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CONTRASTING PERCEPTIONS: A STUDY OF ENTRY BARRIERS TO PARTICIPATION IN PUBLIC WORKS CONTRACTING BY MICRO ENTERPRISES IN INDIA AND PAKISTAN

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ABSTRACT

There is growing interest in encouraging private sector involvement in the construction and maintenance of public works in developing countries, and a preference to involve micro-enterprises in this work so as to achieve economic benefits and enhanced local employment for the poor. However, the administrative and procedural requirements of the public sector act as barriers for many small-scale contractors and hence discourage their participation in the procurement process. Whilst most clients and most contractors agree with this proposition in principle, their perception of the nature of the barriers and the practicality of their removal are likely to differ.

This paper describes the results of practical research carried out in conjunction with the Karachi Metropolitan Corporation and the Pakistan Public Works Department, and a range of Indian officials from public works departments, coupled with a questionnaire survey and direct interviews with proprietors of micro-enterprises. The study reveals the contrasting perceptions of contractors and clients' representatives, and concludes that clients are sometimes excessively concerned with eliminating risks that are not particularly serious in the context of a highly competitive environment with relatively large programmes executed through small contracts by large numbers of very small enterprises.

Keywords

Construction industry development, small-scale contractors

INTRODUCTION

Effective and efficient infrastructure procurement is essential if construction industry performance is to be improved, and there is usually scope to involve micro-enterprises (very small businesses operating on the verge of the formal and informal sectors, usually sole proprietors) in this work so as to achieve economic benefits and enhanced local employment for the urban poor (Edmonds and Miles 1984, Sohail 1997). Furthermore, small enterprises have been widely assumed to offer significant development potential (Young 1993). In most developing countries the public sector is the predominant client for urban infrastructure work; hence it is essential to understand its procedures and requirements and examine how it encourages or obstructs the participation of small-scale contractors both directly and indirectly as formal or informal sub-contractors to larger firms. Whilst most public sector clients accept in principle that micro-contractors should be enabled to compete fairly for work, they may be complacent regarding the working of the established system and it appeared likely that micro-contractors might have a different perception.

This paper draws on a survey of 25 contractors who undertake work for the Karachi Metropolitan Corporation (KMC), which is the municipal authority for the largest city of Pakistan with a population of 10 million, and compares and contrasts their views with the views of construction clients. The municipal system in Karachi has undergone many changes due to the politically unstable situation in the last five years. The administrative system has two tiers. A metropolitan corporation was set up in 1988 along with the four zonal committees in four districts; Central, East, West and South. The Mayor is elected by the councillors from each local area, and is the chief executive of the corporation. The local councils have the powers to levy taxes. The salient compulsory functions of the corporation include provision and maintenance of urban infrastructure including water and sanitation, drainage, street lighting and solid waste management.

A parallel study examined practices in the Pakistan Public Works Department (PWD), which is a public sector organization involved in procuring works on behalf of the central government. It regularly produces documentation including recommended procedures, a schedule of rates and standard specifications. Its procedures have influenced almost all the public sector organizations, including quasi-government organizations. Another interesting aspect is that the PWD procedures are similar to the works procedures used in India due to the common inherited legal framework.

Based on the study of departmental practices in PWD the key issues were identified and some of those were further explored in the survey.[This is what I have added to make a link between the two paragraphs]

The survey related to the contracts used mainly in routine procurement. The advice provided in the standard texts for survey research (Fink and Kosecoff 1985) was followed. Purposive sampling was used to get the basic information related to procurement process and the perception of the stakeholders involved. The questionnaire was intended to:

1. Cross-check the awareness of the respondents regarding the procedural issues with the information gathered by the initial review of documents.
2. Obtain base line factual information.
3. Explore the perception of the respondents with respect to the contractual procedures in routine procurement and community-participated procurement.

Client responses included four KMC officials, five KMC consultants, one official from the Sindh Katchi Abadi Authority (a provincial level authority responsible for the development of squatter and informal settlements and negotiating with municipalities and other urban authorities) and 18 Indian officials from public works departments. Although the contractor respondents were all from Pakistan and the client respondents were from both India and Pakistan, the views of Indian and Pakistani client representatives were largely similar and the experience of the authors suggests that the views of Indian and Pakistani micro-contractors would also be similar.

Both correspondence and face-to-face meetings were used to obtain the views of officials and consultants, but the 25 micro-contractors were all interviewed. Two assistants were employed to trace and interview the contractors. It was quite difficult to reach these respondents as many have no permanent office, and most have little time to spare due to the exigencies of their businesses with a need to attend personally to such tasks as purchasing, hiring of labour, and organizing their sites. Basically the contact point was the office from where they obtain work. The surveys were completed by the beginning of 1995. In total 53 questionnaires were completed by the respondents (25 by contractors and 28 by clients/consultants).

PERCEPTION OF MICRO-CONTRACTORS

Table 1 provides a summary of the key findings of the survey of the organizations and people involved as micro-contractors in the procurement of infrastructure at the tertiary level of infrastructure procurement. The study also indicates the benchmarks or the requirements to become a micro-contractor in a local urban government department. The survey also provides an overview of people acting as micro-contractors in the procurement of infrastructure in an urban local authority. It is notable that these micro-contractors are not very well equipped, but are well experienced. They have also demonstrated their capacities to meet the procedural requirements, and have good connections in the market to fill in the gaps as far as the logistics are concerned. They possess basic business survival skills including how to get registered, get enlisted in the department, open a bank account and deal with the public sector. They are, in short, small entrepreneurs. They could act as a model for any newcomers in the contracting business including the community groups.

PERCEPTION OF OFFICIALS AND CONSULTANTS

In the procurement process, the key stakeholders include the officials of the client organisation, their consultants and the small scale enterprises who bid for work (although it is rare in public sector departments in the study countries to hire an independent consultant for micro-contracts). The outcome of the questionnaire survey of the client and consultants representatives is summarised in Table 2. The respondents were selected from typical urban local organizations. Some very basic questions were asked from the officials to see if they are aware of the procedural issues and to corroborate the finding from the document reviews and interviews. Non-parametric tests were run to see the goodness of fit. The non-parametric tests were considered to be relevant as they do not require certain assumptions required by parametric tests (Siegel

1956). The tests are particularly useful when dealing with relatively small samples. The significance level was set at 0.05.

Table 1 The procurement process: Perception of micro-contractors.

Statements	Agreed by (%)	Comments
The contractors have one or two levels of organization. The numbers of permanent staff, including managerial personnel, are 0-3.	84	In small firms, the chain of command does not go beyond two levels, with few (if any) permanent staff. This supports the findings that the sub-contracting is more common than formally permitted.
The contractors have no geographical preferences to work.	96	Contractors are willing to bid wherever the work comes up in the city. There are many divisions in a city and contractors have no preference for a particular division. The contractors are quite small but have capacities to go beyond one division.
Contractors do not own plant and machinery but own tools and simple equipment.	84	This is quite interesting as on paper it is one of the factors or criteria of enlisting the contractor in a department, but in practice it is clearly not enforced. This response also suggests that some of the requirements could be relaxed since much of the work is not of a nature which requires mechanization.
Facilities for hiring tool and plant are available.	100	It adds to the flexibility of the organizations, since it lowers capital investments and overheads. The rental charges could be charged to the project directly.
There is no facility for institutional loans	100	Formal credit is not available to micro-contractors even if they are a registered. They must rely on informal finance or private resources.
They have bank accounts	100	This is a necessary condition. A bank account would be required from a community group if they want to become a micro-contractor of the local public sector.
They are registered and enlisted with a governmental organization.	100	Also a necessary condition.
The majority contractors have 4-6 years experience	60	The micro-contractors have experience of many years of work. This again is something that would be expected from any newcomer in the procurement process.
The annual turnover of the micro-contractor does not exceed RS 1.0 million. The most frequent range of turnover is RS 0.5 to 1.0 million [Exchange rate approximately \$1= RS 50].	84 52	If a micro-contractor could get contracts of RS 1.0 million, assuming the profit margin of 20% the monthly income comes out to be around RS 16666. This is a quite acceptable income for a micro-contractor, and micro-contracting is seen as a good source of income.
No verbal contracts were used - all the contracts were written.	100	In the informal sector and in many community groups written contracts are not used. This again is something that would be required from the community groups.
The contractors also act as a sub-contractor.	64	The role of micro-contracting is not restricted to micro-contracts. This also highlights the frequent use of sub-contracts and indirect entry of relatively smaller contractor in the process of large contracting.
Getting private sector work is easier than public sector work.	96	This indicates that in public sector there may be complex procedural requirements.
The majority of contractors have the capacity to undertake the works not exceeding RS 500000 at one time.	60	This indicates the financial and managerial capacities of the micro-contractors to handle the contracts.
The majority of contractors perceive work costing than Rs.25,000 as of minor nature.	80	This highlights the relative nature of the meaning of the term 'minor work.'

Table 2 The procurement process: Perception of officials and consultants

Statement	Agreed by (%)	Comments
More than 60% of the infrastructure development budget is contracted out.	74	Contracting is perceived to be the main method of procurement. This correlates with the literature and document review.
Managing one contract is easier than dividing it into smaller packages.	74	Prefer dealing with a single party with the implication of using large main contractors.
Small scale contracting is beneficial to the local community.	81	Communities have a better chance to benefit from small scale contracts (only one respondent had experience of working with a community contractor).
Most (75-100%) of the work is repetitive in nature.	87	The work is standard, hence risks are lower since small contractors will be competitive in simple routine tasks.
A significant share of the work (up to 50%) is sub-contracted by the selected contractor.	78	This occurs even where sub-contracting is not formally permitted. Sub-contracting is common even in small-scale contracting. The officials know and accept it. The implication is that this mechanism must have some appeal to all the parties concerned. Another implication is that the 'real' contractor is the sub-contractor who does not have a direct contractual link with the public sector and is effectively denied the access to the procurement process. It also indicates an avenue which could be explored by community groups.
The work cannot be awarded without competition.	81	The perception of the majority of respondents is that competitive bidding is the only acceptable method for awarding contracts.
A bid bond is essential even small scale contracts.	82	The perception is that financial surety is vital, even where risk is minimal (as is often the case with micro contracts).
A security deposit is essential even for small-scale contracts	89	Even where the bills are paid in arrears the security is considered to be critical.
All micro contracts are in the range of 0-2 million rupees. [Exchange rate approximately \$1= RS 50].	100	Fairly small contracts. The concept of micro contracts covers the bulk of contracts used in the procurement of urban infrastructure.
At least 50 % of the local contractors are involved in government works.	78	The perception is that the public sector is a major client in construction.
What proportion of contracts are completed on time?		
0-30%	26	There is no clear message about the time performance. The implication is that as many as 70 % of the contracts may have time overruns. This indicates a very inferior time performance as compared to the cost performance.
70-90%	39	

Source: Questionnaire Survey

REGISTRATION - THE CLIENT'S VIEW

The public sector requires its contractors to be of demonstrable legal status. In general, some sort of registration as a company or as a registered co-operative society is required. The firm can enter into a contract with the public sector as a registered organisation, company or society to undertake commercial or non-profit based activities. The registration is generally done by the registrar at district level. The registration has its own requirements and a set procedure. This registration is different from the registration with a department as a contractor. Later the contractor may be registered with the concerned department to undertake certain a class of work. In some relatively large projects there is an additional requirement that the

contractor has to be pre-qualified. When pre-qualification is used the restriction of being registered with the department is generally waived.

Table 3 Who is allowed to bid for public sector work? - The client's view

Response	Commentary
<ol style="list-style-type: none"> 1. The Engineering Department operates a system whereby only those contractors who are enlisted can submit tenders 2. The contractors are enlisted within a particular class, which specifies the financial limit of the works for which they are deemed competent to bid. 3. The requirements of enlistment are to demonstrate capacity in terms of experience, financial credentials, tools and equipment owned and personnel employed. 4. The contractors are enlisted for a particular duration and are required to pay an enlistment fee. 5. In general if a contractor is already working in one department it is relatively easy to work in another department. Conversely, if a contractor does not perform well in one department then he can be banned from other departments. 6. In large scale works, potential bidders are selected for the one project only; this process of prequalification is similar to that of enlistment. 	<ul style="list-style-type: none"> • The requirements are demonstrated by submitting relevant documents. • Litigation against the department is one of the reasons for 'blacklisting' a contractor.

Source: Interviews and documents

Table 4 What administrative and financial demands are made on a contractor? - The client's view

Response	Commentary
<ol style="list-style-type: none"> 1. Earnest money (2%-3% of the tender value) must be deposited. 2. A performance bond for small works may be required. A typical bond is 10% of the contract value and is released after the end of the defect liability period. 3. Insurance is not usually required for very small works. 4. On acceptance of the tender, the contractor has to deposit typically 10% of the tendered amount as security money with the department. This is inclusive of the earnest money already deposited. In some cases the money is deducted from the running bills. All money is released at the end of the defect liability period. 5. Liquidated damages can be imposed if there is a serious time overrun. 	<ul style="list-style-type: none"> • For a micro-contractor this could be an additional financial burden. • No recourse to easy and fast compensation in case of an accident. • No study has been carried out on the frequencies of accidents or claims for small works. • These demands have high associated costs which may reach over 25%; this can create serious problems in arranging finance. • The ultimate cost of this is borne by the client; it is reflected in the tender prices. • Generally used as a bargaining tool. Actual incidences of imposition are rare.

Source: Interviews and documents

Sureties are used to provide an additional safety net for the client. An evaluation of the capacities of the contractor is generally done to ascertain that the contractor is capable of undertaking the work. In some cases this review takes place simultaneously with the price offer, but generally it is done before the offers are invited. In some cases only documentary evidence is required but in other cases interviews are also held to ensure that the contractor can give a responsive and reasonable offer to carry out the work. Documentation could take the form of the audited balance sheets for three years as evidence of financial stability. The

criteria clearly favour the established commercial contractor. The underlying question which needs to be answered satisfactorily before the contract is awarded is ‘can the contractor perform successfully?’.

The message that the contractor evaluation is important to predict contractor failure is quite clear. The methods used are prequalification and surety bonds or both. The time spent in evaluation is seen as worthwhile in terms of the benefits of reducing the risk of problem contracts. However, when tackling the three questions of how to do it, what factors are to be considered, and which among the long list of the factors are truly significant, the feeling is that the process is still an art rather than an exact science. Sophisticated techniques have been used but the basic assumptions have not been challenged.

Routine procurement of infrastructure requires certain conditions to be met by the potential contractors. The following section explores the perception of the contractors who have gone through the enlistment process. The micro-contractors were asked to identify the factors which they think were instrumental in getting them enlisted in the to public sector organization. Some of the factors were quite sensitive and the contractors were assured of their anonymity. A set of factors was provided with an option to add any factor if they so wished.

REGISTRATION - THE CONTRACTOR’S VIEW

The clients and consultants see the game of contracting as akin to the game of cricket, with established rules and procedures, independent umpires and a broad commitment to ‘sportsmanship’ - not to mention a level playing field. The contractors saw things rather differently, and the game seems to them more akin to poker, and sometimes poker played with marked cards! From their point of view, becoming enlisted in a public sector department is at best a complex process. It is seen as neither so simple nor so unbiased as some of the official documents report it to be. The factors considered important in getting access to the public sector works are shown in Table 5, and the responses were categorized in the four alternative categories of ‘very often’, ‘often’, ‘occasionally’ or ‘never’ important (the percentage figures refer to the individual or grouped responses in column 2).

Table 5 Who is allowed to bid for public sector work? - The contractor’s view

Factors	Response	%	Comments
Reading the notices of tenders /pre qualifications.	Very Often	100	It triangulates with the documentary evidence that there is a set procedure for the enlistment
Technical competency of the contractors.	Very Often/ Often	88	Generally seen as of importance
Managerial competency of the contractors	Very Often/ Often	52	Fewer perceived it to be important as compared to the technical competence.
Legal status of the contractor.	Very Often/ Often	80	Important.
Political background.	Occasionally/ Never	92	Only a few perceived it to be important.
‘Relations’ with the officials.	Very often/ occasionally.	100	It was not reported by anyone as ‘never’. It is generally seen as an important factor.
Experience of the contractor.	Occasionally/ Never	96	Interestingly the contractors do not perceive experience to be important. The message is that having experience is not a guarantee to get enlistment in the government sector. This view was completely denied by the officials.
Competency of the contractor's staff.	Often/ Occasionally	56	Again it is not seen as a critical factor.
Bribery.	Very Often/ Often	100	<i>Bribery is the factor perceived to be important by all.</i> This tells us a lot about the working environment of the public sector. It is not just the factors which are written in the documents which govern the enlistment, and others which are unwritten are seen (rightly or wrongly) as more important. This is the environment in which the

			community group needs to survive. Understanding what is not written is also important in understanding aspects of the procurement process.
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Source: Questionnaire Survey

It is noteworthy that factors which are not mentioned by the client's representatives, and which (not surprisingly) do not feature in any of the documents, are perceived by key stakeholders to be so influential, for example bribery, politics and relationships with officials. Reading the notice board for tender, technical competency and experience are all important. It could be envisaged that any organization wishing to enter into a legal contract with the public sector in the study organization under the existing situation is expected to have the characteristics (and perhaps the attitudes) of these micro-contractors. How can community involvement be promoted in such a situation? Further research would be required through a pilot study of the processes where the community did participate in the procurement.

BIDDING AND CHOOSING

In practice the criterion for selection of the contractor is normally the lowest bid. The lowest bid can be rejected but in practice this is seldom done. The argument put forward in support is that if the contractor has fulfilled the basic criteria that indicate capacity to give a reasonable and responsive bid, the only concern left is that of a mistake being made. The argument against the award to the lowest bid is that, if the bid is too low as compared to an estimate made by the professionals, then there is no way that the contractor could deliver the work to the quality specified.

On the other hand the competing contractors may know their market better than the professionals (including the level of quality and general performance which is normally accepted in practice). Different opinions exist. One solution could be to set a threshold below which any bid should be automatically rejected. Some think that this should be the Engineer's estimate, some think that the average of the bids should be used and some have gone into detailed analysis after reference to a data base of similar bids. Although there are factors besides the cost that ought to be considered, current practice in South Asia local government is still the acceptance of the lowest bid given by the selected bidders.

In principle it can be argued that the market is the most objective means of determining the prices and hence the value of the work. But this implies a state of free competition. The form of competition that is routinely used is invitation of sealed bids. The sealed bid system is generally preferred since it is considered to be transparent and audit friendly. Professionals make estimates which are used as a basis for comparison, but the final contract value is determined by the offers received. In a form of modified competition the public sector may develop a schedule of rates which becomes the basis for all engineering estimates. Table 6 describes the typical basis of cost estimation.

Table 6: Cost estimates and market rates

Response	Commentary
<ol style="list-style-type: none"> 1. Government engineers prepare detailed cost estimates for technical sanction. 2. These estimates have to be based on the latest edition of a schedule of rates provided by the Public Works Department. 3. Provision is made for the schedule to be updated periodically; the problem is that this is a tedious and time-consuming process and in practice many years may elapse between updates. 4. The cost estimates which are given technical sanction do not reflect the actual cost of procuring the works unless the schedule is up to date. 5. The market rate for doing the work is therefore nearly always greater than the engineers' cost estimate. 6. Prices tendered for work have to reflect market rates. 	<ul style="list-style-type: none"> • This provides a standard basis for tendering • High construction cost inflation means that the estimates rapidly become unrealistic. • In one extreme case, the schedule of rates was over 15 years old, with tender prices coming in at many times the estimated value. • These estimates serve no purpose in terms of managing the work for the contractor • If the actual cost of a contract increases beyond a certain limit then the approval process has to be repeated.

Source: Interviews and documents.

CONCLUSIONS

Conclusions from the research are set out under three broad headings.

Micro-contractors as business enterprises

- Micro-contractors competing for public sector infrastructure work generally know how to satisfy the procedural requirements.
- Most of them are sole proprietors.
- They do not own the plant and equipment as required by the procedures but have access to it.
- They have bank accounts but no facility for institutional loans.
- They have experience in the kind of work they undertake.
- They sometimes act as sub-contractors as well as bidding in their own right.

The process of procurement

- Public sector clients are heavily protected against the non-performance of the contractors through screening methods and sureties.
- A prospective contractor has to pass many screening stages.
- Only organisations with demonstrable legal status could enter into a legal contract with the public sector.
- Criteria for evaluating the capacity of the contractor are established.
- There is little empirical evidence supporting the assumption that detailed screening of contractors is necessary to protect the client from risks of non-performance.
- The legal and procedural requirements are designed for the commercial private sector, and effectively exclude community groups from the procurement process.
- There are set procurement procedures which are used in the public sector.
- Competitive tendering from registered contractors is routinely used.
- The estimation of cost by clients is frequently not based on the current market rates.

Barriers faced by micro-contractors

- Even for very small contracts the procedural requirements are stringent.
- Time taken for fulfilling the procedural requirements is often more than that for actually doing the work.
- Involvement of many signatories is seen by clients as a way of increasing accountability, but is a significant burden for micro-contractors.
- Delay in payments adversely affects the performance of micro-contractors who are usually short of working capital.
- No advance is provided to the small contractors.
- Only contractors with significant capital could survive in public sector contracting.

UNDERSTANDING AND TRUST

So what can be done to improve the situation? The group of micro-contractors studied in this exercise appear sufficiently technically capable and sufficiently competent (or at least street-wise) to undertake the range of basic urban infrastructure work for which they compete. What seems to be lacking is understanding and trust, with clients perhaps over-concerned with eliminating risks that are not particularly serious in the context of a highly competitive environment with relatively large programmes executed by large numbers of very small enterprises.

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