

Global Trends in Construction Procurement

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Abstract

This paper sets out the results of recent research into the current and possible future trends in public sector construction procurement practices around the world. The study is one of the few truly global reviews of public sector procurement and provides a comprehensive guide as to who is doing what in construction procurement and what are the most likely future trends. The study involved input from practitioners actually working in each country studied and included real life experiences.

The results of this study have been placed into a global context through the use of the apportionments of global construction output for each of the studied nations. In total close to 88% of the global public sector construction output has been studied in detail. It is hoped that this review will provide construction practitioners around the world with a true reflection of both where public sector construction expenditure occurs as well as the methods used to procure construction contracts.

Following on from this basic research further detailed study and consideration has been given to the applicability of the identified new procurement trends and approaches within the context of the Hong Kong and China construction markets. This has been aimed at identifying the key barriers and benefits associated with the alternative approaches.

Keywords

Procurement, Global Trends

1. Introduction

Construction procurement can be defined in a number of ways, whether it be the overall concept of obtaining the delivery of a facility or the purchasing of specific services. The reality is that true construction procurement really centres on the process of obtaining contracting services and it is this point which has in recent years been lost morass of buzzwords and management theories. Construction ultimately is still primarily about building facilities, to achieve this suitable contractors have to be employed. The process of employing these contractors requires a design (no matter how vague) and some form of agreement on how reimbursement will be made in the future. If this fundamental principle is accepted the specific names attached to different procurement routes (e.g. Design & Build, BOT, PFI etc) are irrelevant since it is the process which becomes the differentiator.

This study set out to analyse the actual different procurement options available on a global level and then try and establish their respective level of adoption. The purpose of examining this issue has been driven by a number of factors, but primarily the need for Hong Kong, in particular, to look beyond traditional construction procurement practices to see if more effective and suitable approaches exist. This review has been tempered by the underlying principle that all construction procurement must be tailored to the specific project and as such blanket procurement strategies or policies would not be an acceptable approach. Coupled with the desire for knowledge has been the urgent global need to look at methods of delivering public sector services as efficiently and economically as possible. Regional fiscal difficulties have placed increased demands on public sector expenditure, while at the same time domestic demand for new and improved public services remains strong. The international observer will no doubt see parallels with the market positions in Europe and Australia a few decades ago.

2. Methodology

Comparing and establishing trends in construction procurement are difficult tasks not because information is lacking but due to inconsistencies in the terminology used around the world. This study was carried out in three stages, procurement classification / definition, international survey and international trend comparison, each of which was a discrete and sequential process.

2.1 Procurement Classification / Definition

There are a number of definitions given to the various procurement arrangements currently being put forward by a range of learned authors each of whom return to the basic themes which define the key procurement approaches. Based upon a review of current literature, but most importantly through consultation with international practitioners, a set of five generic procurement categories were established along with their inter-relationship. Figure 1 below summaries the classification adopted for this study and the respective relationships.

Figure 1 - Procurement Categorisation & Relationship

Procurement Practice		Contractor's Involvement	=	Procurement Practice
Designer Led	+	Design of Works	=	Design & Construct
	+	Management	=	Management Arrangement
Design & Construct	+	Management	=	
Management Arrangement	+	Design Development and Operation of Completed Works	=	Prime Contracting or Design, Build, Operate
Prime Contracting or Design, Build, Operate	+	Finance	=	Finance, Design, Construct & Operate

Despite the above classification, closer examination of the actual procurement process revealed that Finance, Design, Construct & Operate projects were predominantly financial management approaches rather than actually being a really innovative procurement option. This conclusion is based upon the fact

that the procurement of the actual works on site is still usually secured through either a designer led or design and build contractual arrangement. This point illustrates the fine line between which is true construction procurement and that which is the high level financial arrangement leading to construction procurement. Although similar parallels could be drawn with Prime Contracting and Management Arrangements, they were considered to be sufficiently different to warrant separate examination. To aid understanding and avoid misinterpretation by the survey participants each of these procurement options were individually defined.

2.1.1 Designer Led

This is perhaps the most traditional of construction procurement methods and would be familiar to virtually all within the industry. The key aspects of this method are the development of a design by consultants followed by a tendering process comprising the submission of a price (either fixed or remeasurable) leading to a contract award for the construction of the facility. This approach is characterised by the sequential and segmented execution of the key tasks, but is also recognised as being the underlying principle of construction procurement to the extent that a price is obtained for a defined scope of work.

2.1.2 Design & Construct

Design and Construct procurement is fundamentally the same principle although the level of information provided is significantly less and the responsibility for completing the design is added to the contractor's obligations. The result is that the point of awarding the contract can be at varying stages during the design process. The contractor is then charged with achieving the objectives of the client or completing the design from the point of contract.

2.1.3 Management Arrangement

The Management Arrangement sprang out of the need for early on site construction commencement, often before any design details were available. In principle the contractor undertakes the role of project coordinator with the details of the design being released in packages as the works progress. Usually each of these individual packages of work would be tendered separately to nominated sub-contractors.

2.1.4 Prime Contracting / Integrated Team

Originating predominantly in the UK and USA, this procurement category is characterised by the inclusion of the contractor in the earliest stages of the design development process and most notably his enhanced obligation to maintain and sometimes to operate the completed facility for a predetermined period of time.

2.1.5 Finance, Design, Construct & Operate

Finally, under this category the funding for the project is passed, either in whole or in part, down to the contractor. These arrangements are widely known throughout the world but, usually under the guise of a series of acronyms such as BOT, PFI, PPP. The objective of this approach is to pass some or all of the funding obligations over to the private sector with a view to maximising the volume of public sector project delivery while not draining limited public funds.

2.2 International Survey

As noted at the outset, this study focussed on the procurement of public sector projects and therefore with the increasingly widespread adoption of WTO government procurement rules it is noticeable that there is

significantly more commonality in the approaches adopted than might have been the case 20 years ago. The survey was a questionnaire based one, using a standardised format to ensure consistency of return. Unlike many other similar survey exercises where the level of return can be disappointing, this survey was conducted within the international offices of Davis Langdon and Seah International. This approach had two distinct advantages, firstly a 100% return was guaranteed and secondly the respondents were all quantity surveying practitioners hence ensuring consistency in interpretation.

A total of 21 countries or territories around the world were surveyed (Hong Kong, China, Singapore, South Korea, Japan, Indonesia, Thailand, Malaysia, Brunei, Philippines, USA, UK, Spain, France, Germany, Ireland, Italy, Australia, New Zealand, South Africa and Dubai) which geographically represented most regions, but most significantly accounting for approximately 88% of the total value of global public sector procurement ensuring a high degree of representation. This survey was conducted between July and September 2002 with all the results being compiled using published information for the year ending December 2001.

2.3 International Trend Comparison

When comparing the returns from different countries there were a number of methodological options available, either a purely statistical comparison or a more representative weighted comparison. Since the size of the public sector procurement markets varied dramatically between the countries examined it was considered that if truly global trends were to be presented a weighted comparison was both necessary and appropriate. Therefore the individual values of public sector construction output were identified for each country surveyed (using nationally published statistics) and these were then compared against the global public sector construction output (United Nations Economic Development Reports 2001 & 2002). Finally both statistical sources were cross-checked to ensure consistency. In terms of the proportional allocation of public sector procurement around the world it was noted that a relatively small group of countries and areas dominated, Table 1 below illustrates this point:

Table 1 - Countries / Areas with Dominant Public Sector Procurement Values

Country	% of Studied Share	% of Total Global Share
European Union States	33.2 %	29.4 %
United States of America	19.4 %	17.2 %
Japan	14.9 %	13.2 %
People's Republic of China	11.3 %	12.8 %
South Korea	3.6 %	3.2 %
United Kingdom	1.9%	1.7 %

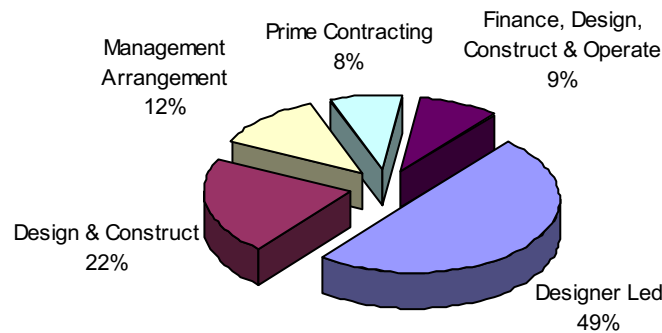
For the purposes of this study the UK was excluded from the European Union States and compared separately. As shown above there are a few very dominant counties and although their survey results would guide the overall findings it was considered realistic since this demonstrated how and where public sector expenditure was being incurred. In summary a country may be very innovative in the adoption of different procurement approaches, like the UK, but if it represents only a small proportion of the world's public sector procurement market it should not be held up as being the "global trend".

3. Findings

The critical outcome from the survey and study was an indication of the current trends in global public sector procurement. Figure 2 below illustrates how public sector procurement is divided between the five generic procurement categories. It is very clear and largely unsurprising that the Designer Led and Design and Construct approaches dominate, with over 70% of the world share. This is a reflection of the

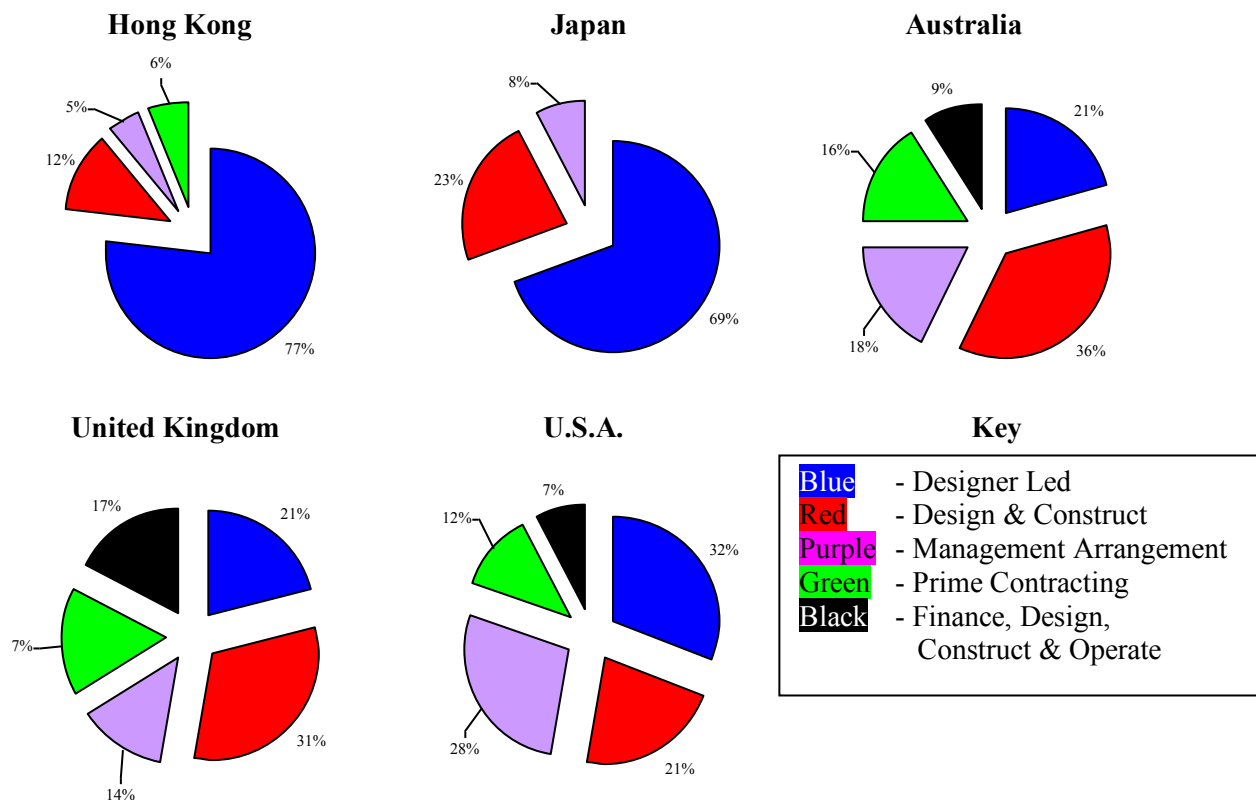
WTO tendering rules and the predominantly traditional approach to procuring public sector projects. What was more surprising was the relatively small proportion of projects being procured through private financing arrangements, especially given the extensive publicity this approach receives and the current global economic climate

Figure 2 - Current Global Approtationment of Public Sector Procurement



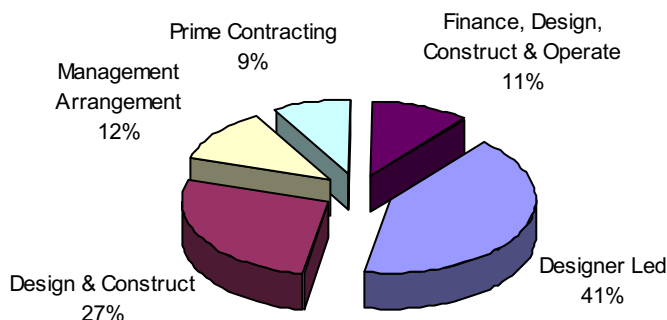
These results also reflect the relatively conservative nature of the public sector in embracing alternative procurement options, but when the individual country results were examined in detail it was interesting to note that some countries were very innovative and adopting a wide range of alternative procurement practices while others were completely the opposite. Figure 3 below illustrates a sample of individual country results from the different extremes of the global innovation scale.

Figure 3 - Individual Country Procurement Trends



Clearly some Asian countries are less innovative than their “western” counterparts and this was reflected by the division of the public sector procurement options adopted. Despite this when future trends are examined the results are also interesting. To generate this, all the survey respondents were asked to forecast how they considered the landscape of public sector procurement would change over the next 5 – 10 years and based upon the international feedback the global division of procurement is anticipated to be as shown in Figure 4 below.

Figure 4 - Projected Future Global Appropriation of Public Sector Procurement



The above clearly shows a shift from the traditional Designer Led procurement practices to the Design and Construct approach. Most of the other procurement methods remain relatively static, with the exception of Finance, Design, Construct & Operate which is also expected to increase in popularity.

4. New Directions for Hong Kong and China

Turning to a local level the trends in Hong Kong and China are similar to the global results, although they are not as pronounced. In China the public procurement market is currently dominated by local State controlled companies, the few international contracting organisations who are involved, usually do so through joint ventures or on projects involving some form of external financing arrangement (such as those funded by the World Bank or Asian Development Bank). This landscape is slowly changing as the market opens up following China’s accession to the WTO but the progress is and will remain gradual. Hong Kong by contrast is actively seeking alternative procurement options and as with the global trend, has seen a steady rise in the number of public projects procured using the Design and Construct format (close to 50% of Architectural Service Department projects by number are now let using this approach based upon 1999 statistics). It is anticipated that PFI and similar procurement arrangements will be actively promoted in the future. The trends would appear to suggest that these approaches would begin to figure more predominantly in the procurement landscape. Overall, Hong Kong will perhaps, be a closer mirror of the global trend, while China will follow a similar path but at a much more gradual pace.

5. Conclusions

The results of this study have been illuminating to the extent that they provide some hard evidence as to the true trends in global construction procurement. However, the specific results do graphically demonstrate that promoters of innovative construction procurement approaches still have a substantial amount of work to do before governments fully embrace these options.

Despite these views, the fundamental principle of construction procurement must not be forgotten. A successful procurement strategy must be founded upon the need to select the correct option and approach for the individual project, irrespective of the current fashion or any personal bias.