

Loughborough University
Institutional Repository

*Principal considerations in
the use of community
partnered procurement for
sustainable urban
infrastructure*

This item was submitted to Loughborough University's Institutional Repository by the/an author.

Citation: SOHAIL, M. and BALDWIN, A.N., 2005. Principal considerations in the use of community partnered procurement for sustainable urban infrastructure. IN: Murakami, S. (ed.). Action for sustainability : SB05Tokyo proceedings [of] The World Sustainable Building Conference in Tokyo, September 27-29, pp. 4263-4270.

Additional Information:

- This is a conference paper.

Metadata Record: <https://dspace.lboro.ac.uk/2134/3968>

Publisher: SB05 Tokyo National Conference Board

Please cite the published version.

This item was submitted to Loughborough's Institutional Repository (<https://dspace.lboro.ac.uk/>) by the author and is made available under the following Creative Commons Licence conditions.



CC creative commons
COMMONS DEED


Attribution-NonCommercial-NoDerivs 2.5


You are free:

- to copy, distribute, display, and perform the work

Under the following conditions:

 **Attribution.** You must attribute the work in the manner specified by the author or licensor.


 **Noncommercial.** You may not use this work for commercial purposes.

 **No Derivative Works.** You may not alter, transform, or build upon this work.

- For any reuse or distribution, you must make clear to others the license terms of this work.
- Any of these conditions can be waived if you get permission from the copyright holder.

Your fair use and other rights are in no way affected by the above.

This is a human-readable summary of the [Legal Code \(the full license\)](#).

[Disclaimer](#) 

For the full text of this licence, please go to:
<http://creativecommons.org/licenses/by-nc-nd/2.5/>

TITLE: PRINCIPAL CONSIDERATIONS IN THE USE OF COMMUNITY PARTNERED PROCUREMENT FOR SUSTAINABLE URBAN INFRASTRUCTURE

Muhammad SOHAIL Ph.D.¹
Andrew N. BALDWIN Ph.D.²

- 1 WEDC International Development Centre, Department of Civil and Building Engineering, Loughborough University, United Kingdom, m.sohail@lboro.ac.uk
- 2 Department of Building and Real Estate, The Hong Kong Polytechnic University, Hom Hung, Hong Kong, bsanb@polyu.edu.hk

Keywords: Partnering, Procurement, Community, Local Infrastructure

Abstract

There is an increasing desire to involve the community in the procurement of infrastructure on the grounds of good governance and sustainability of urban services. One such emerging option to meet such demands is Community Partnered Procurement, (CPP), whereby community groups act as 'stakeholders' in the procurement process particularly with respect to 'micro contracts', contracts costing less than US\$20,000 and duration of less than one calendar year. This paper reviews the results from some 800 contracts of this nature and provides a framework to help the practitioner decide when to use this option or more importantly, when not to use it. Perceptions and experiences of technocrats and professionals concerning the existing capacity of the community to undertake work as contractor have a strong influence on the decision whether to use community as contractors. Similarly the perceptions and experiences of community about the complexity of the work involved can influence their decision whether to undertake such work. This paper provides an overview of CPP based on cases studies from countries in South Asia and East Africa. The results show that this type of procurement is not only viable but can achieve comparable performances in time, cost and quality and have wider socio-economic impacts such as income generation, empowerment and micro-enterprise development.

1. Introduction

Half of the world now lives in urban areas (UN 2001). The urban population in most developing countries is increasing extremely rapidly. Conventional approaches have proved inadequate to meet the demand for shelter and services created by this rapid urban growth and this has led to a proliferation of informal, unimproved slum and squatter settlements where the inhabitants generally experience high levels of unemployment and underemployment. The United Nations Center for Human Settlements, (UN, 1996), suggests that between 40 per cent and 50 per cent of the population in many cities live in such settlements. According to present trends, this is likely to increase. The ability of government to provide infrastructure is already far outstripped by the inexorable increase in demand, so that the poorest and most vulnerable will continue to suffer from the lack of services and work opportunities.

The driver for this research has been the increasing interest in promoting the participation of community groups in response to sustainable urban development to improve access to basic services at the household and neighborhood levels. There is a substantial body of work addressing the issues of community participation and empowerment, which identifies barriers to increased community participation and suggests ideas and techniques for tackling these problems. These include the many currently popular tools relating to participatory appraisals. Not all of these tools are well suited to small scale projects. The aim of the research was to provide new tools and techniques.

Based on the analysis of approximately 400 small scale conventional contract and 400 community contracts, interviews with key personnel and focus group discussions, this paper describes the types of works suitable for micro contracts procured under the community partnered procurement (CPP) of infrastructure

and the mechanisms that have been adopted in efforts to deliver improved services in partnership with community.

The paper should be read in conjunction with others by the authors including Sohail (1997) and Cotton, and Sohail & Tayler (1998) which looks in detail at the procedural barriers and Sohail and Baldwin (2001) which provides an introduction to the concept of community partnered procurement. The development of performance indicators for 'micro-projects' in developing countries is described by Sohail and Baldwin (2004) and issues relating to urban infrastructure procurement in low-income countries detailed by Sohail and Baldwin (2003).

2. Research Methodology

The research described in this paper took place over a six year period. First, a collection of background information was made through a comprehensive literature review. Whilst there was considerable information available on the procurement of construction work and the control of small, medium and large construction projects little material directly related to 'micro-projects'. The literature review was followed by interviews with people experienced with urban infrastructure procurement in low-income countries. Data were also collected via workshops and group meetings. In all some 125 single experts were interviewed and some thirty workshops and meetings took place. The typical experience brought to each meeting was a mean of 14.5 years per participant. The objective of both the interviews and the meetings was to elicit the key issues relating to successful 'micro-projects'. For the group sessions facilitators were used to identify issues and collate views.

From these meetings a total of 93 performance indicators were produced. The validation of these indicators was obtained from a different group of 200 independent officials. A revised list of 67 indicators was used on a trial basis on 25 'micro-projects' in India, Pakistan and Sri Lanka. Over a six year period the indicators were developed and tested and refined on a total of 400 small scale conventional contracts and 400 community contracts. From these general considerations on the suitability of CPP for use on 'micro-projects' have been produced. These are described in this paper.

3. Infrastructure Procurement

Procurement is the process of buying the goods, works or services, which in our case comprises the infrastructure and services previously described. This includes micro-contracts, (We adopt the term micro-contract to refer to the countless number of small contracts for works which are the mainstay of urban improvement in South Asia. The contract value is typically less than £10 000 and the duration less than one year.)

The 'traditional' and most common method of procurement is based on competitive tendering. Here the responsibilities for the design and construction aspects of the project rest with different organisations. Clients are attracted to this method on the basis that it will ensure competition, include a transparent decision making process, and show accountability in the spending of public money. Other methods of procurement include integrated procurement systems where design and construction become the responsibility of one organisation, usually a contractor, and management-orientated procurement systems where the emphasis is placed upon the overall management of the design and construction of the project. Here, the construction element is usually carried out by works or package contractors, the management contractor having the status and responsibilities of a consultant (Masterman, 1992) Other forms of procurement have been developed specifically for detailed administrative /managerial frameworks, e.g. the British Property Federation System (BPF, 1983) and the HM Treasury CUP Guidance (HMSO, 1992) The trend towards private participation in the development of government projects has led to less competitive tendering and more management orientated contracts that include the provision of finance in exchange for ongoing revenue. These forms of procurement include the Private Finance Initiative, (PFI), and Build Own Operate and Transfer, (BOOT). Such projects invariably use Partnering as a method of meeting the needs of all participants. These methods are described in detail elsewhere (Tam 1999, Grubb 1998, Tiffin and Hall 1998, Pena-Mora, Fieniosky and Harpoth, 2001). To date, such procurement systems and forms of contract have related primarily to large-scale projects.

Some guidelines exist on the issue of selection of different contract types (HMSO 1992, Gordon 1994, Skitmore and Marsden 1988) and there are also attempts to use decision theory to look at the issue of tendering. (See Fellows and Langford, 1980). The research described in this paper is based on empirical findings from work carried out in India, Pakistan, Sri Lanka, Tanzania and Zambia. In all of these countries the legal framework for contracts is compatible and comparable. In all of the case studies reviewed CPP was used along with the conventional procurement methods.

4. Community Partnering

We use the term Community Partnering as a concept to embrace this variety of roles and responsibilities. In its broadest sense, it reflects the continued involvement of people with the planning, implementation and sustenance of local infrastructure and service improvements and with income generation, enterprise development and skills training. The role the community groups within the contractual triangle ranges from informal advisors to formally appointed micro-contractors with legally binding contracts to construct the works, (Sohail and Baldwin 2001). Case study evidence indicates that “urban infrastructure at the local (tertiary) level is seldom too complicated for ordinary people and local artisans to get to grips with. Urban infrastructure is complex, but nevertheless community groups in different situations demonstrate their ability to play a positive role even though they are neither well-equipped with construction plant nor are they large organizations” (Sohail, 1997)

Community partnering embraces a variety of roles and responsibilities in a relationship or contract. It is an approach that emphasizes a non adversarial relationship for achieving mutually agreed objectives. In its broadest sense, it reflects both the continued involvement of people with the planning, implementation and the sustenance of local infrastructure and service improvements, and with income generation, enterprise development and skills training. A key aspect in the community participated procurement is the achievement of ‘goal alignment’ thus producing efficient contracts for both promoter and contractor.

Additional benefits which accrue include benefits to the local micro-economy, enterprise development, and income generation for low-income groups. In community partnering community members are directly affected by the way in which work is carried out and have a strong incentive to see improved quality of work. This is typically achieved through increased involvement in planning, informed decision making and a sense of ownership and interest in the ongoing maintenance. Resources are channeled into the community rather than being siphoned off by outside contractors. Whereas conventional procurement of infrastructure has a single benefit, the provision of the infrastructure itself, community partnering can increase the benefits obtained from the investment. Not only Infrastructure is provided, employment opportunities and enterprises are created in the community. People are empowered to take more control of their own lives. The development of the skills of the micro contractors and community groups together with the formation of local societies to carry out the work, contribute to this aim. There is a stronger sense of community and belonging of community members. Increased access to local knowledge is gained on such issues as the location of existing services. There is a reduction in the potential for disputes with community members as work proceeds on site.

Community partnering may involve the community as the Promoter, engineer or contractor. We have found examples of each of these forms of involvement. If the community acts as the promoter it fully or partially finances the infrastructure at tertiary level. The evidence we found of cases such as these were restricted to small value contracts, as illustrated by the Orangi Pilot Project works, Sindh Katchi Abadi Authority internal works, Faisalabad Area Upgradation Project and the Clean Settlement Programme Unit. If the community acts as the Engineer it undertakes planning, monitoring and supervision of the contract. Examples of such projects are the Karachi Metropolitan Corporation/ Asian Development Bank, CSPU and Sevanathe. If the Community acts as the Construction Contractor it undertakes construction related tasks, partially or fully, such as material purchase, labor works or management. Examples of this are SKAA internal works, OPP housing and Development Authority (NHDA), and the Slum Improvement Programme, CPSU. All of these forms of involvement produced related but differing results. Within the scope of this paper we shall focus on the Community as Construction Contractor.

5. Factors which Contributed to the Success of the Projects

Whilst there are real opportunities for benefits from community partnering it must be emphasized that these benefits do not automatically arise. Not all projects are successful. Successful projects demand energy and hard work to ensure that they meet the expectations of all concerned. Analysing the successful projects within the 400 case studies it was evident that the following factors were found to have strong positive influence on the success of the project. It is difficult to introduce both new community organizations and new projects. Successful projects require a strong community organisation with representative leaders. The basic skills required for the work should be available or there should be a strong willingness to learn. Technical supervision must be already available or be provided. There must be full community participation ideally in ethnically homogenous communities. Information and training must be provided and planning, design and decision making should be transparent. There must be clearly visible gains from the project that are recognizable to all stakeholders. The safety of the community during the execution of then works must not be compromised and there must be a clear understanding of basic health and safety issues during construction process.

6. The Kind of Works Potentially Suitable for Community Partnered Procurement

Although the case studies covered a range of projects, it was evident that not all types of work are potentially suitable for community partnered procurement. Successful community contracts were generally found not to be technically difficult and were within the capabilities of most communities. There was usually a clear demand for the work from the community and this was achievable within a simple flexible procedural framework. There was a sense of ownership of both the problems and the solution. Projects which have an in-built element of training including human capacity building in technical and managerial skills were found to have less risk of failure. Successful projects tended to be those where there was a clear need for a long term relationship. This was often engendered through the ongoing maintenance of the facilities constructed. If a genuine sense of pride is attained for the work they have undertaken and the community shows an interest in maintaining the works then the partnership can be sustained over a long period of time. Similarly the kind of work and services that require regular inputs, such as solid waste collection at neighborhood level, are suitable work of CPP. The technical people involved e.g. design engineers and construction engineers however need to be willing and able to provide strong technical support to the community contractors. This support must not create dependency otherwise long term benefits will not be forthcoming. The test is whether, if only the contract documents were provided and all technical support withdrawn, the community would be able to transform the drawings into reality. The project must be based on a simple but comprehensive and comprehensible contract that clearly states: the size of the contract; a description of the infrastructure works; details of wage levels and work norms; procedures to elect and rotate labourers; the profit levels; the risks; accident insurance; tools, equipment and protective gear; and details of payments.

Our research has found the involvement of community members and groups in the procurement of their local infrastructure to be widespread but not appropriate for all types of micro-contract. We have identified two categories of questions that need to be considered before the decision is taken to involve the community in the implementation of the work. First, what kind of work is suitable for community involvement? Secondly, What role or combinations of roles are appropriate for community groups? The research produced a number of design guidelines and decision guidance notes. These are shown in Tables 1 and 2.

7. Conclusions

The paper provides a set of guiding principles for making decisions at policy and practice level regarding the use of Community Partnered Procurement, a special form of Public Private Partnership and Public Finance Initiative. Community Partnering between the urban public sector and suitable urban communities is an appropriate procurement strategy that has been used on a widespread basis throughout Asia. Use of CPP, which is embedded in the principles of participation, partnerships and empowerment, will the writers believe result in sustainable urban development at neighborhood level. CPP is a not only a viable procurement option for tertiary level urban infrastructure but if the guidelines provided are used appropriately CPP can achieve not only comparable performances in time, cost and quality but also wider socio-economic impacts such as income generation, empowerment and micro-enterprise development.

If the use of CPP is to be extended further benchmarking needs to be performed on micro contracts using the indicators developed in the research. A framework and tools should be developed for the appraisal,

monitoring and evaluation of micro contracts for the procurement of local infrastructure. Such tools need to capture the wider impact of community partnered procurement, particularly socio-economic impacts. As part of this impact analysis, the process and actors involved in procurement through the micro contracts could be further explored using stakeholders analysis techniques. It is important to investigate the effect of procurement strategy and community partnering on the performance of operations and maintenance of the tertiary infrastructure and urban services at the neighborhood level. Safety and Risk involved for community groups needs further exploration. This is particularly important should the community undertake relatively large contracts.

References

British Property Federation, Manual of BPF system: the British Property Federation System for building design and construction, BPF, 1983.

Cotton, AP, Sohail, M and Tayler WK (1998) Community Initiatives in Urban Infrastructure, WEDC, Loughborough University.

Fellows, R.F. & Langforf, D.A. (1980) Decision Theory and Tendering, Building Technology and Management

Gordon, C.M. (1994) Choosing Appropriate Construction Contracting Method, Construction Engineering and Management, Vol.121, No. 1, pp 196-210.

Grubb, S.R.T., Private finance initiatives-public private partnership, Proceedings of the Institution of Civil Engineering, Vol. 126, 1998 , 133-140.

HM Treasury CUP Guidance No.36: Contract Strategy Selection for Major Projects, HMSO, London, 1992.

Masterman, J.W.E., An Introduction to Building Procurement Systems, E & FN Spon , London 1992.

Pena-Mora, Feiniosky and Nina Harpoth, Effective Partnering in innovative procured multicultural projects, Journal of Management in Engineering, 2001, 7, No. 1, 2-13.

Skitmore, R.M. & Marsden, D.E. (1988) Which Procurement System? Towards A Universal Procurement Selection Technique, Construction Management and Economics, 6, 71-89, UK.

Sohail, M. An Investigation into the procurement of urban infrastructure in developing countries, PhD, Loughborough University, 1997.

Sohail, M. and Baldwin, A.N., "Partnering with the community - an option for infrastructure procurement", *Proceedings of the Institution of Civil Engineers Municipal Engineer*, 1454, December 2001, pp.293-297.

Sohail, M. and Baldwin, A.N., "Urban Infrastructure Procurement in Low-income Countries", *Proceedings of the Institution of Civil Engineers, Engineering Sustainability*, 156, June 2003, pp. 87-93.

Sohail, M. and Baldwin, A.N., "Performance Indicators for 'Micro-projects' in Developing Countries". *Construction Management and Economics*, January 2004, 22, pp. 11-23.

Tam, C.M. Build-operate -transfer model for infrastructure development in Asia: Reasons for successes and failures, *International Journal of Project Management*, 1999, 17, No. 6, 377-382.

Tiffin, M. and Hall, P., PFI-the last chance saloon, *Proceedings of the Institution of Civil Engineering*, 1998, 126, 12-18.

United Nations Centre for Human Settlements (2001) Cities in a Globalizing World Global Report on Human Settlement,2001, EarthScan press, UK.

United Nations Centre For Human Settlements (Habitat), An Urbanising World: Global Report on Human Settlements (1996), Oxford University press, UK.

Table 1 General Considerations for Suitability of CPP

Checklist	Guidance note
Is the community capable of playing at least one of the roles: Promoter, Engineer or contractor?	If no, explore option for capacity building or look for other alternatives for procurement
Is the relationship between community and client likely to be non-adversarial?	If yes, proceed with CPP
Can the parties agree to a goal?	If yes, proceed with CPP
Are the parties agreeable to enter into a contract to achieve the agreed goal?	If yes, proceed with CPP.
Is the work or services technically complicated?	If yes, do not proceed
Is there any provision for on-site training at the initial stages of works?	If no, provide such provisions
Is it the intention of the parties to enter into a long term working relationship?	If no, try to inculcate such relationships
Is there a clear demand for the works and services from the community?	If no, do not proceed
Are the working procedures flexible enough to accommodate CPP?	If yes, proceed. If no, introduce such flexibility.
Is the work undertaken under a simple and clear contract?	Proceed only if yes
Does the size of the contract matches the capability of the community?	If yes, proceed
Is there continued involvement of community in the pre-implementation, implementation and post implementation stages of the project?	If no, explore capacity building options.
Are the parties interested in sustaining the local infrastructure?	Proceed only if yes.
Are the parties committed to improving local services?	If yes, proceed
Is the community ready to build on the additional benefits of increased micro-economic activities?	If no, explore capacity building
Are there mechanisms likely to be in place to support income generation and enterprise development?	If no, ensure such mechanism are in place
Are the parties ready to respond to the demand of community for improved quality of work?	If yes, process
Is it likely that community will develop a sense of ownership and will use the constructed facilities with care?	Proceed only if yes
Are there mechanisms in place to use the increased capacity and developed skill of the community?	If no, ensure such mechanism are in place
Is it likely that the community contractors will be able to continue to provide construction services in its future?	If no, create links with the potential promoters and build the capacity of community contractor to market their services
Are there mechanisms in place to store the information generated related to settlements and constructed facilities in a usable medium?	If no, ensure such mechanisms
Are there mechanisms to provided technical supervision?	Proceed only if yes
Are there enough funds available to complete the full extend of the works?	Proceed only if yes

Checklist	Guidance note
Is there a strong community organization under leadership which has the trust of people?	If no invest in community organisation and mobilisation
Are there basic skill in the community currently available or is there a willingness to learn?	If yes, build on it If no, build capacity
Is there a willingness from the client side to work with the community?	If no build capacity
Are the parties clear about the visible gains expected from CPP?	If no, clarify
Is there appropriate information available for the parties to design, plan and implement works?	If no ensure availability of information before proceeding
Are the parties aware of health and safety issues and are they prepared to take actions to minimize risks and mitigate the impacts of risks?	Proceed only if yes

Table 2 Considerations for Kind of Works Suitable for CPP

Checklist	Guidance note
<p>Based on experience certain guidelines could be deduced regarding the kind of work where the community could be involved. The kind of work suitable for community partnering should:</p> <ul style="list-style-type: none"> • Not of high risk or hazard • Not be technically or managerial complex • Not very mechanized • Not capital intensive • Be of routine nature, know how is available • Not be requiring special skills 	<p>Proceed if meet the requirements list in adjacent column</p>
<p>Some examples of suitable kinds of work include but are not restricted to;</p> <ul style="list-style-type: none"> • Excavation of water and sewerage lines, • laying of pipes, • jointing of pipes, • cleaning of manholes, • minor repairs, • maintenance routine checks, • operation of small infrastructure facilities, • collection of domestic refuse, • street cleaning, • construction of small and medium size manholes, • general labor based works, • plastering, • masonry works, construction and maintenance of small buildings, • construction and maintenance of small access pavements. 	<p>Proceed if similar or works of equivalent complexities.</p>