td>
</tr>
<tr>
<td>Don't know</td>
<td>1</td>
<td>4.5</td>
<td>6</td>
<td>4.3</td>
<td></td>
</tr>
</tbody>
</table>

### Table 9.25 Homeworkers' Refusal of Work

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;DK&quot;, or &quot;not comparable&quot; or missing responses</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>No. of assigned ranks</td>
<td>21</td>
<td>22</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Mean of assigned ranks</td>
<td>1.67</td>
<td>1.91</td>
<td>2.00</td>
<td>1.33</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.91</td>
<td>0.81</td>
<td>1.41</td>
<td>0.72</td>
</tr>
<tr>
<td>Rank order</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table 9.26 Relative Absenteeism

IV - 48
### TABLE 9.27 Relative Reliability

<table>
<thead>
<tr>
<th></th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size</td>
<td>22</td>
<td>24</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>&quot;DK&quot;, &quot;not comparable&quot; or missing responses</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>No. of assigned ranks</td>
<td>18</td>
<td>20</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Mean of assigned ranks</td>
<td>1.06</td>
<td>1.20</td>
<td>2.67</td>
<td>2.24</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.23</td>
<td>0.52</td>
<td>1.03</td>
<td>1.15</td>
</tr>
<tr>
<td>Rank order</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

### TABLE 9.28 Voluntary Turnover Rates

<table>
<thead>
<tr>
<th></th>
<th>Dw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size</td>
<td>24</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>DK responses</td>
<td>6</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>No. of responses</td>
<td>18</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Mean rate (% pa)</td>
<td>21.26</td>
<td>16.70</td>
<td>9.86</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>23.02</td>
<td>0.00</td>
<td>14.42</td>
</tr>
<tr>
<td>Rank order</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

### TABLE 9.29 Relative Voluntary Turnover

<table>
<thead>
<tr>
<th></th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full sample size</td>
<td>22</td>
<td>24</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Blank or DK responses</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>No. of assigned ranks</td>
<td>17</td>
<td>19</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Mean of assigned ranks</td>
<td>1.76</td>
<td>1.42</td>
<td>2.00</td>
<td>1.36</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.90</td>
<td>0.69</td>
<td>1.29</td>
<td>0.81</td>
</tr>
<tr>
<td>Rank order</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

IV - 49
<table>
<thead>
<tr>
<th>Sample Size</th>
<th>Dw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>Total Duration</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>24</td>
<td>4½ weeks</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>2 days</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>15 hours</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>7</td>
<td>21</td>
</tr>
</tbody>
</table>

**TABLE 9.30** The Incidence of Disputes over a 12-month Period (by establishment response)

<table>
<thead>
<tr>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size</td>
<td>22</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Missing responses</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Mean of assigned ranks</td>
<td>1.58</td>
<td>1.58</td>
<td>1.00</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.72</td>
<td>0.72</td>
<td>0.00</td>
</tr>
<tr>
<td>Rank order</td>
<td>=3</td>
<td>=3</td>
<td>=1</td>
</tr>
</tbody>
</table>

**TABLE 9.31** Relative Quiescence

<table>
<thead>
<tr>
<th>Measure</th>
<th>No. of Establishments</th>
<th>No. of Homeworkers</th>
<th>No. of DP Workers</th>
<th>Mean Size of Establishment</th>
<th>Std. Dev.</th>
<th>% of Hw in DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Negotiations (often successful)</td>
<td>7</td>
<td>41.4</td>
<td>121</td>
<td>17.3</td>
<td>8.36</td>
<td>33.9</td>
</tr>
<tr>
<td>Complaints (usually fail)</td>
<td>6</td>
<td>44</td>
<td>633</td>
<td>105.5</td>
<td>80.61</td>
<td>7.0</td>
</tr>
<tr>
<td>No measures</td>
<td>6</td>
<td>29</td>
<td>363</td>
<td>51.5</td>
<td>32.02</td>
<td>8.0</td>
</tr>
<tr>
<td>TOTALS:</td>
<td>19</td>
<td>114</td>
<td>1117</td>
<td>58.8</td>
<td>58.65</td>
<td>10.2</td>
</tr>
</tbody>
</table>

**TABLE 9.32** Homeworkers' Measures to Influence their Work Situation
<table>
<thead>
<tr>
<th></th>
<th>Sm</th>
<th>Fm + Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Estblmnts.</td>
<td>11</td>
<td>40</td>
<td>22</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>Number of Hours</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>0 to less than 10</td>
</tr>
<tr>
<td>1</td>
<td>24</td>
<td>1</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>25</td>
<td>3</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>28</td>
<td>1</td>
<td>22.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Hours</td>
<td>40</td>
<td>40</td>
<td>29.7</td>
<td>17.1</td>
<td>20.0*</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0</td>
<td>0</td>
<td>2.76</td>
<td>3.05</td>
<td>8.57*</td>
</tr>
<tr>
<td>Rank Order</td>
<td>=1</td>
<td>=1</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

* Calculated from the actual figures supplied; not the midpoints of each range.

TABLE 9.33 Mean Hours per Basic Week
<table>
<thead>
<tr>
<th>Incidence</th>
<th>Sm</th>
<th>Fm (knitters)</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of Estblmts</td>
<td>Mean hrs (Std dev)</td>
<td>No. of Estblmts</td>
<td>Mean hrs (Std dev)</td>
<td>No. of Estblmts</td>
<td>Mean hrs (Std dev)</td>
</tr>
<tr>
<td>Regular basis</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>7.4 (2.8)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Seasonally, or under pressure</td>
<td>5</td>
<td>3.7 (1.8)</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>2.68 (1.21)</td>
</tr>
<tr>
<td>Very limited overtime</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>No overtime</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Missing</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sample size</td>
<td>11</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>22</td>
<td>-</td>
</tr>
</tbody>
</table>

TABLE 9.34 Incidence of Overtime (by Establishment Response)
<table>
<thead>
<tr>
<th>Performance Dimension</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Competence</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Quality of Work</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Reliability</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Voluntary Turnover</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Disputes</td>
<td>=3</td>
<td>=3</td>
<td>=1</td>
<td>=1</td>
</tr>
<tr>
<td>Hours Worked</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Mean Overall</td>
<td>2.13</td>
<td>1.88</td>
<td>3.38</td>
<td>2.38</td>
</tr>
<tr>
<td>Performance Rank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.83</td>
<td>0.83</td>
<td>1.19</td>
<td>1.19</td>
</tr>
<tr>
<td>Performance Rank Order</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**TABLE 9.35** Overall Performance Ranks

<table>
<thead>
<tr>
<th></th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost implication</td>
<td>=4</td>
<td>=4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Stated preference</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Preference implied by actions</td>
<td>1</td>
<td>2</td>
<td>=3</td>
<td>=3</td>
</tr>
<tr>
<td>Performance ranking</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Overall order of preference</td>
<td>2.00</td>
<td>2.25</td>
<td>3.25</td>
<td>2.50</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>1.41</td>
<td>1.26</td>
<td>0.96</td>
<td>1.00</td>
</tr>
<tr>
<td>Overall Rank Order</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**TABLE 9.36** The Order of Preference
<table>
<thead>
<tr>
<th>Performance Dimension</th>
<th>Number of Volunteered Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity</td>
<td>5</td>
</tr>
<tr>
<td>Reliability</td>
<td>5</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>4</td>
</tr>
<tr>
<td>Voluntary Turnover</td>
<td>3</td>
</tr>
<tr>
<td>Spoilage of Work</td>
<td>1</td>
</tr>
<tr>
<td>Total Number of Observations</td>
<td>18</td>
</tr>
<tr>
<td>Number of respondents volunteering observations</td>
<td>12</td>
</tr>
<tr>
<td>Sample size of respondents</td>
<td>25</td>
</tr>
</tbody>
</table>

TABLE 10.1 Observations of Young Workers' Inferior Performances
### TABLE 11.1 Unionised and Non-unionised Establishments

<table>
<thead>
<tr>
<th></th>
<th>Establishments</th>
<th>DP Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Unionised Establishments</td>
<td>14</td>
<td>56</td>
</tr>
<tr>
<td>Average workforce size (Standard deviation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-unionised Establishments</td>
<td>11</td>
<td>44</td>
</tr>
<tr>
<td>Average workforce size (Standard deviation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals:</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

* 3 working proprietors have been excluded from the sample of workers

### TABLE 11.2 Establishment Affiliation to an Employers' Association

<table>
<thead>
<tr>
<th></th>
<th>Establishment</th>
<th>DP Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Affiliated establishment</td>
<td>18</td>
<td>72</td>
</tr>
<tr>
<td>Non-affiliated establishement</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>Affiliation unknown</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Totals:</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

* 3 working proprietors have been excluded from the sample of workers
<table>
<thead>
<tr>
<th>Effect unknown</th>
<th>No. of Establishments</th>
<th>No. of Factory Workers</th>
<th>No. of Home-Workers</th>
<th>Total Workers</th>
<th>% of Work-force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precedent followed but less occasionally awarded</td>
<td>2</td>
<td>20</td>
<td>21</td>
<td>41</td>
<td>20.9</td>
</tr>
<tr>
<td>Agreement adhered to exactly</td>
<td>5</td>
<td>61</td>
<td>13</td>
<td>74</td>
<td>37.8</td>
</tr>
<tr>
<td>Agreement adhered to, more occasionally awarded</td>
<td>3</td>
<td>24</td>
<td>34</td>
<td>58</td>
<td>29.6</td>
</tr>
<tr>
<td>Totals</td>
<td>11</td>
<td>124</td>
<td>72</td>
<td>196</td>
<td>100</td>
</tr>
<tr>
<td>% of the DP worker sample</td>
<td>100</td>
<td>36.7</td>
<td>63.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 11.3** The Impact of the National Pay Agreement on the Non-unionised Sector

<table>
<thead>
<tr>
<th></th>
<th>No. of Homeworkers n=139</th>
<th>% of Homeworkers</th>
<th>% of the Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unionised Establishments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not comparable</td>
<td>17</td>
<td>12.2</td>
<td>26.6</td>
</tr>
<tr>
<td>Same rates</td>
<td>22</td>
<td>15.8</td>
<td>34.4</td>
</tr>
<tr>
<td>Below factory rates</td>
<td>25</td>
<td>18.0</td>
<td>39.0</td>
</tr>
<tr>
<td>Totals:</td>
<td>64</td>
<td>46.0</td>
<td>100</td>
</tr>
<tr>
<td>Non-union Establishments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not comparable</td>
<td>38</td>
<td>27.3</td>
<td>50.7</td>
</tr>
<tr>
<td>Same rates</td>
<td>27</td>
<td>19.5</td>
<td>36.0</td>
</tr>
<tr>
<td>Below factory rates</td>
<td>10</td>
<td>7.2</td>
<td>13.3</td>
</tr>
<tr>
<td>Totals:</td>
<td>75</td>
<td>54.0</td>
<td>100</td>
</tr>
</tbody>
</table>

**TABLE 11.4** Comparability of Homeworkers' Rates with Factory Rates in Unionised and Non-unionised Establishments
<table>
<thead>
<tr>
<th></th>
<th>All Males</th>
<th>Fw</th>
<th>%</th>
<th>Pw</th>
<th>%</th>
<th>Tw</th>
<th>%</th>
<th>Hw</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unionised Establish-</td>
<td>319 92.2</td>
<td>534 94.5</td>
<td>413 86.6</td>
<td>12 85.7</td>
<td>55 43.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average workgroup</td>
<td>22.9</td>
<td>38.1</td>
<td>29.5</td>
<td>3.0</td>
<td>6.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>size (Std. dev)</td>
<td>(22.9)</td>
<td>(29.74)</td>
<td>(17.85)</td>
<td>(0.82)</td>
<td>(4.37)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-unionised</td>
<td>27* 7.8</td>
<td>31 5.5</td>
<td>64 13.4</td>
<td>2 14.3</td>
<td>72 56.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establishments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average workgroup</td>
<td>3.3</td>
<td>3.9</td>
<td>6.4</td>
<td>2.0</td>
<td>9.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>size (Std. dev)</td>
<td>(1.41)</td>
<td>(2.64)</td>
<td>(4.25)</td>
<td>(0.0)</td>
<td>(5.98)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals:</td>
<td>346* 100</td>
<td>565 100</td>
<td>477 100</td>
<td>14 100</td>
<td>127 100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 3 working proprietors have been excluded from the sample of workers

TABLE 11.5 Group Employment in Unionised and Non-unionised Establishments
### Table 11.6 Employers' Affiliation Versus Trade Union Recognition

<table>
<thead>
<tr>
<th>Employers' Associations</th>
<th>Trade Union</th>
<th>Establishments</th>
<th>Workers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>14</td>
<td>56.0</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>16.0</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>6</td>
<td>24.0</td>
</tr>
<tr>
<td>DK</td>
<td>No</td>
<td>1</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td></td>
<td>25</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**TABLE 11.6 Employers' Affiliation Versus Trade Union Recognition**

<table>
<thead>
<tr>
<th>Rank order of Female Groups</th>
<th>All Males No.</th>
<th>Fw No.</th>
<th>Pw No.</th>
<th>Tw No.</th>
<th>Hw No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Trade Union Members</td>
<td>262</td>
<td>75.5</td>
<td>431</td>
<td>76.3</td>
<td>350</td>
</tr>
<tr>
<td>Non-Trade Union Members</td>
<td>80</td>
<td>23.1</td>
<td>110</td>
<td>19.5</td>
<td>121</td>
</tr>
<tr>
<td>Membership Unknown</td>
<td>5</td>
<td>1.4</td>
<td>24</td>
<td>4.2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td>347</td>
<td>100</td>
<td>565</td>
<td>100</td>
<td>477</td>
</tr>
</tbody>
</table>

**TABLE 11.7 Levels of Trade Union Membership**
<table>
<thead>
<tr>
<th>Condition of Service</th>
<th>No. of Est'mts</th>
<th>Rating of the Impact of the Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>Earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pay rates</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Shift premia</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Overtime premium</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dismissals</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Redundancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selection for redundancy</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Redundancy pay</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Holidays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holiday times</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Holiday pay</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>School holiday scheme</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recruitment</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Contract of Employment</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Job Allocation</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total Ratings</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

Sample size = 14 unionised establishments

TABLE 11.8 The Impact of Workplace Collective Bargaining

<table>
<thead>
<tr>
<th>Sample size</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Don't know responses</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Valid responses</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Mean of assigned ranks</td>
<td>3.12</td>
<td>3.0</td>
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<td>1.38</td>
</tr>
<tr>
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<td>0.35</td>
<td>0.0</td>
<td>0.53</td>
<td>0.52</td>
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<tr>
<td>Rank order for redundancy</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Assessed power position</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

TABLE 11.9 Employer Perceptions of Local Trade Union Redundancy Strategy

IV - 59
The provision does not apply to:

1. Anyone who is not an employee
2. Employees working 16 hours or more with fewer than 4 weeks c.r.e.
3. Employees working 16 hours or more with fewer than 26 weeks c.r.e.
4. Employees working 16 hours or more with fewer than 104 weeks c.r.e.
5. Employees working between 8 to 16 hours with less than 5 years c.r.e.
6. Employees on fixed term contracts
7. Employees on fixed term contracts of 12 weeks or less
8. Employees on fixed term contracts who have waived the right to the provision
9. Employees over 60 years (women) 65 years (men)
10. Employees whose c.r.e. ends on or after the 60th birthday (women), 65th birthday (men)
11. Employees below the age of 18
12. Employees not under contract of employment up to the 11th week prior to expected confinement

<p>| Provisions of the EP(C)A, 1978 (provision code numbers as on page 2-22) |
|--------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|</p>
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7a</th>
<th>7b</th>
<th>7c</th>
<th>7d</th>
<th>8a</th>
<th>8b</th>
<th>8c</th>
<th>9a</th>
<th>9b</th>
<th>9c</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anyone who is not an employee</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2. Employees working 16 hours or more with fewer than 4 weeks c.r.e.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3. Employees working 16 hours or more with fewer than 26 weeks c.r.e.</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4. Employees working 16 hours or more with fewer than 104 weeks c.r.e.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>5. Employees working between 8 to 16 hours with less than 5 years c.r.e.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6. Employees on fixed term contracts</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>7. Employees on fixed term contracts of 12 weeks or less</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>8. Employees on fixed term contracts who have waived the right to the provision</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>9. Employees over 60 years (women) 65 years (men)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>10. Employees whose c.r.e. ends on or after the 60th birthday (women), 65th birthday (men)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>11. Employees below the age of 18</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>12. Employees not under contract of employment up to the 11th week prior to expected confinement</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

TABLE 11.10 Exclusions Clauses for Entitlement to the Provisions of the Employment Protection (Consolidation) Act, 1978
## TABLE 11.11 The Overall Power Structure

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>Fw</th>
<th>Pw</th>
<th>Tw</th>
<th>Hw</th>
</tr>
</thead>
<tbody>
<tr>
<td>National activity</td>
<td>=1</td>
<td>=1</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Local activity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Choice</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Legislation</td>
<td>=1</td>
<td>=1</td>
<td>=1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Mean bargaining rank</td>
<td>1.00</td>
<td>1.50</td>
<td>2.50</td>
<td>4.25</td>
<td>4.75</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.00</td>
<td>0.58</td>
<td>1.00</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Overall power ranking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
### TABLE 14.1: MALE AND FEMALE FULL-TIME AND LESS-THAN-FULL-TIME OUTPUTS AND PAY RATES

#### OUTPUT (batches)

<table>
<thead>
<tr>
<th></th>
<th>Fm</th>
<th>Dw</th>
<th>Hw</th>
<th>Tw + NHw at 0.5 Fw</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10% Faster Than Median</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>825.00</td>
<td>105.60</td>
<td>660.00</td>
<td>52.80</td>
</tr>
<tr>
<td>Daily</td>
<td>165.00</td>
<td>21.12</td>
<td>132.00</td>
<td>10.56</td>
</tr>
<tr>
<td>Hourly</td>
<td>20.62</td>
<td>2.64</td>
<td>16.50</td>
<td>1.32</td>
</tr>
<tr>
<td><strong>Median Pace</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>750.00</td>
<td>96.00</td>
<td>600.00</td>
<td>48.00</td>
</tr>
<tr>
<td>Daily</td>
<td>150.00</td>
<td>19.20</td>
<td>120.00</td>
<td>9.60</td>
</tr>
<tr>
<td>Hourly</td>
<td>18.75</td>
<td>2.40</td>
<td>15.00</td>
<td>1.20</td>
</tr>
<tr>
<td><strong>10% Slower than Median</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>675.00</td>
<td>86.40</td>
<td>540.00</td>
<td>43.20</td>
</tr>
<tr>
<td>Daily</td>
<td>135.00</td>
<td>17.28</td>
<td>108.00</td>
<td>8.64</td>
</tr>
<tr>
<td>Hourly</td>
<td>16.90</td>
<td>2.16</td>
<td>13.50</td>
<td>1.08</td>
</tr>
<tr>
<td><strong>Short-time Outputs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 day</td>
<td>540.00</td>
<td>69.12</td>
<td>432.00</td>
<td>34.55</td>
</tr>
<tr>
<td>2 days</td>
<td>405.00</td>
<td>51.84</td>
<td>324.00</td>
<td>25.90</td>
</tr>
<tr>
<td>3 days</td>
<td>270.00</td>
<td>34.56</td>
<td>216.00</td>
<td>17.28</td>
</tr>
<tr>
<td>4 days</td>
<td>135.00</td>
<td>17.28</td>
<td>108.00</td>
<td>8.64</td>
</tr>
</tbody>
</table>

#### PAY RATES

**Time Rates**

Fm = £78.00 per 40 hour week = £1.95 per hour

**Overtime and Short-time Rates**

Short-time: £0.90 per hour  
Overtime: £0.36 per hour

**Piece-Rates**

\[
Dw = \frac{62.5 \text{ Fw equi.} \times \text{£60.0}}{6000 \text{ batches per week}} = \text{£0.625 per batch; i.e. 1.6 batches per £1}
\]

\[
Hw \text{ exclv.} = \frac{10 \times \text{£20}}{6000} = \text{£0.0333 per batch; i.e. 30 batches per £1}
\]

(The above values were calculated using data from Part B and assumptions contained within Section 14.1)
### TABLE 14.2: SHIFT WORKER PAY RATES AND OUTPUTS WHEN OPERATING VARYING NUMBERS OF MACHINES

<table>
<thead>
<tr>
<th>No. of Machines</th>
<th>12</th>
<th>15</th>
<th>18</th>
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</thead>
<tbody>
<tr>
<td><strong>10% Faster than Median</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>352.0</td>
<td>440.0</td>
<td>528.0</td>
</tr>
<tr>
<td>Daily</td>
<td>70.4</td>
<td>88.0</td>
<td>105.6</td>
</tr>
<tr>
<td>Hourly</td>
<td>8.8</td>
<td>11.0</td>
<td>13.2</td>
</tr>
<tr>
<td><strong>Median Pace</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>320.0</td>
<td>400.0</td>
<td>480.0</td>
</tr>
<tr>
<td>Daily</td>
<td>64.0</td>
<td>80.0</td>
<td>96.0</td>
</tr>
<tr>
<td>Hourly</td>
<td>8.0</td>
<td>10.0</td>
<td>12.0</td>
</tr>
<tr>
<td><strong>10% Slower than Median</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>288.0</td>
<td>360.0</td>
<td>432.0</td>
</tr>
<tr>
<td>Daily</td>
<td>57.6</td>
<td>72.0</td>
<td>86.4</td>
</tr>
<tr>
<td>Hourly</td>
<td>7.2</td>
<td>9.0</td>
<td>10.8</td>
</tr>
<tr>
<td><strong>Short-time Outputs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 day</td>
<td>230.4</td>
<td>288.0</td>
<td>345.6</td>
</tr>
<tr>
<td>2 days</td>
<td>172.8</td>
<td>216.0</td>
<td>259.2</td>
</tr>
<tr>
<td>3 days</td>
<td>115.2</td>
<td>144.0</td>
<td>172.8</td>
</tr>
<tr>
<td>4 days</td>
<td>57.6</td>
<td>72.0</td>
<td>86.4</td>
</tr>
</tbody>
</table>

**Piece-Rates**

15 Sm x £100 = £0.25 per batch; i.e. 4 batches per £1

When reduced to a single shift:

15 Sm x £81.60 = £0.204 per batch; i.e. 4.9 batches per £1

**Short-time and Overtime Rates and Shift Premium**

- Short-time: £1.20 per hour
- Overtime: £0.36 per hour
- Shift premium: £0.46 per hour

(The above values were calculated using data from Part B and assumptions contained within Section 14.1)
APPENDIX V

ILLUSTRATIONS
Figure 1.1 Location of the Surveyed Local Labour Market
Figure 2:1 Possible Relationships Between Skill Level and Established/Unestablished Status
(Source: Beardsworth et al. 200)

Figure 2:2 An Example of Adjustment to Shortage
(Source: Thomas and Deaton 196)

Figure 2:3 The Elimination of Shortage
(Source: Thomas and Deaton 196)
Figure 2:4 Employees in Employment: GB
(Seasonally adjusted - supplementary series)

(Sources: Department of Employment and Manpower Services Commission 254)
Figure 2:5 Unemployment: Great Britain
(Seasonally adjusted, excluding school leavers)
(Sources: Department of Employment and Manpower Services Commission254)

Figure 2:6 Employees in Employment: Great Britain
(Seasonally adjusted)
(Source: Department of Employment and Manpower Services Commission254)
<table>
<thead>
<tr>
<th>Industry</th>
<th>1975</th>
<th>1981</th>
<th>Change (%)</th>
<th>1975-81</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry, Fishing</td>
<td>13.4</td>
<td>17.7</td>
<td>+4.3</td>
<td></td>
</tr>
<tr>
<td>Mining and Quarrying</td>
<td>4.7</td>
<td>4.6</td>
<td>-0.1</td>
<td></td>
</tr>
<tr>
<td>Food, Drink and Tobacco</td>
<td>39.3</td>
<td>38.7</td>
<td>-0.8</td>
<td></td>
</tr>
<tr>
<td>Coal and Petroleum Products</td>
<td>16.7</td>
<td>10.5</td>
<td>-6.2</td>
<td></td>
</tr>
<tr>
<td>Chemicals and Allied Industries</td>
<td>26.7</td>
<td>26.4</td>
<td>-0.3</td>
<td></td>
</tr>
<tr>
<td>Metal Manufacture</td>
<td>11.2</td>
<td>12.0</td>
<td>+0.8</td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>15.1</td>
<td>15.5</td>
<td>+0.4</td>
<td></td>
</tr>
<tr>
<td>Instrument Engineering</td>
<td>38.6</td>
<td>34.0</td>
<td>-4.6</td>
<td></td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>36.2</td>
<td>33.2</td>
<td>-3.0</td>
<td></td>
</tr>
<tr>
<td>Shipbuilding and Marine Engineering</td>
<td>6.2</td>
<td>8.9</td>
<td>+2.7</td>
<td></td>
</tr>
<tr>
<td>Vehicles</td>
<td>11.2</td>
<td>11.4</td>
<td>-0.2</td>
<td></td>
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<tr>
<td>Metal Goods not elsewhere specified</td>
<td>27.6</td>
<td>24.6</td>
<td>-3.0</td>
<td></td>
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<tr>
<td>Textiles</td>
<td>43.5</td>
<td>44.6</td>
<td>+1.1</td>
<td></td>
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<tr>
<td>Leather, Leather Goods and Fur</td>
<td>47.0</td>
<td>39.5</td>
<td>-7.5</td>
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</tr>
<tr>
<td>Clothing and Footwear</td>
<td>74.9</td>
<td>74.0</td>
<td>-0.9</td>
<td></td>
</tr>
<tr>
<td>Bricks, Pottery, Glass, Cement etc</td>
<td>24.6</td>
<td>23.6</td>
<td>-1.0</td>
<td></td>
</tr>
<tr>
<td>Timber, Furniture etc</td>
<td>18.4</td>
<td>18.9</td>
<td>+0.5</td>
<td></td>
</tr>
<tr>
<td>Paper, Printing and Publishing</td>
<td>32.3</td>
<td>30.6</td>
<td>-1.7</td>
<td></td>
</tr>
<tr>
<td>Other Manufacturing Industries</td>
<td>35.1</td>
<td>32.7</td>
<td>-2.4</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>6.6</td>
<td>8.1</td>
<td>+1.3</td>
<td></td>
</tr>
<tr>
<td>Gas, Electricity and Water</td>
<td>19.9</td>
<td>20.6</td>
<td>+0.7</td>
<td></td>
</tr>
<tr>
<td>Transport and Communication</td>
<td>17.5</td>
<td>19.3</td>
<td>+1.8</td>
<td></td>
</tr>
<tr>
<td>Distributive Trades</td>
<td>53.2</td>
<td>52.8</td>
<td>-0.4</td>
<td></td>
</tr>
<tr>
<td>Insurance, Banking, Finance and Business Services</td>
<td>48.0</td>
<td>50.7</td>
<td>+2.7</td>
<td></td>
</tr>
<tr>
<td>Professional and Scientific Services</td>
<td>64.8</td>
<td>68.6</td>
<td>+3.8</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Services</td>
<td>51.6</td>
<td>53.4</td>
<td>+1.8</td>
<td></td>
</tr>
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<td>Public Administration</td>
<td>37.2</td>
<td>42.0</td>
<td>+4.8</td>
<td></td>
</tr>
<tr>
<td>All Industries, Total</td>
<td>36.2</td>
<td>39.9</td>
<td>+3.7</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2:7 Women as a Percentage of Industrial Labour Force, Great Britain 1975 and 1981

(Sources: Department of Employment, New Earnings Survey 1975, 1981; Part E. Table 135 and Trades Union Congress)
Figure 2:8 Lower Paid Groups where Women Predominate
(Source: Trades Union Congress)
Figure 3.1 Location of the British Footwear Manufacturing Industry
Figure 4:1 Profile of the Establishment Sample
Figure 4.2 Schematic Representation of the Complete Direct Production Workforce in the Interviewed Establishments
Figure 4.3 Open Box Chart, as Used During Interviews, Displaying the Composition of the Aggregate DP Workforce
Figure 4:4 Work Patterns (Horizontally) and Relative Size (Vertically) of Groups
Figure 5.1 Cumulative Percentage Distribution of Workers Residing Within Specified Distances from Factory
Figure 5:2 The Stated Supply of Potential Workers (by Establishment Response)

*sk indicates responses for specified skilled operations only
Figure 5:3 Cumulative Percentage Distribution of Full-time Females (Fw) Travelling Specified Distances in Relation to Transport Provision

Key:
- A - Free Private Bus
- B - No Private Transport (all other companies)
- C - No Private Transport (companies of similar size to A)
Figure 5:4 The Effects of Relaxations of Hiring Standards on Female Labour Supply, Within Catchment Areas
Figure 6.1: Age Compositions of the Female Workforce Groups
Figure 7:1 The Relative Importance of Formal and Informal Channels of Workgroup Recruitment
Figure 11:1 Percentage of Each Workgroup Employed by Unionised and Non-Unionised Companies
Figure 11:2 Diagrammatic Representation of the Power Structure Emanating from Workplace Bargaining
Figure 12:1  
Circularity in the Process of Male/Female Segmentation in the Hosiery and Knitwear Labour Market  
(As at 1980)
Figure 12:2 A Model of Access to Female Skilled Jobs Showing the Influence of Over-supply, Supervision, and Shortage of Specific Skills
<table>
<thead>
<tr>
<th>MALE</th>
<th>FEMALE</th>
</tr>
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</table>
| 1. Mechanics;  
   Shift supervisors | |
| 2. Shift working  
   knitters | |
| 3. Skilled full-time day workers (reason 1); supervisors | |
| 4. Semi-skilled full-time day workers (reason 2); bar-loaders | |
| 5. Skilled full-time day workers; supervisors | |
| 6. Part-time day workers (reason 2) | |
| 7. Full-time workers on 'women's' jobs | |
| 8. Part-time workers on 'women's' jobs | |
| 9. Skilled twilight workers (reasons 4 and 5) | |
| 10. Skilled home workers (reasons 4 and 4) | |
| 11. Twilight workers (reason 3) | |
| 12. Homeworkers (reason 3) | |

Figure 12:3 Stratification of the Hosiery and Knitwear Labour Market
Figure 12:4 Choice of Work Pattern for Capital Equipment
Figure 12.5 Output Flexibilities Assuming Differently Productive Operations and Heterogeneous Labour Inputs
STRATEGY ONE

limit the degree of variation in business activity
by variations in:
(A) product stocks; (B) the product range.

STRATEGY TWO

vary labour input from a fixed number of established workers
by variations in:
(C) payment systems; (D) length of basic work-week;
(E) short-time working; (F) overtime working;
(G) workgroup switching; (H) average hours worked;
(I) worker redeployment; (J) time-off;
(K) machine/worker ratio; (L) subcontracting to homeworkers.

STRATEGY THREE

vary the number of workers, without changing hiring standards
by variations in:
(N) shift-work patterns; (O) voluntary turnover;
(P) replacement recruitment; (Q) redundancies;
(R) additional recruitment of preferred labour.

STRATEGY FOUR

vary hiring standards to modify labour supply
by modification of stipulations relating to a recruit's:
(S) skill/experience; (T) personal attributes;
(U) weekly hours; (V) work times;
(W) place of work.

STRATEGY FIVE

vary workers' earning potential to modify labour supply
by variations in:
(X) basic pay rates; (Y) premia and bonuses;
(Z) fringe benefits.

Figure 13:1 The Range of Possible Adjustment Instruments
Figure 13:2 Impacts of Different Payment Schemes on (a) Weekly Earnings and (b) Unit Price

(a) Impact on Weekly Earnings

(b) Impact on Unit Price
Figure 13:3 A Sequence of Adjustments for a Widely Varying Business Cycle
Figure 13:4 The Use of Marginal Labour by Firms with Different Product Market Trends
Figure 13:5 Labour Demand of Service Industries
Figure 14.1 Employment Schedules (Worked Example)
Figure 14.2: Income Schedules (Worked Example)
Figure 15.1 A Labour Market Paradigm (The Supply of, and Demand for, Labour in a L.L.M.)
Figure 16:1 Implicit Contracts of the Hosiery and Knitwear Industries
Full Sample of Direct Production Workers (DP)

Segments (all men and all women)

Components (in-factory and out-of-factory)

Core and Secondary Elements

Work Groups

Sub-groups or cohorts (e.g. workers recruited by advertising)

Categories (e.g. retirement-age or ethnic minority workers)

Figure II:1  Schematic Representation of the Terminology
(by diminishing size)
Figure II:2 Composition of the Aggregate Direct Production Workforce Within 25 Establishments
Figure III:1 Schematic Representation of the Segments, Components, and Groups (with non-existent groups encircled)
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