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Cultural Clashes in International Infrastructure Development Projects: Which Cultures Matter?

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ABSTRACT

Large Infrastructure Projects in developing countries often involve multiple international contractors working together. Cultural differences at many levels are likely to impact the performance of these projects. There may be differences in national cultures between international joint-venture partners. Local institutions and cultural norms of the country where the project is being built may pose challenges to international firms. There may be differences in organizational cultures between firms or differences in professional cultures between clients, contractors and consultants. Our research aims to identify the types of cultural differences likely to be the greatest sources of difficulties. We conducted detailed case studies on four, matched international construction projects – two in Taiwan and two in India. We gathered data through one-on-one interviews and observations of meetings and daily interactions among participants. Our research indicates that local institutions and work practices, together with differences in professional cultures, provide the greatest challenges to these projects. Our results on how cultural differences impact global projects can help practitioners identify likely areas of potential conflict on international projects, and researchers to identify areas of future research.

Keywords: Cultural differences, Developing Countries, Infrastructure projects, Local Institutions, Professional Cultures.

INTRODUCTION

As globalisation proceeds at an ever-increasing rate, the amount of international or cross-national activity is increasing dramatically. The opening up of markets and the injection of a certain amount of transparency into the functioning of the political machinery of developing nation-states has led to an increase in overseas investments. (Friedman 2000). Large domestic and multinational companies are setting up overseas subsidiaries, while investors and real estate developers are exploring new pastures abroad. Simultaneously many governments, particularly in developing countries, are soliciting international aid in terms of financing, technology and know-

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how, in order to speed up their development. Large-scale infrastructure projects involving participants and stakeholders from multiple countries are being undertaken in many parts of the developing world. To obtain an idea of the magnitude of this trend, Engineering News Record magazine estimates that the top 25 international firms alone perform work worth $98 billion annually (ENR Sourcebook, 2004).

However, many of these large-scale international ventures run into difficulties during the course of their lifecycle. Research indicates that only 40% of International Joint Ventures meet their prescribed objectives (Beamish and Delios 1997). Informal interviews with executives from multinational companies also indicate that international ventures are beset with difficulties that lead to unforeseen costs. What kinds of difficulties do these firms face? Why do these problems occur? These are some of the questions facing researchers and practitioners. Extant research points to "cultural differences" as being a key cause of observed inefficiencies on global projects (Pheng and Leong 2000; Abeysekara 2002). However, the terms "culture" and "cultural difference" have been given a wide variety of definitions by various scholars (Hoecklin 1994). Furthermore, there are various types of cultures: National culture (Hofstede 1991), Professional Culture (Van Maanen and Barley 1990), Organizational Culture (Martin 2002) and Founder or Leader culture (Schein 1985). How much does each of these different 'cultures' influence the outcome of global projects? Which 'cultures' are more important than others?

To date there is no comprehensive validated theory or framework that allows us to analyse and understand the problems triggered by "cultural differences" on global projects. An immediate need, based on the above discussion, is to develop such a framework. Previous work has indicated that the concept of Institutions and Institutional theory provide a means to do so (Mahalingam and Levitt 2004). The concept of Institutions provides a broader sociological framework that encompasses and consolidates the commonly considered notions of culture, and may thus prove to be a more robust building block that we can use to build a framework to analyse conflicts on global projects. In the remainder of this paper, we plan to develop this institutional framework further using empirical data. We start by reviewing extant research on the applicability of Institutional theory to global projects. In the next section we review the formulation of the problem and some preliminary research objectives. We then briefly review institutional theory to identify gaps in the theory that prevent us from directly applying this theory to explain the problems faced on global projects. We then delineate our research methodology and present some of our initial observations, analysis and findings. In closing, we discuss implications of our research to both academia and practice, and future avenues of exploration.

THEORETICAL FRAMEWORK

Merging concepts generated by Greif (Greif, forthcoming) and Scott (Scott 2001), we define ***institutions as a set of rules, norms and values that help generate a regularity of behavior***. Legal regulations are an example of institutions. They are a set of **rules** that generate **regular behavior** among all actors within their domain of influence, say a particular country. All actors within this country will uniformly need to abide by these laws—e.g. drive on the right-hand side of the road—and thereby demonstrate some regularity among their behaviour, since individuals cannot unilaterally deviate

from these rules without incurring costs. Work practices or contracting practices are another example of institutions. They may be a set of legal rules or professional norms that lead to a uniform and consistent method of project procurement and organization within a domain. Characteristics commonly classified as cultural attributes (Hofstede 1991, Schein 1985, Martin 2002), are also types of institutions. These institutional arrangements however may differ vastly from country to country or even from profession to profession. Existing research indicates that difficulties on Global Projects arise due to institutional differences. Each nation and industry has a set of institutions. The set of local institutions in a society creates a specific 'logic' (Friedland and Alford 1991)that leads to regularities of behaviour that both influence, and to some extent define, the construction industry in these countries. In the presence of participants from multiple institutional backgrounds (as is often the case in Global Projects), differences in the institutions or in the institutionally specified behaviours lead to problems, since the differences need to be reconciled for a joint activity to be successful (Mahalingam and Levitt 2004).

Research Objectives

Based on the above problem formulation, three research questions have been identified, the pursuit of which could lead to a better understanding of the challenges on global projects (Mahalingam and Levitt 2004). These research questions are:

1. What are some of the most relevant institutions that lead to added costs on global construction projects?
2. How do differences in Institutionalised Behaviours between project participants affect their behaviours, interactions and task characteristics on projects?
3. What are the institutional costs that result?

In this paper, we will primarily focus on the first research question that has been identified above. We will first look at what the existing academic literature has to offer towards answering these research objectives.

LITERATURE REVIEW: INSTITUTIONAL THEORY

According to institutional theorists, a firm's action is seen not as an instrumental choice among an unlimited array of possibilities determined by purely internal arrangements, but rather as a choice among a narrowly defined set of legitimate options determined by the group of actors composing the firm's *organizational field*. The form of this influence is manifested in institutions: rules, norms and beliefs that describe and prescribe reality for the organization, explaining what is and what is not, what can be acted upon and what cannot (Scott 2001). How do organizations respond to institutional forces? Some scholars posit that organizational isomorphism will result, wherein all organizations within the same environment will come to display similar features (DiMaggio and Powell 1983). However organizations that are more self-sufficient or those that do not need to be viewed as legitimate to survive may avoid, defy or even manipulate institutions in order to perform efficiently (Oliver 1991). Under institutional pressure, organizations may also exhibit 'loose coupling' wherein a veneer of institutional conformance is proffered (Meyer and Rowen 1977).

Work on institutional change and conflict is still in its early stages. Some indications are that disruptive events are necessary to induce institutional change (Fligstein 1991).

In terms of institutional conflict, some initial research indicates that, institutional differences at a cognitive level result in conflicts and resistance, whereas differences in formal rationalities may be easier to resolve (Townley 2002).

Gaps in the application of institutional theory:

There are significant gaps in the application of institutional theory with respect to our research questions. Firstly, institutional theorists have never considered projects as a unit of analysis. Projects are short-term activities that feature diverse teams that will disband at the end of the project. As a result there will always be a variety of institutional beliefs on projects. Secondly, the construction industry has seldom been featured in institutional theory as the domain of analysis. Thirdly, not much work has been done in describing the process of institutional change or institutional conflict at a micro level. These gaps indicate that we need to investigate global projects further in order to answer our research questions. For the remainder of this paper, our investigation will focus on the first research question that was proposed:
What are some of the relevant institutions that lead to added costs on global construction projects?

SITE SELECTION AND RESEARCH METHODOLOGY

Since we did not have a-priori hypotheses that we wished to test, we chose to pursue exploratory case studies to inform our research. We selected four projects on which we conducted case studies, two of which were segments on a high-speed Rail project in Taiwan. The first segment was a joint venture between a Taiwanese firm and a Japanese firm. The second segment was a joint venture between a Taiwanese firm and a Korean firm. The other two projects were segments of a Metro Railroad project in India. The first of these projects was a joint venture between companies from Japan, Korea, Germany and India while the second project was a joint venture between companies from Sweden, Japan and India. The contractors on these projects employed international design firms from the UK. Further, on all these projects, multiple international consulting firms were contracted to act as the client's representatives. These firms were mostly from the USA or from Japan.

Since all these projects were civil rail infrastructure projects, they exhibited technological similarities, thus providing a good basis for comparison. Further, the large amount of international involvement made these projects excellent 'natural laboratories' in which to conduct our research. Also, one of the Korean firms and one of the Japanese firms were involved both in a project in India and a project in Taiwan. This then offered a basis through which we could control for the firm and measure their performance in different cultural settings. In terms of data collection we employed both on-site 'unstructured' interviews with project participants, as well as observations conducted during project team meetings. We asked the informants to tell us stories about problematic events on the project. From these interviews we then reconstructed the incidents that occurred on these projects.

PRELIMINARY FINDINGS

By reading project documentation, we had an initial understanding of the different nationalities involved in the project and their roles. Having spent two weeks in Taiwan and three months in India collecting data and observing the projects, we

observed three primary sources of problems on these projects. We now briefly discuss each of these sources.

1. Rules vs. Results Orientation

One of the most prominent issues that we observed on these projects was a conflict between certain groups that would insist on following the exact wording of the contract; and other groups that were more intent on exercising engineering judgment and trying to progress the works as quickly and as efficiently as possible. In particular, we observed this difference in the projects in India wherein the Indian client (in this case, the government) tended to be highly 'Rules' oriented, while the international contractors and consultants tended to be more 'Results' focussed. This difference contributed to a large number of problems on these projects.

To illustrate this cultural difference, consider the following anecdote. Intermediate milestones were set on these projects and progress payments on these projects were made as and when these milestones were met. The contractors were accustomed to using these intermediate payments towards financing future costs on the project and had planned their expenses and project schedule, taking these payments into consideration. Quantity assessments were made at the end of every month and based on the milestones that were met, payments would be made to the contractors. The cost of delaying the achievement of a milestone was quite high from a contractor's perspective, as it would affect their cash flow and potentially hinder the purchase of equipment and materials, thereby disrupting their schedule.

On one of the Indian projects that we observed, at the end of a monthly billing cycle, the contractor was fractionally short of achieving a milestone. Based on other projects that they had worked on, they had expected that since they were only marginally short of achieving their milestone, the client would exercise some discretion and award them the milestone payment. This payment could then be used to finance future work. While a few British freelance expatriates whom the client hired as technical consultants shared this view, the local client representatives (who made up more than 75% of the client organization) preferred to abide strictly by the contract. In their view, the contractor would have to wait for another month to receive payment even though the contractor was merely days away from achieving the milestone. Such a decision not only placed the timely completion of the project in jeopardy, but also led to an impasse and numerous altercations between representatives of the client and the contractor, which led to further impediments to the smooth progress of the project.

This anecdote is one of many incidents that illustrate the impact on the project due to the presence of one group that was 'Rule oriented' and a competing group that was 'Result oriented'. In this particular case, the British expatriate freelancers used their authority to circumvent the chain of command, and took charge of the milestone certifying process to solve the incident. The rule-oriented nature of the public-sector client could partially be explained as a consequence of the "Vigilance" anti-corruption unit created by the Indian government in an attempt to root out corruption. This unit was charged with investigating any discrepancies on projects. Heavy punitive measures were levied, even on those who were not guilty but were merely being investigated. As a result, Indian engineers were discouraged from exercising any form of judgment, as they feared incurring the wrath of vigilance. This led to an inclination to abide by the written rule, as much as possible, often causing delays and friction on

the project—an unanticipated side effect of the government's anti-corruption drive. However, the potential impact of the Vigilance program on project costs and schedules was often mitigated by the intercession of the expatriate intermediaries, who appreciated the need to keep the project moving.

2. The Dilemma of More or Less: Partnership vs. Dictatorship:
Another set of issues stemmed from the ambiguities present in the contract document. The client entities on these projects had little or no prior experience of building such fast-track cutting edge infrastructure projects. As a result, when formulating the contract conditions they relied heavily on clauses from other comparable international contracts. Further, ambiguous clauses such as a general requirement to conform to 'Best International Practices' were included in the contract. So several areas in the contract were unclear, required judgment to adjudicate, and allowed for multiple interpretations.

For instance in one of the projects in India, the contract was unclear as to whether the structural or the geotechnical codes should be applied to the design of an underground station. The Indian client was particularly insistent that Indian Structural codes be used, which indicated that the entire weight of the soil be considered as a dead-load acting on the station. However, based on their experiences in other countries, the foreign contractors adopted a less conservative philosophy where they allowed for the soil to redistribute its load around the structure. This approach would also provide for a stable structure, and in addition was more economical for the contractor. Although this was perfectly in line with the contractual requirements, the client refused to accept this solution, as they preferred a more conservative design. The contractors were hoping that the client would adopt a 'partnership orientation' and work towards a compromise to resolve this issue, while the client insisted on having their way and obtaining a design that was arguably costlier and more conservative, than what was required by the contract. This issue led to an impasse on the project with neither side willing to change its stance. When it reached a point on the critical path such that further delays in resolving this issue would lead to a delay in the project, the client adopted a dictatorial stance and forced the contractor to comply with its (the client's) approach. The contractor reluctantly agreed, but simultaneously planned to raise this issue as a claim at the end of the project.

Many such instances occurred where, from the contractors viewpoint, clients insisted on receiving more than what was agreed upon in the contract. As far as the clients were concerned however, the contractors were offering less than what was agreed upon in the contract. The client typically approached this situation with a dictatorial orientation—wherein they tried to insist and force their view on the contractor. The contractors were expecting a partnership orientation where they would be able to work with the client and come to an agreeable compromise. This difference in beliefs and assumptions led to many difficulties on these projects.

3. Better Safe than Sorry: Safety and Quality issues
Foreign contractors were used to observing and implementing high standards of safety and quality on their projects. However, the safety and quality standards prevalent in India and Taiwan were very poor. The clients as well the international contractors were in agreement that safety and quality standards on the project needed to be high.

This led to problems as they were faced with the difficulty of having to change the mentality of local subcontractors and the labourers on the project.

The first strategy that the clients and contractors employed was a normative one—e.g., they would hold extended training sessions and toolbox talks to educate workers on the project. However, due to the incredibly low cost of both labour and insurance premiums, subcontractors were loath to comply. Also, since such stringent safety and quality standards were not being enforced on other projects in India and Taiwan, the subcontractors did not feel the need to educate their workers and incur the costs of a learning curve on this project, when there was no necessity (or from their point of view – perceived benefits) to use this learning on other local projects. Furthermore, labourers were so accustomed to their unsafe work practices that they were not keen to wear extra safety equipment in the hot, humid conditions of these projects. The client and international contractors then adopted more coercive measures. Safety guidelines were laid out and violation of these guidelines led to fines and stop work notices. This naturally led to delays and additional costs on these projects.

Over a period of time, both the safety and the quality standards on the project improved. In the final analysis, primarily due to the coercive strategies employed, the overall standards in safety and quality were raised to a level that was acceptable, but far short of the ideals espoused by the client and international contractors. In the process of doing so, the project was greatly impacted with delays and work stoppages.

ANALYSIS

Based on our findings and observations, the major problems on the global projects that we observed arose primarily due to differences in 'professional cultures' (Dictatorial client behaviour vs. partner-oriented contractor behaviour), as well as differences between locally institutionalised norms (Rule following, poor safety standards) and internationally accepted practices (Results oriented, high safety standards). This difference in orientations led to difficulties. **Professional cultures and Institutionalised Work Practices were therefore the relevant institutions or cultures, differences in which led to extra costs on these projects.**

A surprising corollary to these findings is that despite the presence of multiple nationalities on the project (Germans, Swedes, Koreans etc), there were relatively few incidents where differences in national cultural values or beliefs led to a significant impact on these projects. In fact, many of the altercations on this project, such as the dynamic of clients wanting as much as they can get, and contractors insisting on providing only what they are contractually obligated to do, were not entirely dissimilar to conflicts that arise on mono-cultural lump sum or unit price projects. These outcomes were similar, irrespective of the nationality of the international professionals. To be sure, participants felt that the owner-contractor cultural gap was more pronounced on the two sets of international projects studied, due to the impact of the Vigilance program in India, and the lack of experience of the newly created owner agency in Taiwan. The Safety and Quality issues too were characteristic of projects in developing nations and are unlikely to exist in the same manner, for instance, in a mono-cultural project in the USA. However, the fact remains that systematic cultural differences on a per-nation basis that led to major conflicts, were conspicuously absent.

Existing research discuses the existence of cultural value dimensions at the national level such as Individualism, Power Distance etc (Hofstede 1991) and the impacts of differences on these dimensions on global projects (Abeysekara 2002). Why then did differences in national cultural not have a significant impact on this project? The answer partly lies in the fact that the most of the international employees (engineers from Germany, Sweden, Japan, Korea) on the project had been groomed by their parent organizations to work on international projects. As a result, they had long, prior experience at working internationally in developing countries. This experience helped them speed up their process of acculturation. After a brief period at the beginning of the projects, during which they would go through a process of familiarization with their colleagues from other countries, they were able to flexibly adjust and negotiate any differences in national culture. Further, from a technological point of view, the relative standardization and the routine nature of many of the engineering tasks served as a common base or 'language' that helped bridge potential cultural differences.

Apart from the lack of problems due to national cultural or institutional differences, our other, and perhaps **most surprising** finding was the following: On entering the field we were confronted with a new community of expatriate freelancers (such as those employed as consultants by the client), whose presence we had neither expected nor heard about. This community consisted of individuals primarily from the UK. Most of these individuals had spent several years working on infrastructure projects in Asia and had considerable experience working in developing countries. The fact that the official language on all of these projects was English and the fact that building regulations and design standards were similar to UK building standards, aided the ability of these freelancers to work in the developing world. Either the lure of money or the desire to face new challenges was the prime motivation behind their adoption of such an itinerant lifestyle. These freelancers were not permanent employees of any of the firms on the project. Rather, they were mostly on 'project contracts'. At the end of each of these projects, they would then use their personal contact networks to find future employment. As a result, some members of this community on these projects had worked with one another before—in some cases they had previously worked for the same organization and now found themselves working on opposite sides of the contract. Members of this community staffed many key positions on these projects.

The expatriate freelancers also had a large amount of experience working in Asian countries. Many of them – in particular those who were a part of the clients team - were excellent strategists and diplomats. Since they were 'above' the reach of local institutional systems such as the Vigilance system in India, they were able act as intermediaries who would bear the responsibility and smooth over conflicts to achieve a settlement that was accepted by both the client and the contractor. The roles that members of this community played is an issue that is worth researching further.

CONCLUSIONS

The aim of our research was to identify which institutional or 'cultural' differences had the most significant impacts on global projects. Our data was collected from four projects and therefore we recognize that we will be unable to draw large-scale generalizations from our study. However, many infrastructure projects in developing countries involve similar technologies, similar mixes of nationalities and actors (international contractors, freelance expatriates, multilateral funding agencies such as

the World Bank or the ADB etc) and comparable contracting forms and structures. Therefore, we believe that our findings can indeed be considered to be representative of (albeit to a limited extent), some of the behaviours that may occur across other infrastructure projects in developing countries in Asia.

From an academic perspective, one of the significant findings of our research was that differences in professional institutions and work practices were of far greater significance than aggregate national cultural values, in terms of their impact on the project. Researchers could now focus on enumerating the different sub-types of work practices and local professional institutions – Rules-orientation and safety practices are two of many such relevant work practices that we have discussed. Further, researchers can also start to describe and model the ways in which these institutional differences affect global projects, the process flow through which these differences are resolved and the quantitative impact to project schedule or cost. One of our most surprising findings was the existence of the community of expatriate freelancers. More qualitative and quantitative research must be conducted in order to better understand the problem-solving role that this community plays on global projects. Finally, detailed case studies should also be done on global projects in other sectors and other parts of the world, in order to ascertain whether national cultural parameters are significant parameters for other types of projects.

For practitioners, our research indicates that seeking out and hiring expatriate freelancers into their organizations on global projects might help reduce some of the unforeseen costs on the project. Further, many firms currently are engaged in familiarizing themselves with knowledge of different national cultural traits when they attempt to expand abroad. Our research indicates that global construction firms may benefit more by studying and understanding local institutional arrangements such as the roles of anti-corruption units, prevalent contracting practices and standards of safety and quality. We believe that by pursuing these directions, and through future research, the trend of global projects that fail to meet expectations can be reversed.

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