

# Factors constraining the development of professional project management in China's construction industry

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## Abstract

This paper introduces a survey aimed at identifying the underlying factors that constraint the development of professional project management in China's construction industry. Professional construction project management, which is known as construction supervision (CS) in China, was introduced into China's construction industry in 1988. After more than 10 years of rapid growth, the further development of CS is challenged by a number of arising problems. Based on the findings of the survey, this paper highlights the most significant factors causing these problems. These factors are related not only to CS companies, but also to clients, other construction professionals, and the environment of the construction market. It is anticipated that the discussion of these factors will provide a basis for future strategies to promote the development of CS in China and also provide a useful reference for other developing countries which face similar problems in promoting the applications of professional construction project management in the construction industry.

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## 1. Introduction

Since the reforming and open door policy started in the end of 1970s, China has accelerated its economic development with an impressive rate and has risen as an important economic force in the world. There can be no economic activity without construction. To accommodate the national rapid economic expansion demands for building and infrastructure, China's construction industry has achieved extraordinary growth and dramatic development in the past two decades. However, there were no independent professional project management companies in the Chinese construction market until 1988. At that time, the practice of establishing a construction project in China always involved a temporary organization, the Project Preparatory Office (PPO). This was set up by the project client to take on the duty of project management on behalf of the client. A PPO usually comprised of a number of in-house staff of the client, and a few external technical

persons appointed by the client. The majority of PPO members had not gone through the necessary project management training and lacked sufficient knowledge, skills and experience to manage a project successfully. Moreover, the PPO ceased to exist when the project was completed and the in-house staff involved in managing the project would shift to other positions within the client's organization. The valuable experience and knowledge accumulated by these people through practice was rarely reused in future construction projects funded by other clients. Under PPO practice, it was not uncommon to find projects with cost overruns, poor quality and time delays [1].

Professional construction project management, known as construction supervision (CS) in China, was introduced by the Ministry of Construction in 1988 to replace the traditional PPO practice. Given China's unique economic and political environment, it is natural that CS should have some different characteristics compared with its counterpart-construction project management in the West, but the essence of these two systems is quite similar. A comparison between them is given in Table 1.

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Table 1  
Comparison between construction PM in the West and China's CS

		PM [2]	CS [3]
Definition		Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.	Construction supervision is a service on behalf of the client for managing and supervising the overall activities or any specific activity of a construction project.
Main duties	Inception and feasibility	<ul style="list-style-type: none"> <li>Assist in preparing project brief</li> <li>Develop project manager's brief</li> <li>Advise on budget/funding arrangements</li> <li>Advise on site acquisition, grants and planning</li> <li>Arrange feasibility study and report</li> <li>Develop project strategy</li> <li>Prepare project handbook</li> <li>Develop consultant's briefs</li> <li>Devise project program</li> <li>Select project team members</li> <li>Establish management structure</li> <li>Select procurement system</li> </ul>	<ul style="list-style-type: none"> <li>Advise investment decision-making</li> <li>Develop or assist in preparing the project proposal</li> <li>Participate in feasibility study</li> <li>Develop project design specification</li> <li>Select procurement system</li> <li>Arrange design tender</li> <li>Participate in designer selection</li> <li>Participate in project design evaluation</li> </ul>
	Design	<ul style="list-style-type: none"> <li>Appoint consultants</li> <li>Co-ordinate design process</li> <li>Arrange insurance and warranties</li> </ul>	<ul style="list-style-type: none"> <li>Co-ordinate design process</li> <li>Audit the project cost estimation</li> </ul>
	Pre-Construction	<ul style="list-style-type: none"> <li>Arrange tender documentation</li> <li>Organize contractor pre-qualification</li> <li>Evaluate tenders</li> <li>Participate in contractor selection</li> <li>Participate in contractor appointment</li> <li>Organize control systems</li> </ul>	<ul style="list-style-type: none"> <li>Arrange tender documentation</li> <li>Audit the qualification of contractors</li> <li>Evaluate tenders</li> <li>Assist in contractor selection</li> <li>Participate in contractor appointment</li> <li>Assist in acquiring construction approval</li> <li>Evaluate construction plan</li> </ul>
	Construction	<ul style="list-style-type: none"> <li>Monitor progress</li> <li>Arrange meetings</li> <li>Authorize payments</li> <li>Organize communication/reporting systems</li> <li>Provide total co-ordination</li> <li>Issue safety/health procedures</li> <li>Address environmental aspects</li> </ul>	<ul style="list-style-type: none"> <li>Monitor quality and time</li> <li>Provide co-ordination</li> <li>Issue safety protection</li> <li>Monitor design variation</li> <li>Monitor contract change</li> <li>Arrange payments</li> <li>Monitor budget variation</li> <li>Deal with claims</li> </ul>
	Completion	<ul style="list-style-type: none"> <li>Co-ordinate statutory authorities</li> <li>Monitor budget and variation orders</li> <li>Develop final account</li> <li>Arrange pre-commissioning/commissioning</li> <li>Organize handover/occupation</li> <li>Advise on marketing/disposal</li> </ul>	<ul style="list-style-type: none"> <li>Prepare completion report and document</li> <li>Co-ordinate statutory authorities</li> <li>Assist in getting occupation approval</li> <li>Arrange handover/occupation</li> </ul>
	Maintenance	<ul style="list-style-type: none"> <li>Organize maintenance manuals</li> <li>Plan for maintenance period</li> <li>Develop maintenance program/staff training</li> <li>Plan facilities management</li> <li>Arrange for feedback monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Organize maintenance</li> <li>Supervise maintenance</li> </ul>
	Knowledge areas		<ul style="list-style-type: none"> <li>Integration management</li> <li>Scope management</li> <li>Time management</li> <li>Cost management</li> <li>Quality management</li> <li>Human resource management</li> <li>Communication management</li> <li>Risk management</li> <li>Procurement management</li> </ul>

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