Culture Studies in International Construction Contracting: an Overview

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ABSTRACT

Cultural issues in international construction have drawn much attention from both practitioners and researchers, for culture has been identified as a variable to explain project performance. This paper reviews the trend of the studies in international construction from the cultural perspective, especially focusing on effect of culture on communication, dispute resolution, negotiation, and international construction joint ventures. The main findings are: (1) Cultural differences do contribute to adversarial attitudes and disputes in international construction projects; (2) Organizational culture of each participant in the global projects is always complicated by national culture distance and professional barriers; (3) Hofstede’s work are still be most widely referred in the researches when it comes to the cross-cultural considerations. Based on the related references, this paper presents further research topics, which is to modify the existing culture measuring instruments for the particular context of international construction and to develop a culture regulator using the improved culture measuring instruments and information technology. Such a culture regulator is expected to enhance both normal communication and negotiating process once the conflicts or disputes arise.

Keywords: culture; international construction contracting; overview; culture regulator

1. INSTRUCTIONS

International construction can date back to military installations and public works undertaken by colonial governments even before the 20th century (Low, 2000). The fragmentation of the construction industry brings difficulties in managing a construction project. In addition, complexities in international construction manifest themselves in the execution of the contract, especially those that caused by the cross-cultural management. Since global projects involve interactions among individuals, organizations and agencies from diverse national backgrounds and cultural context, problems inevitably arise from the additional misunderstandings, increased transaction costs, friction between project participants and coordination and communication difficulties (Mahaligam, 2007). Consequently, the performance of the international projects declines.

Therefore, cultural issues in international construction have drawn much attention from both the practitioners and researchers. The studies in question entrench horizontally in two ways: one is observation and exploration of the impact that culture has on the project performance;
the other is development of solutions to manage the culture problems in international project. For the former stream, studies have been conducted from various perspectives. Normally, researchers don’t head on to the impact of culture directly; instead, some mediate variables are introduced, such as partnering, performance of international joint venture, communication, conflicts and disputes, etc. Such variables are subject to the cultural factors and in turn pose impacts on the project performance. For the latter, team motivation techniques have been adopted in managing a multiethnic and multicultural project team (Miller, 2000). Vertically, culture studies in international contracting involve two levels, national culture and organization culture. When it comes to national culture, Hofstede’s work are still widely referred (Phua, 2003; Chen, 2004; Chan, 2003; Ankarh, 2005). Organizational culture studies are not particular for the international construction, as the corporate culture plays a part in nearly all industries. However, the barriers among the project participants arising from the professional distance cannot be ignored (Ankarh, 2005).

The aim of this paper is to give a general picture of current culture studies in international construction and raise some further research topics. References of the overview cover updated papers published in the key journals or by the influential academic conferences of construction management worldwide, including ASCE journals (Journal of Management in Engineering, Journal of Construction Engineering and Management), Academy of Management Journal, Construction Management and Economics, International Journal of Project Management, Construction Innovation, Engineering Management Conference by IEEE, etc. It is expected that a better understanding of the status of culture studies in international construction could be acquired and ideas for future research could be generated.

The paper is organized as follows. Section 2 gives a description of methods employed, including paper collection and selection, and delineation of scope of the overview. Section 3 presents general findings from the analysis of the materials selected with regard to the culture impact on the project performance. Section 4 addresses some issues for current research methodologies. In Section 5, the main findings from the overview are discussed and topics for future research are put forward. The conclusion is drawn in the last Section.

2. METHODOLOGY AND PAPER SELECTION

The literature on culture studies on international construction is expanding. For the present overview, we selected 7 journals/conference collected by the eminent database of “Ei Village”, which can be considered as a source of major academic journals in the field of construction management, as well as echoes the “ranking of construction management journals” (Chau, 1997). From the database, we identify all the papers from the year 2000 onwards with the key words of “culture, international project, construction management” in the abstract/subject/title. From the retrieved titles, we initially select a subset of only 7 papers available. Some papers are rejected in that they only reflect a little about the culture but not significant enough as a factor (Shen, 2001); others are rejected in that culture serves as the context instead of research focus, such as safety issues (Mahalingam, 2007), or knowledge management (Teerajetgul, 2006; Brochner, 2004).

In view of the small number of papers, we turn to earlier valuable works according to the selected paper’s reference. As a result, another 4 papers from the 1990 onwards are collected in this way, which are also sourced from the key journals.

Considering that studies on the organization culture in construction industry may not necessarily relate to international context, we temporarily cancel the limit of “international project”. From the retrieved results, we identify the papers focused on the diverse organization culture resulting from the different professions among the project participants. 3 representative papers are pre-qualified. Besides we selected another 5 appropriate papers generally related to the cross-cultural impact in this stage.

After the initial selection, all collected papers were examined in greater detail. The hypothesis, the variables considered, the sample, the case studies and the results are summarized in
order to sort them into subgroups. All the papers can be generally classified into three categories: (1) cultural impact on communication, conflicts and dispute resolution within a project; (2) organizational culture profile of particular type of participants in international construction project; (3) cultural impact on international joint venture. Obviously, cross-cultural effects on the joint venture have been an increasingly interesting research topic. To make a full understanding of such a trend, the scope is expanded to papers with regard to joint ventures. Another one paper was identified on the final selection. A subset of 20 papers was prepared for further analysis. Table 1 shows the distribution of the selected papers across the 7 journals/conference.

<table>
<thead>
<tr>
<th>Journal</th>
<th>Number of papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy of Management Journal</td>
<td>1</td>
</tr>
<tr>
<td>International Journal of Project Management</td>
<td>5</td>
</tr>
<tr>
<td>Journal of Management in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Journal of Construction Engineering and Management</td>
<td>3</td>
</tr>
<tr>
<td>Construction Management and Economics</td>
<td>5</td>
</tr>
<tr>
<td>Construction Innovation</td>
<td>1</td>
</tr>
<tr>
<td>IEEE conference</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 1 Overview of journals and selected papers

More generally, in this paper, we have restricted the discussion to impact of cultural difference on the performance of international construction projects. As a consequence, we don’t consider factors other than the culture, although some of the selected papers have a broader exploration of other factors (Ozorhon B, 2007; Ozorhon B, 2008).

3. GENERAL DESCRIPTION AND FINDINGS

3.1 General Description

All papers fall into three general categories as listed in Section 2. As an independent variable, culture difference cross the nationality and professions pose impacts to various extents on the mediate variables, such as communication, conflicts and disputes, team motivation, performance of international joint venture, etc. The main findings from the overview of the selected paper will be concluded in terms of the “mediate variables”.

3.2 Effect of Culture on Communication, Conflicts and Disputes Resolution within a Project

As is expected, culture is often associated with language and communication (Tso, 1999). Cross-cultural management frequently encounter the barriers on communication and mutual understanding, as is illustrated by Low S P(2000) and Loosemore M (1999). Low draw lessons from the case of APC-TRTSB that failure to appreciate the different style of communication in cross-cultural business may lead to misunderstanding. The consequence may be work scope creeping, overestimate or underestimate of demand of the clients, etc. Finally, it may influence the project performance in an undesirable way.

According to the key observations of research results by Chan Edwin H W (2003), the most significant factors contributing to disputes in international projects are: inappropriate contractual arrangements and cultural clashes. Using social identity theory, Phua F T T(2003) attempt to explain how construction industry developed in such fragmented and adversarial manner. On three propositions, the author calls for further accurate and comprehensive empirical investigations. With institutional theory as a framework, Mahaligam (2007) identified the conflicts on global projects systematically. A hierarchy of categories of cross-national conflicts on a specific global projects executed by a certain firm was established. Among the six sub-categories, three fall into the broad concept of cross-cultural issues, including aesthetic conflicts, differences in building codes and difference in regulations, for “culture ” has been said to be “collective programming of the minds of the entire society”; or “the
personality of society”; or “patterned ways of thinking, feeling and reacting” (Kumaraswamy, 1995), in which sense aesthetic views, building codes and regulations can be seen as the channel to express the culture value of a society.

Due to the nature of national culture, the studies on its influence on communication, conflicts and dispute resolutions cannot be accomplished in a general sense; instead, specific countries or areas are inevitably involved. This gives us profiles of national cultures as shown in Table 2.

<table>
<thead>
<tr>
<th>Country/Area</th>
<th>National Culture Profile</th>
<th>Professional Group Involved</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Strong personal relationship; high social conscience, more to collectivism; social status focus; polychronic culture;</td>
<td>Owner(Chinese); Contractor(American)</td>
<td>Low S P, 2000</td>
</tr>
<tr>
<td>Persian Gulf</td>
<td>Language of Arabic and religion of Islam prevails; High-contact cultures; High levels of silence and cognitive loops; Polychromic culture; Compared with UK, based on Hofstede’s dimensions: higher power distance and uncertainty avoidance, lower individualism and masculinity</td>
<td>Owner(Persian Gulf); Contractor(British)</td>
<td>Loosemore M, 1999</td>
</tr>
<tr>
<td>Japan</td>
<td>Paying more attention to defining success measures; Emphasizing more the achievement of schedule and cost targets; The communication System in Japan uses both intensive formal and informal communications among project stakeholders;</td>
<td>Project manager</td>
<td>Zwikael O, 2005</td>
</tr>
<tr>
<td>Israel</td>
<td>Preferring some vagueness regarding the outcomes of the project; More impacted by superior technical performance; Communications is typically verbal and hardly formulated, neither by the project manager, nor by management.</td>
<td>Project manager</td>
<td>Zwikael O, 2005</td>
</tr>
<tr>
<td>Indian</td>
<td>Informal discussion preference; Strong sense of environment protection</td>
<td>Owner(India); Architecture, engineering and construction firms(India)</td>
<td>Ling F Y Y, 2006</td>
</tr>
</tbody>
</table>

Table 2 National culture profiles of the typical countries or areas in selected papers

3.3 Organizational Culture Profile of the Particular Type of Participants

Literature review on organizational culture was thoroughly done by Zhang (2004), regarding to the origin of the study, the definition, the conceptual framework, the research methodology and the measuring instruments of organization culture. This paper focuses on the new findings on the culture profile of the typical participant of the construction project. Most of relevant researches are not initiated by the international contracting practice in that not only international project are influenced by the culture profile of the participants. However, McSweeney(2002) argues that because organizations often consist of multiple cultures that exist within and between units of the same organization, it is likely that, in addition to national culture, organizations may reflect other types of sub-cultures that interact at more micro level.
Accepting the fact that conflicts between project participants have been identified in various construction industry reports as being one of the principal causes of poor performance on construction projects, Ankrah(2005) conducts a comparative study of organizational culture between architects and contractors in order to explore the cultural clash at the inter-organization level. Architects are found to be largely informal organizations in which control and coordination are achieved through empathy between organizational members and through direct personal contract, while the contractors are largely formal organizations in which control and coordination are achieved through formal methods and procedures. The comparison of orientations between the two main players in construction project is displayed in dimensions selected from the literature review. As of enhancement of project performance, Igo (2006) diagnoses the organizational culture of an Australian engineering, procurement and construction management consultancy, using the competitive values framework. The company in question was found to be dominantly market-oriented in contrast of the employee’s focus culture which would be much more appreciated in terms of quality outcomes.

3.4 Effect of Culture on the International Joint Ventures

As a conceived variable explainable to performance of the international construction joint venture (ICJV), culture has been researched extensively in the literature related to the ICJVs. Park S H (1997) examined the effect of national culture, together with the other two factors organizational complementarity and economic motivation, on joint venture dissolution. The test rejects the hypothesis that culture distance has an effect on dissolution but confirms that opportunities threat and rivalry appeared to be a stronger indication of the dissolution of joint ventures than organizational variables. It corresponds with the research conducted by Ozorhon Beliz (2008), in which the direct influence of the cultural fit on the ICJV performance on interpartner relationships was not verified. However, inconsistent findings appeared in his earlier paper published in 2007, in which cultural fit was found to be the most important fit that should be attained between the partners (Ozorhon, 2007).

4. METHODOLOGIES ADOPTED IN REVIEWED PAPERS

Like most of the researches on social science, survey-based approaches are the dominant information collecting techniques. Questionnaire is a basic form in such surveys, whether it be communicating through face-to-face interview or via e-mails. Likert Scale is widely used in cloze choice. Besides, Phenomenography serves as an effective interpretive approach in open-ended interview (Chen, 2005).

As the traditional technique of data analysis, statistical tools are still popular (Chan, 2003; Chua, 2003; Phua, 2004). The alternative data analysis techniques are also employed to examine the relationship between the variables, such as Structural Equation Modeling (SEM) (Ozorhon, 2008).

Case study plays an important part in illustrating the cross-cultural management executed in specific countries or areas (Low, 2000; Mahaligam, 2007).

Whatever the data analysis technique the researchers resort to, dimensions of the analysis framework is indispensable. In this sense, Hofstede’s work are still widely referred (Fisher, 2001; Chan, 2003; Phua, 2003; Chen, 2004; Phua, 2004) as the basic dimensions, although it has been criticized as value-laden (Ankarh, 2005). Meanwhile, some researchers prefer to adopt more comprehensive dimensions summarized from a number of literatures and tailored to the particular field (Ankarh, 2005).
As is observed from the survey by Chan Edwin H W (2003), the most significant factors contributing to disputes in international projects are: inappropriate contractual arrangements and cultural clashes. Cultural clash may pose some influence on the contractual arrangements. Cultural clashes are inevitable to some sense; however, contract strategy is a pure artifact. In another word, we have an absolute control on it. Considering the incompleteness of the contract, we always try to make contractual arrangements on basis of as much information as possible. Information about the culture difference can be valuable to the design of the contract strategy. For example, higher uncertainty avoidance may call for more conservative risks schemes. Thus the impact of culture difference on the contract arrangements is well worth of further investigation. It may be a shortcut to handle the two primary contributors to the disputes in international projects.

From the cases and samples cited in the selected papers, we can conclude that culture clash between the participants in the global projects is always complicated by both national culture distance and professional barriers. Though the current studies address the issues from one of the perspective either national culture or organizational culture, their intricately interwoven existence cannot be ignored. In this sense, Hofstede’s dimensions don’t work well, let alone the existing defects (Ankarh, 2005). There is an adequate need to improve the culture measuring instruments for the particular context of international construction.

Among the problems caused by the culture clash, communication barriers can be seen as the starting point, for the conflicts and disputes can be attributed to poor communication. Therefore, enhancement of communication in the cross-cultural context comes first. It is recommended that a culture regulator based on the improved culture measuring instruments and information technology can be developed. Such a culture regulator is expected to enhance both normal communication and negotiating process once the conflicts or disputes arise. As a precondition, database of the national culture profiles and organizational profiles in terms of their business type should be established. It calls for the international cooperation within and out of the construction industry. The information of the typical countries or areas shown in Table 2 can be seen as the primary prototype of the unit of database.

Although cultural studies are seen as divergent; however it is generally recognized that culture can be a variable to explain the project performance whether directly or indirectly. Problems encountered in the practice of international construction, especially those at the interface level, can be attributed to culture difference to some extent. In this overview, focus was put on three aspects- (1) Effect of culture on the communication, conflicts and disputes resolution within a project, (2) Organizational culture profile of the particular type of participants, and (3) Effect of culture on the international joint ventures, for ease of discussion. The three aspects are neither exhaustive nor independent from each other. The materials used in this paper were sourced mainly from top-class research publications. Some other publications in this field may well be important and influential; however, they were not overviewed because of the availability of the sources. It is hoped that they could be expanded into in further study.

6. CONCLUSIONS

The paper combs the recent researches on culture studies in international construction published in the key journals or by the influential international conference. The main findings are as follows:

1. Cultural differences contribute to adversarial attitudes and disputes in international construction projects, ranked as one of the primary factors.
2. Investigation on the degree of cultural sensitivity from one nationality towards another within the construction industry has been conducted in specific areas, such as Eastern Asia, China, Persian Gulf, Japan and Israel etc.
3. Organizational culture of each participant in the global projects is always complicated by national culture distance and professional barriers.
4. Cross-cultural effects on the joint venture have been an increasingly interesting
research topic.

5. Though some researchers try to give a more comprehensive analytic framework to understand the cross-national issues on global projects, Hofstede’s work are still be most widely referred in the researches when it comes to the cross-cultural considerations.

In addition to analysis of findings from the overview, some future research topics are raised in this paper, which may act as a guide for further studies in this field, such as(1) Inappropriate contractual arrangements and cultural clashes could be consolidated to handle; (2) There is an adequate need to improve the culture measuring instruments for the particular context of international construction; (3) A culture regulator based on the improved culture measuring instruments and information technology could be developed

REFERENCES


