

Institutional Theory as a Framework for Analyzing Conflicts on Global Projects

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Abstract: Global construction projects that involve collaboration between participants from multiple countries often result in unique challenges, and costs due to cross-national interactions. Case studies performed to investigate the cross-national interactions and tensions present on global projects suggest that institutional differences—differences in workplace norms, legal regulations, and cultural values—contribute to these costs. We demonstrate how institutional theory—a branch of organizational theory—can comprehensively describe the cross-national challenges on global projects. We show how this theory can help practitioners to more accurately classify the cross-national issues they encounter, determine the causes behind the conflicts, and judge the relative ease with which each type of conflict can be resolved. However, there are gaps in the extant application of institutional theory that prevent us from predicting institutional conflicts on global projects and devising solution strategies. These gaps are identified and a research trajectory to understand them is proposed. This paper is aimed at starting a much-needed dialogue on the mitigation of cross-national issues on global projects, and not as a demonstration of methods to eliminate all cross-national conflicts.

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Introduction

An increased need for facilities, infrastructure, and communities in many parts of the world, coupled with the international expansion of construction firms to meet this need, has led to a rapid increase in the volume of activity in the international construction industry in recent times. Over the last decade, the top 225 international contractors saw their international construction revenues rise by 53% from 1995 to 2003 (Reina and Tulacz 2004, 1996). This trend does not show any immediate signs of abating, and large construction firms such as Bilfinger Berger and Hochtief AG of Germany intend to generate at least 50% of their overall revenue from foreign projects in 4 years' time (Reina and Tulacz 2003).

The above phenomenon has led to an increase in the number of large "global projects" that involve collaboration between participants from multiple countries. As is the case for any large engineering project, large global projects involve a great amount of technological and organizational complexity in addition to complex coordination requirements. Such project complexities

and other related political, economic, and environmental uncertainties often lead to confusion between project participants, delays, and increased costs (Flyvbjerg et al. 2005). An analysis of several large engineering infrastructure projects in the energy, power, petrochemical, and nuclear sectors, the majority of which were global projects, indicated that these cost overruns frequently occurred and could range from 30 to 700% of estimated costs (Miller and Lessard 2000).

In addition to the complexities present in most large engineering projects, global projects are distinct from other nonglobal large engineering projects in that global projects involve interactions among individuals, organizations, and agencies from diverse national backgrounds and cultural contexts. Such interactions, even on technologically routine global projects, often lead to additional misunderstandings, increased transaction costs, friction between project participants, and coordination and communication difficulties. These in turn also contribute to additional costs and time overruns that are often a significant fraction of original project estimates (Orr 2005). Such costs and risks are nontrivial and are unique to global projects.

The increased frequency of these global projects, coupled with the magnitude of the difficulties that they face due to cross-national interactions, makes the study of such difficulties and their associated delays and cost overruns a problem worth investigating. Insights into the types of problems that global projects are uniquely likely to encounter due to the presence of multiple nationalities, and strategies to mitigate their effects, could greatly help these projects meet their goals successfully.

Symposia such as CIB TG-23 and CIB W-92, of the International Council of Building (CIB) in Rotterdam, The Netherlands, have studied construction practices in different countries on a separate per-country basis [e.g., Knocke (1993)] and the experiences of firms in general as they strategically expand into foreign markets [e.g., Johanson and Vahlne (1977)]. However relatively few scholars have focused on the global project as the unit of

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analysis. Of the few scholars who have studied the unique management challenges of cross-national interactions for global engineering and construction projects [e.g., Abeysekera (2003); Pheng and Leong (2000); Phua and Rowlinson (2004)], the majority [e.g., Abeysekera (2003); Pheng and Leong (2000)] have focused mainly on ways in which cognitive or value-based cultural differences between national groups affect global projects (Hofstede 1991; Trompenaars and Hampden-Turner 1998).

Although the cultural parameters these scholars considered are useful in explaining some of the unique conflicts that occur on global projects, they suffer from significant limitations. The cultural parameters considered in earlier studies adopt a monolithic view of culture and ascribe the same characteristics to all participants from a given national group. No attempt is made to distinguish the culture of an engineer from that of a lawyer, or of an engineer who has worked abroad and has thereby gained crucial experience from the culture of an engineer from the same country who has not.

Contextual variables specific to a particular setting—in our case, characteristics specific to engineering projects, such as specific engineering work practices related to quality practices, safety practices and so on—as well as the differences in these variables across national groups and the consequent problems they cause, are usually ignored. Thus, theories and parameters based on national cultural values help identify generic challenges at a broader cross-national level, but they cannot explain or predict specific risks rooted in the context of a global engineering project. There is thus a need to identify and develop a broader framework that can encompass existing theories on national cultures, incorporate engineering-specific nuances, and help to identify, predict, and mitigate cross-national conflicts on large global projects.

In this paper we take the first step toward studying unique cross-national issues that arise on global projects. The purpose of this paper is not to provide a comprehensive tool for practitioners to predict cost overruns due to cross-national interactions, but rather our focus here is restricted to conducting an exploratory case study and identifying and examining the applicability of a broad framework that can be used to examine and explain the unique cross-national issues that arise on global projects.

In the next section, we start by presenting a case study of a global project to identify the types of issues that occur as a result of cross-national interactions in the context of a specific global engineering and construction project. Using this case study, we then show that neoinstitutional theory, a branch of organization theory, provides a very useful framework to describe and understand the problem of cross-national conflicts on global projects.

This framework provides academics and practitioners with a rough guide for identifying the unique areas of risks on a given global project. However, in its current state, this theory does not allow us to estimate the magnitude of the risks and their impacts on the global projects. Hence, in the following section we identify some gaps in the application of institutional theory that prevent us from directly predicting and mitigating these challenges on global projects and indicate the need for more research.

We conclude by identifying a set of specific research questions, the answers to which will provide us with a better understanding of how to predict and mitigate conflicts on global projects, as well as a research methodology to help answer these questions. This research agenda builds upon our initial research and has the potential to enhance the success of global project outcomes.

Research Setting: Case Study of Kattadam Inc.

We conducted a case study on global construction projects involving an American firm engaging in a series of projects in Europe, in order to identify the types of issues that arise on such projects. This firm, Kattadam Inc. (the names of the firm and its employees have been disguised for the sake of confidentiality), is a successful and highly respected real estate developer in the United States. Kattadam was founded in the 1970s and has built several corporate headquarters, mixed-use centers, industrial complexes, and residential communities. Kattadam's experience in the field of real estate development in the United States is indicated by the fact that it has successfully developed over 700 projects and currently controls assets valued in excess of \$13 billion.

In the early 1990s, Kattadam decided to expand internationally to take advantage of development opportunities overseas. Its initial geographical focus was on Europe, and the firm opened its first overseas office in Berlin in 1991. In a few years, offices were opened in Moscow, Paris, London, Frankfurt, and Prague. Our research centered on Kattadam's initial high-rise development projects in France and Germany.

Kattadam's early projects in France and Germany—two high-rise development projects in France and two in Germany, all built during the same early 1990s timeframe—displayed a similarity of organizational form. Kattadam set up an investment fund in partnership with institutional investors from the local environments to provide the capital for its projects. Further, Kattadam sent experienced American managers as expatriates to provide top management expertise and direction to its projects in France and Germany. Since the types of buildings it was planning to build in these European locations had been built previously by Kattadam in the United States, Kattadam chose to retain U.S. architects with whom they had previously worked. However, they hired local engineers from the countries they were working in to act as project managers—both to manage the projects on a day-to-day basis and to link with local contractors and regulatory authorities.

Local French and German construction companies were selected to construct the projects that we studied in France and Germany. These construction firms recruited local subcontracting firms for parts of the project. The subcontractors then selected the manual labor on the project based on cost considerations; the labor was chiefly composed of immigrant Polish, Turkish, and Portuguese workers who commanded a lower wage than nationals of the host countries.

Our decision to use Kattadam as a case study was based on three factors. First, Kattadam had performed multiple projects in Europe. Gathering data from multiple case studies allowed us to use a “case-replication” methodology to test the generalizability of our findings across cases (Leonard-Barton 1990; Yin 1984). Second, Kattadam's size, employee composition, and annual turnover indicate that Kattadam is representative of large-sized real estate development firms in the United States. Kattadam's internationalization strategy of first expanding to markets in developed countries and hiring local participants as project management intermediaries is also one of the more common internationalization strategies that firms adopt (Johanson and Vahlne 1977) and leads to the creation of the kinds of global projects we wished to study. For these reasons, it was very likely that Kattadam's cases would not be unique with regard to the cross-national issues that it would encounter in its global endeavors when compared to other American real estate firms. Kattadam's experiences could therefore be considered representative of the global project context that

we wished to explore. Third, Kattadam was a willing participant in our research endeavor and was open to providing us with the data we required—a key practical consideration when embarking on field-based research (Pettigrew 1990).

Research Method

Our aim was to explore and uncover the unique types of issues that arose on global projects. Thus, to investigate the issues that arose on Kattadam's projects in France and Germany, we adopted a qualitative research methodology. Scholars have noted that such a method is particularly apt for exploratory research where the objective is to gain familiarity with a problem or to generate new insights for future research (Scott 1965; Eisenhardt 1989). Our data was mainly collected through face-to-face unstructured interviews (Spradley 1979) with project personnel. English was used as the language for interviews, and all our informants demonstrated considerable competency in this language. Typically we asked the informants to talk about the challenges they encountered working on the project, specifically with other national groups.

We interviewed over 20 American, French, and German participants who worked at various levels in the project organizations. Each interview ranged from a minimum of 45 min to a maximum of 3 h with certain participants. We interviewed expatriate managers, project managers, project engineers, local contractors, and architects. In several cases we conducted multiple interviews with several of our informants and compared comments made by various people on a given issue, to increase the internal consistency and validity of our data (Yin 1984). The interviews were conducted 2 years after the completion of the projects, yet although our informants were unlikely to remember all the minute details of the project, they were able to recall and provide details about several specific incidents. We were able to corroborate these details with other informants.

While conducting interviews, we also followed a technique of "theoretical sampling" (Strauss and Corbin 1998). If we identified a set of parameters that led to a certain outcome, we then directed our enquiries to determine the change in the outcome, given a change in the set of parameters. This enabled us to obtain a better understanding of the causes and drivers behind the incidents on these projects. For instance, we often investigated whether the observed outcome of a certain type of incident was due to the presence of national differences among the participants. We did this by interviewing participants about the processes and outcomes of incidents (e.g., design reviews) in cases where all participants were of the same nationality. We then interviewed participants to ascertain the outcomes of similar incidents when cross-national participation was involved. In this manner, we could investigate whether a particular observed outcome had occurred irrespective of the global dynamics involved, or was due to the unique cross-national dynamics that exist on global projects. We used project documentation as a supplemental data source to participant interviews.

We transcribed our interviews and then "coded" these interviews (Strauss and Corbin 1998; Glaser and Strauss 1999). During the process of coding, we went through each of the interview transcripts and extracted every reported incident or anecdote that involved project conflicts, delays, and/or extra costs. Each of these incidents was assigned to a category. For instance, delays that arose in trying to sort out the differences between American and French or German building codes were classified under the

code "problems due to differences in building codes across countries." These categories or codes emerged from our data.

We initially started with broad categories such as "problems in the design phase." However, as more incidents were coded, we were able to classify incidents into subcategories within the main category—such as "delays due to differences in building codes across countries" within the "problems in design phase" category. Once all the incidents from the transcribed interviews were classified into subcategories, we went through each subcategory and eliminated incidents that did not arise as a result of cross-national differences. For instance, on one of the projects we studied, the local supplier of reinforcing steel bars was not able to fulfill his obligations on time. However, since this incident involved a local supplier and local construction personnel, we did not consider this incident as being relevant to our study of unique cross-national issues that arise on global projects.

We then identified those subcategories populated by recurring incidents of conflicts and delays that occurred both in France and Germany (in cases where the same incident was referred to by American and European participants, we noted the nuances pertaining to each participant's perspective to examine the drivers behind the incident, but considered these anecdotes as contributing only to one incident within the subcategory). These densely populated subcategories thus indicated some of the different types of cross-national problems that were likely to occur on global real estate projects. Since each of these subcategories featured multiple incidents from different projects, they represented general types of cross-national issues with the potential to arise on other global real estate projects and were not specific to any single project that we studied.

Hence, through the systematic process of asking open-ended questions, coding across informants at various levels and from various nationalities, and by comparing their anecdotes and generated codes, we were able to arrive at a preliminary model of some of the cross-national challenges on global real estate projects. Further, these identified challenges are situated within the engineering context, unique to the cross-national dynamics present on global projects, and are general to the extent that they have been observed to occur on multiple projects within our small sample.

Findings

Through the process of coding identified above, we identified the following three main categories:

1. Problems in project planning phase;
2. Problems in design phase; and
3. Problems in construction phase.

In addition we identified the following six subcategories that pertained to cross-national challenges on global projects:

1. Problems due to different information gathering techniques;
2. Delays due to conflicting aesthetic views;
3. Problems due to differences in building codes;
4. Problems due to differences in available building materials;
5. Delays due to differences in contracting practices; and
6. Delays due to differences in regulations.

Fig. 1 depicts the codes that we generated. We now discuss each of these codes in detail.

Problems in the Project Planning Phase

In the project planning phase, we found several instances where difficulties arose due to different information gathering tech-

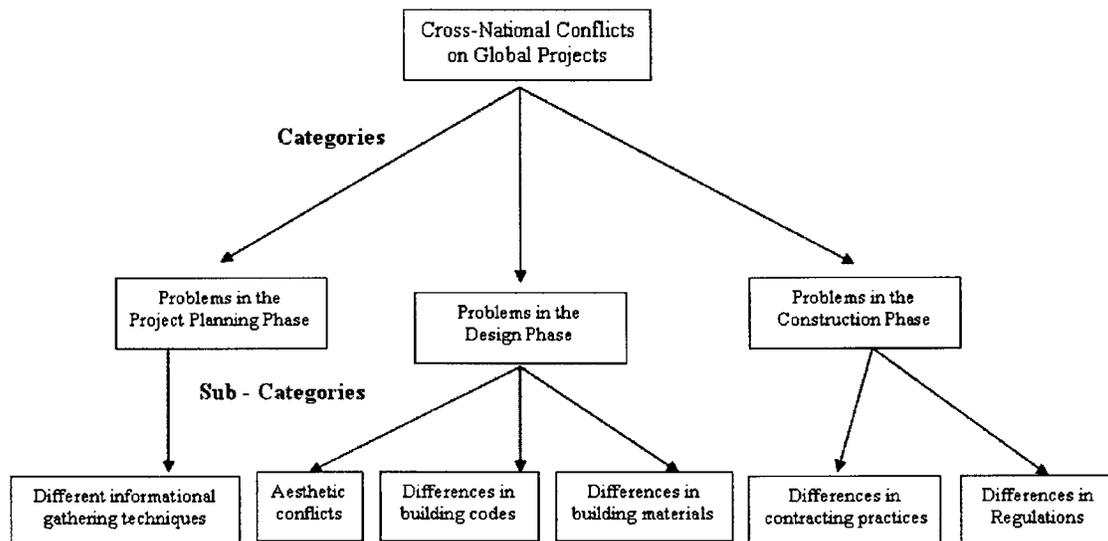


Fig. 1. Categories of cross-national conflicts on Kattadam's global projects

niques used to shape development projects in the United States and in Europe. On a project in Germany, Kattadam's corporate headquarters' marketing department in the United States had requested the local site office to collect certain types of demographic data. They intended to use these data to aid them in deciding the types of real estate developmental efforts (residential, retail, etc.) that they should pursue. However, since German markets are less open than U.S. markets, the local German employees were unable to collect these data. Initially, this led the American marketing representatives into questioning the efficacy of their German counterparts and conflict ensued as a result of these national differences in available demographic data. After several arguments and discussions, the Americans finally understood the German point of view and changed their data requirements to be more in line with locally available information. We also encountered similar problems in the French projects.

Problems in the Design Phase

Three types of problems occurred often in the design phase. We discuss them here.

Delays due to Conflicting Aesthetic Views

American and European aesthetic views frequently conflicted in the design phase, leading to project delays. For instance, most high-rise buildings with glass façades in the United States have windows that are "inoperable"—they cannot be opened and closed. Air conditioning systems control the temperature within the buildings. In France and Germany, however, most windows in high-rise buildings are "operable." The American expatriates and architects preferred to design buildings with nonoperable windows, while in contrast, the European project managers were afraid they would lose respect among their peers if they constructed an "ugly" building with nonoperable windows. In addition, they pointed out that, if such a structure were built, no one would be willing to lease it. One of the American expatriate managers working on the first Kattadam project in Germany described this scenario:

Kattadam has some specific expectations for system performance on the buildings that they build. Some of these

expectations are different in the United States and Germany. For instance, in the U.S. buildings are regulated almost completely by mechanical systems. In Germany there is a more passive approach to energy usage and consumption, substituted by operable windows that you can open—a more natural approach. In the U.S. buildings are taller in harsher conditions and there is a push towards creating totally air-conditioned environments. The process of bringing the Germans to see the American point of view and vice versa was a challenge. Kattadam came from an American perspective, trying to create an American building in Berlin. We were wrong. So in contrast to the opening stance of "We will not have these goddamn operable windows," we do have them since it's the right thing to have. It was tough to push ourselves out of our box.

Such differences in aesthetic views led to tensions between the American and German project participants. The American representatives initially tried to force their aesthetic views on their German colleagues and were rather inflexible in their stance. The German representatives met this attitude with hostility, and this led to altercations on the project. After a delay of almost a month, the Americans finally came to the conclusion that German practices were best suited for buildings in Germany, and the project was allowed to advance.

Even though the Americans had come in with preconceived notions on the aesthetic design of the structure, they were eventually able to take a decision that fit in with local cultural norms and helped the project progress.

Problems due to Differences in Building Codes

Aside from aesthetic views, differences in building codes also often led to delays. There were cases where Kattadam's architects submitted designs that violated French or German building codes. In such cases, the local French or German engineers would send the designs back, notifying the American architects of the violation. The architects then had to rework their design, which led to delays.

To be sure, the American architects knew they were working in a different environment with different building codes. In many cases, they had referred to French and German building standards and had made the necessary modifications. Not all elements of the design led to delays as a result of differing building codes. However, due to their lack of experience in working in France and Germany and due to the time constraints involved with the project design, the American architects' attempt to incorporate all relevant German and French design principles was not completely successful. There were several occasions where such building code-related issues did occur (although the number of design elements where French and German standards were incorporated far exceeded the number elements where they were not). For instance, fireproofing systems, sprinklers, and staircase designs were some of the units where differences in building codes inhibited the smooth completion of the design phase on the French projects.

Each occasion where a difference in building codes was unearthed contributed to a delay in completion of the design, since the designs had to be sent back to the United States and extra work had to be done. In several cases there was a clear reason for the difference in building codes between the United States on the one hand and France and Germany on the other, based on the historical origins of the French and German construction industry. However, there were some instances where the reasoning behind the French and German building standards was unclear. When such an issue was brought up, the American architects tried to understand the basis for the French or German standard before implementing it in their design. This process led to additional delays until the architects were able to rationalize the design philosophies.

In a few cases, their French and German counterparts could not adequately explain the rationale behind some of the building standards. In such cases the delays were greater, and there were even occasions of conflict between the American architects and the French and German engineers since the American architects did not automatically accept the French or German standards as a given. A French architect who was hired as a consultant to the American architects stated

Every time we have to teach them again. The problem is they want to understand what is the basis behind this code? If you can explain that it can work this way then they are happy. The difficulty is if we say "no the code does not allow that." They do not easily accept this. Their approach is quite pragmatic. To a certain point we can explain the history of the code, but in some case, some code issues are contradictory with reality and we can't explain why.

Thus differences in building standards between the nationals involved led to reworking drawings and some clarification discussions that were often time consuming and resulted in additional project delays.

Problems due to Differences in Available Building Materials

We also observed recurring problems due to differences in building materials. The American architects in charge of designing the structures were not completely cognizant of the availability of certain types of building materials in Europe. For instance, the American architects had designed a steel building in Germany. For various historic and economic reasons, however, steel construction was not a popular method of construction in Germany in the early 1990s, and German construction companies had only

limited experience building steel structures. A redesign in concrete had to be done, and this resulted in delays and extra costs. An American expatriate manager observed

Steel is much cheaper and more effective in the US. Germans have an entrenched history of concrete—since post World War II there was no way to pay for steel in construction. There was a big debate between Kattadam and also the German bank on the feasibility of using steel. "What do you mean steel construction?" they asked. You couldn't even find a steel contractor in the Berlin area. Kattadam came at it from an "it must be steel" perspective and then we stopped and listened to their partners and learned. At first it was very hard and we were at loggerheads on many issues. The German partners were distraught that this wouldn't work in Germany. That was tough—it was a hard discussion and we learnt.

Another problem with building materials occurred with regard to the materials chosen to adorn the façades. In one structure in France, for example, special glazing designed for the lobby was not available in Europe and had to be imported from Japan, at prohibitively high rates, thus increasing the overall project cost.

Problems in the Construction Phase

Two types of problems occurred often in the construction phase. We describe them below:

Delays due to Differences in Contracting Practices

Differences in contracting practices between American and Western European firms led to problems in the construction phase of the project. In design-bid-build contracts, American designers typically perform close to 100% of the design. Contractors in the United States usually perform no—or minimal—design, and subcontractors create "shop drawings" to specify and guide their installation activities. In contrast, designers in France and Germany perform only around 80% of the total design for the project. Local general contractors then complete the design in a manner that aids their ability to construct the work. Kattadam's American architects supplied the local contractors with almost fully completed designs in their projects in France and Germany. This upset the French and German contractors as they were not allowed to complete the designs in a manner they thought more suitable. This in turn led to conflicts. The American project manager on one of the German projects summed this situation up as follows:

In the United States, we have 100% complete working drawings since time is money and once you start it costs a lot of money to stop. Therefore you invest up front in a complete set of drawings with no ambiguity and bid them out so that, once construction starts, it never stops. In Germany it is not the culture. In Germany you create a design specification for an engineering system. Say you'd like the Air Conditioning system to perform to these specifications. The General Contractor has an engineering workforce that completes those drawings. That is an anathema to our culture. "How can you let your General Contractor design such things? You'll lose money!," etc., etc. In Europe, the General Contractor can design things the way he'd like to build it. As long as you protect yourself with the design specifications, you as the owner/designer don't have to sweat the details.

Kattadam's American representatives who were well experienced in the American construction industry came from a background wherein contractors did not necessarily have the capability to perform engineering design. Thus, they initially refused to trust the European contractors' ability to perform design. The French and the German contractors on the other hand insisted on being allowed to modify the design as per their judgment, while keeping in line with the overall design specifications. This led to several instances of long delays and negotiations on the project until the American expatriates accepted the way in which the French and German construction systems worked, and were convinced as to the design capabilities of the local contractors. As in the case of disputes over the aesthetics of the buildings, the American expatriates eventually relented and allowed the local European contractors to complete the design drawings.

Delays due to Differences in Regulations

Our final code relates to a set of problems that arose as a result of differing local regulations. Construction practices in the United States call for obtaining certain permits from the local regulatory authorities before starting construction operations. In France and Germany, many more approval permits (and in some cases different types of permits) must be obtained than in the United States; Kattadam was prepared for the existence of regulatory differences between France and Germany and the United States; they hired local contractors and consultants to help identify and deal with the local regulatory requirements, since they had not previously been exposed to European construction practices. Despite these efforts, in several instances they grew increasingly frustrated at the lengthy process of obtaining project approvals in France and Germany. A French contractor described a situation on one of the projects in France:

The way we build in France—we have a bureau of controls. It is a person who is paid by the developer and you cannot do without him in France. It is the law and several times the American people did not like this. The Americans say always “we do not have this system in America—if we want to do like this, we do like this—we don't want to have this person (bureau of control representative).” In one meeting I told the Americans, the bureau control said we had to apply for this permit and the Americans said “Bureau of control! Let them swim to America!”

We use this anecdote to highlight a problem that arose due to differences in local regulations. Note, however, that the American representatives in this somewhat amusing case displayed a level of frustration far greater than the level of frustration displayed in the other anecdotes that we heard. Nevertheless, the common point underscored by this particular incident and other similar ones we encountered is that, despite accepting the existence of differences in local legal regulations, in some cases Kattadam's representatives were unhappy with the amount of extra work they needed to do for the project to progress.

This frustration was caused in part by the fact that Kattadam's officials were not used to working in the French and German environments and thus did not know what to expect. In some cases, Kattadam's officials (as the anecdote indicates) often thought that they had filled in the required forms and prepared to perform a portion of the work, only to find that their plans were stymied by additional regulations that they needed to comply with. In addition, although they had allowed for activities such as obtaining extra local permits in their schedule, they had not ac-

curately budgeted the time needed for these activities, which led to delays in Kattadam's initial project plans. Thus cross-national differences in the amount and types of regulatory permits that needed to be acquired led to delays on Kattadam's projects.

Discussion of Findings

All the categories of cross-national issues identified above led to delays and/or cost overruns on Kattadam's projects. Kattadam's experiences cannot be ignored or viewed as an extreme case that occurred due to “cultural imperialism.” Kattadam had, to some extent, anticipated the existence of cross-national differences. For instance, Kattadam was aware that differences in building codes and local regulations existed, although they were not fully aware of all the nuances of, say, the local building codes. Further, the incidents described by Kattadam's expatriates indicate that although Kattadam came in with the assumption that many practices would be similar to those in the American construction industry, for the most part they were not entirely unrelenting in these assumptions.

After lengthy discussions, they could be convinced to change their views to be more in tune with the French and German construction practices. The incidents described above that relate to differences in aesthetic values and differences in contracting practices particularly exemplify Kattadam's ability to change its mindset. On both these occasions, Kattadam backed down from its initial stance and accepted the use of operable windows and the ability of French and German contractors to create design drawings. Kattadam was thus affected more by a lack of relevant cross-national knowledge and experience than by “cultural imperialism.”

To offset their lack of relevant knowledge, Kattadam could have spent more time investigating the local construction practices in France and Germany before entering these markets. However, formal research studies would have been time consuming and difficult to conduct. There is a lack of relevant and available material to identify differences between the way the construction industry operates in the United States versus how it operates in France or Germany. Although some literature provides information on global projects, most of it is written more in the form of a memoir [e.g., Richards (1999)] or set of anecdotes, as opposed to general theoretical frameworks and strategies that practitioners can apply in their own contexts.

Kattadam had recruited local French or German representatives as project managers to help them overcome some of these cross-national differences and to liaise with local contractors. These managers played an advisory role and helped mitigate the overall effect of several cross-national differences by alerting Kattadam to these differences and playing a mediating role between Kattadam and the local contractors. Cross-national conflicts would most likely have been much greater in the absence of these local representatives. However, since the ultimate decision-making powers had not been devolved to these representatives and were still in Kattadam's hands, Kattadam's representatives had to ultimately negotiate the cross-national differences that occurred. Thus, these conflicts due to national differences could not be completely avoided.

Further, Kattadam is not unique with respect to having experienced such cross-national problems on their construction projects. Pheng and Leong (2000) report a similar incident relating to our coded category—“delays due to differences in contracting practices”—in their study of a hotel development project in China with American participants. Differences in the amount of

design work done by American versus Chinese building contractors led to problems on this project. Also, Orr (2005), in his study of global project participants, reports several incidents related to our coded category—"problems due to differences in available building materials." Thus it is not uncommon for firms in the global construction industry to experience cross-national problems of the types that Kattadam encountered.

For these reasons we believe that our findings are not an instance of an extreme case, but can be indicative of the types of cross-national issues encountered within the domain of global real estate projects involving firms that venture into unfamiliar international environments. Such issues could also occur in familiar global environments if large personnel turnover exists from project to project and knowledge transfer mechanisms within the organization are absent.

While Kattadam's experiences were not extreme, the codes that we unearthed can by no means be considered as exhaustive or completely representative of cross-national issues on global projects. Our research was restricted to global real estate projects, and as a result we were not in a position to observe contextual nuances that would arise in, say, large global transportation projects. Also, the size of our sample was not large and therefore our findings cannot be overgeneralized to all real estate projects.

Depending on the context and the nations involved, global real estate projects could experience different sets of cross-national problems. Nevertheless, the purpose of our exploratory case study was not to generate a comprehensive list of cross-national issues that occur on global projects, but to study some representative case examples and attempt to find a theoretical framework that would genetically describe and explain cross-national problems on global projects. We believe that sociological neoinstitutional theory is one such framework. In the next section, we take a break from our empirical research and introduce the basic concepts of neoinstitutional theory, following which we return to the Kattadam case example and demonstrate the theory's applicability as a unified framework to explain challenges on global projects.

Neoinstitutional Theory

Neoinstitutional theory evolved in response to certain practices, procedures, and structures that could not be explained by prevailing rational-actor theories (Goodrick and Salancik 1996). For instance, bureaucratic organizations continued to follow rules that in some cases interfered with the organizations' purposes (Merton 1936). In such situations, rational-actor theories would have predicted the demise of such rules. Scholars attributed this anomaly to taken-for-granted schemas that the environment imposed on actors and regulated their behavior in nonrational ways. These beliefs or schemas are termed "institutions."

Merging concepts elaborated by Greif (2005) and Scott (2001), we define institutions to be "a set of norms, rules and values operating in a given environment that help generate a regularity of behavior among actors affected by that environment." Institutions are environmental characteristics that influence groups of actors and lead to a regularity of behavior among actors in the domain of influence of the institutions. This regularity of behavior may not necessarily be completely rational or consistent—it is often arbitrary.

For example, legal traffic rules are institutions imposed by governments that lead to a regularity of behavior where people drive on the right side of the road in the United States and parts of Western Europe. In other countries, a different instance of this

institution may lead to a different regularity of behavior where people drive on the left side of the road. Early institutional literature stressed the ways by which institutions constrained and directed people to behave in certain regular, perhaps nonrational but homogeneous ways (DiMaggio and Powell 1983). Organizations and actors conform to institutionally specified behaviors since they provide legitimacy. This implies that actors in an environment, say, the French construction industry, would all exhibit certain similar types of behavior.

Several studies have shown that institutions persist and are very difficult to change [e.g., Zucker (1977); Van de Ven and Garud (1994)]. However, while early studies emphasized conformance to institutions, recent studies have focused on how organizations strategically respond to institutional pressures (Oliver 1991), how actors influence and structure institutions (Barley and Tolbert 1997; Giddens 1979), how an organization might proffer a veneer of conformance to the institutions whereas its actual practices may vary considerably from institutionalized norms (Meyer and Rowen 1977), and how organizations and actors bring about institutional change (Hoffman 1999).

Given these basic ideas behind institutional theory, we next analyze how this theory performs as a framework to analyze the problem of cross-national conflicts on global projects.

Institutional Theory as Framework to Analyze Global Projects

Institutions lead to regularized or homogeneous behavior within a group, but institutions can often underline differences across nations, as well as industries, firms, and individuals. For instance, the construction industry in the United States has a certain set of institutions (e.g., local regulations, contracting practices) that regularize participant behavior in a certain way. Players in this market take these institutional pressures for granted and behave in relatively regular and predictable ways where for the most part they abide by these institutional forces. However, the construction industry in another country may have different instances of the same institutions (local rules, contracting practices, etc.) that lead to different taken-for-granted regularities of behavior compared to that present in the United States. The construction industry in another country may also have different institutions as compared to the United States (e.g., the expectation and acceptability of bribery). Thus, due to differences in the behavior specified by these institutions, people tend to act in different ways across countries.

Further, many comparative studies of institutions in different countries indicate that it is advantageous for an organization and its participants to embed their activities and procedures within the institutional environment they work in [e.g., Hall and Soskice (2001), Singh et al. (1986)]. As these studies show, firms that follow procedures that deviate from institutional pressures in an environment usually encounter increased transaction costs in conducting business within that environment. Firms are thus likely to develop structures and policies that align with the institutional pressures they face, since such practices lead to legitimacy and a competitive advantage in their home environments. Scholarly work on institutional persistence [e.g., Zucker (1977)] indicates that participants then become used to working in alignment with these institutional forces present in their home environments and begin to take them for granted. This then leads to the development of internalized institutionalized practices that are difficult to change.

Table 1. Examples of Three Kinds of Institutional Differences on Kattadam's Projects in France and Germany

S. no.	Original category	Original subcategory	Example incident	Relevant institution	Regular behaviors	Type of institutional conflict (new category)
1	Planning phase	Different information gathering techniques	Collecting marketing information in Germany	Rules on what kind of information is made publicly available	Certain types of information are available in the United States; different information is publicly available in Europe	Rule based
2	Design phase	Conflicting aesthetic views	Operable versus nonoperable windows in Germany	Aesthetic values for building facades	Europeans prefer operable windows while Americans prefer nonoperable windows	Value based
3	Design phase	Differences in building codes	Building codes for sprinklers in France	Local design rules	Certain codes are used in Europe; different codes are used in the United States	Rule based
4	Design phase	Differences in available building materials	Building materials for structural core in Germany	Norms on what types of materials are frequently used	Certain materials are used in Europe; different materials are used in the United States	Norm based
5	Construction phase	Differences in contracting practices	Extent of design that contractors can perform in Germany	Contracting norms and work practices	European architects contract to do 80% of construction drawings and contractors do the final 20%; split in the United States is 100% and 0%	Norm based
6	Construction phase	Differences in local regulations	Building permits to be obtained for construction in France	Local construction rules	In United States one must obtain certain building permits; in Europe one must obtain multiple additional permits	Rule based

These insights from institutional theory, along with our findings from the Kattadam case study, help us formulate the issues arising due to cross-national differences on global projects. As institutional theory would predict, Kattadam's global projects featured different institutions—rules, norms, and values—at a national level, in the construction industry in the United States versus France and Germany. Taken-for-granted understandings with respect to institutions, such as contracting practices, the roles of specific professionals, aesthetic values, and local materials, varied between the American and French and German participants.

When American and European participants interacted on a project, participants tried to behave in a manner specified by their own set of national institutions, a mode of behavior they had become used to. In many cases, this led to contradictory opinions on what to do or how to do it. These contradictions had to be resolved for the project to progress. However, in many cases, national groups on Kattadam's projects were not completely aware of the differences in institutionalized views prior to the start of the project. Even when they were acquainted with this difference in institutional views on aspects such as aesthetics and contracting practices, participants were—in accordance with the studies on institutional persistence—unable to instantaneously abandon the practices they had used for years in their home environments, since they were used to employing such practices and had taken them for granted. This led to a series of lengthy discussions before these institutional differences could be resolved. The delays caused by these discussions, in turn, led to poor performance on the projects.

For instance, in the case of the incident relating to operable versus nonoperable windows in Germany, there was a difference in institutionalized values relating to aesthetic standards for

façades. These institutionalized values produced a certain type of regular behavior among the Europeans (they all preferred, and took it for granted, that high-rise buildings would have operable windows) and a different type of regular behavior among the Americans (who all preferred to have nonoperable windows). These opposing views clashed and neither party was willing to relent, as each party was used to working in ways dictated by their own institutional environments. Thus, discussions and delays ensued before a resolution was reached. In the incident relating to the extent of design that contractors were allowed to perform, there were national institutional differences in professional norms relating to construction work practices and professional roles of different project participants, such as architects and general contractors.

Institutional theory identifies three categories or types of institutions—regulative, normative, and cognitive or value based. Thus institutional conflicts can take three forms: conflicts due to differences in rules or regulative institutions, differing institutional norms, and differing institutional values. Using these three forms as codes, we can now recode the anecdotes and subcategories that emerged from our data. Table 1 shows the result of the recoding exercise and identifies the institutional differences relating to each of Kattadam's conflicts described earlier.

Thus all the incidents and subcategories relating to cross-national issues that emerged from our data can be recoded under one of the three forms of institutional conflicts. We propose that these three forms can be used as universal codes to analyze cross-national issues on global projects. Based on the applicability of institutional theory to our findings, we believe that institutional theory can be used as an effective framework to describe exhaustively and categorize the unique challenges found on global projects.

Based on an analysis of Kattadam's experience and institutional theory, we can now formulate the problem of issues arising as a result of cross-national problems on global projects as follows:

Cross-national problems on global projects arise due to national institutional differences between participants. Each nation (or other social grouping) has a set of regulative, normative, and cognitive institutions, each of which create specific "logics" that lead to regularities of behavior. Differences between these regularities of behavior among participants drawn from different nations occur on global projects. Project participants often wish to persist with their own cultures and work practices as they are used to working with such practices in their own institutional environments. When neither side is willing to relent, conflicts result on which practice to follow. Reconciling these differences and determining how to act in the face of unfamiliar, "foreign" institutions may lead to misunderstandings, extra work to resolve them, and hence extra costs to a project in terms of time, money, or quality.

It must be noted that cross-national institutional conflicts need not occur to the same extent on all global projects. The presence of a large body of experienced "global participants" could mitigate cross-national issues, or alternatively, the "institutional gap" between the sets of institutions on a project might not be large enough to cause significant conflicts. A project in the U.K. involving Welsh, English, and Irish participants might proceed relatively smoothly with regard to cross-national conflicts.

Benefits of the Institutional Theory Framework to Practitioners

The purpose of this paper is not merely to draw attention to the fact that differences exist between construction practices in different countries—an observation that is quite intuitive for most practitioners. By formulating the issue of cross-national tensions on global projects as resulting from the conflict of opposing institutional forces, we provide a clear framework to understand and attempt to solve these tensions. As we have already observed, most studies on culture have tended to concentrate only on value-based differences without paying attention to the specific work context. These studies characterize cross-national issues as resulting from abstract "cultural differences" without fully unpacking the concept of "culture." To unpack the notion of culture, we have introduced three specific categories along which cross-national conflicts on global projects can occur. These three categories, particularly the cognitive institutional pillar, subsume most conventional definitions of culture (Scott 2001). Practitioners can now classify cross-national issues on global projects into one of these three specific categories of institutional differences, as opposed to broadly branding them as cultural differences.

Differences in regulative institutions are enforced by state police powers; violating them leads to fines or imprisonment. Normative differences are enforced socially by peer groups; a group member who violates group norms incurs social sanctions such as isolation or ridicule from other group members. And a person who acts in conflict with her or his own values incurs unpleasant cognitive dissonance. Each category has its own unique set of properties and is enforced in different ways, so separate strategies must be evolved to address and mitigate issues under each of these categories.

For instance, institutional theorists generally agree that differences in regulative institutions—those explicit and formal rules that are followed and lead to regular behavior within society, and not legal rules written on paper that may or may not be followed—are generally the easiest to resolve [e.g., Scott (2001)]. In most cases, institutional differences that arise as a result of regulative differences come about as a result of ignorance on the part of one party about the regulative institutions followed in another environment. Since the fact is easily accepted that different regulative institutions or formal rules exist in different environments, such differences can be resolved relatively easily through quick-fix solutions such as summarily educating participants on the different regulative institutional viewpoints.

However, issues that arise due to differences in norms are less clearly understood and therefore more difficult to resolve. Also, differences arising due to cognitive or value differences are the most difficult ones to resolve, since resolving such conflicts often involves changing deep-seated values that can often not be formally expressed or articulated. We observed this in Kattadam's case. Kattadam easily accepted and dealt with the issues that arose due to differences in building codes or local regulations, but it took comparatively longer to resolve issues such as that of differences in aesthetic values. Thus the latter issue resulted in greater "cross-national cost" than the former ones.

Although this might not be a universally applicable rule, project managers can benefit greatly from these insights. For example, as a first step, project managers can classify each cross-national issue that occurs or is likely to occur as a problem due to differences in regulative, normative, or value-based/cognitive institutions. The conflict mitigation strategy can then be based on the insight that regulative institutional differences can potentially be solved relatively quickly through providing information on the different regulative requirements to project participants. Different and more elaborate strategies must be designed to solve issues arising due to normative or value-based institutional differences.

Institutional theory thus provides a framework where practitioners and academics can differentiate between and understand the root cause behind the nature of a cross-national conflict. Practitioners can then design strategic response templates that are optimized for each category of institutional conflict, as opposed to using ad hoc methods of conflict resolution or one-size-fits-all systems for cross-national issues.

We have shown institutional theory to be a useful tool that provides clarity on how to view the cross-national issues on global projects. The next logical step toward mitigating institutional conflicts would be to determine the strategic responses that can mitigate each type of institutional conflict mentioned above. Given a set of situational parameters on global projects, can institutional theory help us predict the conflicts that will occur and design strategies to mitigate them? It is to this that we turn next.

Gaps in the Application of Institutional Theory

To predict the occurrence of and outcome of cases involving cross-national institutional conflicts, as well as to design strategies to mitigate them, we will need to obtain a better understanding of the following issues:

1. What are the relevant institutional rules, norms, and values for which differences lead to significant added costs on global construction projects?
2. What are the dynamics involved in the resolution of institutional conflicts and what are the factors that govern them?

By determining the salient institutions that govern global projects, and given a profile of a global project and its participants, we can attempt to predict areas on the project where institutional conflict is likely to occur by looking for institutional mismatches. Also, based on the theoretical insights regarding how parties behave under cases of institutional conflicts, the parameters that govern the resolution of these conflicts, and so on, we can then design interventions to help mitigate conflicts. These interventions can range from redesigning the project organization to prevent certain kinds of cross-national institutional conflicts, providing specific training and awareness programs, utilizing professional mediation services, and so on.

However, two gaps in the extant institutional theory literature prevent us from directly answering these questions and achieving the above aims. In relation to our first question, apart from work by Stinchcombe (1959) and Stinchcombe and Heimer (1985), a transaction cost perspective by Eccles (1981), and some insights on the organization of construction firms (Hillebrandt and Cannon 1990), very little work has been done in analyzing institutions that are prevalent in the construction industry.

Regarding our second question, a large and growing literature exists that analyzes how institutional viewpoints can be changed and what happens when opposing institutional views conflict. For instance, in some organizational contexts, several scholars have noted that when institutions conflict, the institutional form that enjoys greater leverage is likely to emerge as the dominant logic [e.g., Phillips et al. (2000); Haveman and Rao (1997)].

Several of the incidents in Kattadam's case align with this view. In the case of the extent of design that a contractor can perform and in the case of whether windows should be operable or not, Kattadam finally gave in to the local institutional logics, as these views held more leverage in the local environment. As a real estate developer, Kattadam's projects were all deeply embedded in the host country's institutions, and since Kattadam was subject to local regulators and reliant on local contractors and consumers to build and occupy its buildings, they saw fit to abide by the local institutional views.

However, other scholars have observed and described several cases for which institutional conflict becomes a contested, multi-level process where different logics negotiate with one another and a "middle-ground" compromise between these views is reached [e.g., Schneiberg (1999); Hoffman (1997)]. Still others have noted that institutional conflicts and shifting political alliances could lead to the rise of new institutional forms (Scott et al. 2000; Morrill 2003). In some cases the fragments of the competing institutional views can be patched together in a process termed as bricolage (Douglas 1986), to create new and hybrid institutional forms [e.g., Clemens (1996); Haveman and Rao (forthcoming)].

These studies provide practitioners and academics with some helpful but still preliminary insights on how institutional conflicts are likely to play out in different situations and the factors that affect their resolution. However, they suffer from some key limitations. Chief among these is the fact that scholars who have studied institutional dynamics in different settings and have noted factors that influence the types of resolutions that occur have not considered institutional conflicts in project settings.

Projects are short-term activities that feature diverse teams (with different and often conflicting sets of institutional beliefs) that will disband at the end of the project. Due to their limited temporal nature, processes such as learning, transfer of information, the formation of institutionalized arrangements, and the resolution of conflicting institutions do not have sufficient time to

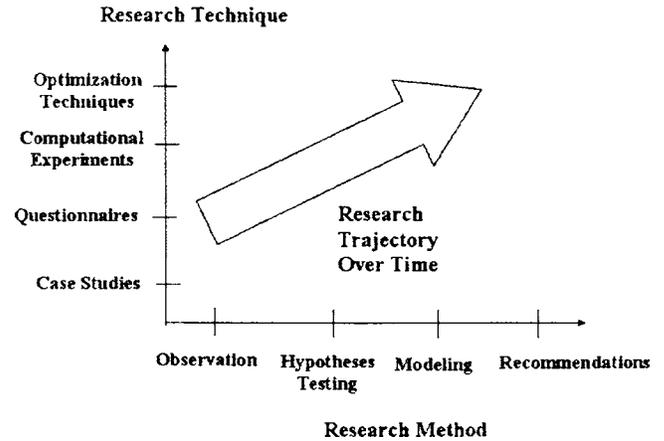


Fig. 2. Overall research trajectory

develop fully and are frequently disrupted. Institutional dynamics in project settings are therefore somewhat unique as compared to other more permanent settings where time frames are longer. Thus Kattadam and their European counterparts were forced to reach a relatively quick agreement, since inordinate delays would affect both parties. If this time constraint were relaxed, the eventual outcome might also have changed.

In addition, the various works on institutional conflict are yet to be integrated. Various studies have documented and analyzed the different types of resolutions to institutional conflicts, but there is no clear understanding as yet of when a certain kind of outcome will result, and what situational parameters will determine whether, say, a dominant institutional form will overcome a weaker one, as in Kattadam's case, or a completely new, hybrid set of institutions will emerge in a given situation.

The above limitations prevent us from directly applying existing theories on institutional conflicts to the study of global projects. While such theories might provide hints on how institutional conflicts can be resolved, managers on global projects cannot rely on these hints to predict the kinds of conflicts that will occur on their projects and how these conflicts will unfold. This in turn inhibits our capacity to design appropriate strategies to mitigate these conflicts.

The two research questions identified at the start of this section highlight fundamental issues that must first be answered in order to design strategies to mitigate cross-national issues on global projects. We now briefly describe a proposed research trajectory that can help us answer these two specific research questions.

Proposed Methodology

Fig. 2 describes our proposed research trajectory. Since research on sociocultural and institutional issues on global projects is still in its early stages, we recommend initially conducting qualitative field research (Strauss and Corbin 1998) in the form of more case studies (Yin 1984; Spradley 1979) on various types of global projects. The objective is to understand better the institutional dynamics that occur most frequently and have a large impact on global projects. We recommend using techniques of data collection, coding, and analysis that are similar to those used for the Kattadam study.

Hypotheses can be constructed from these observations and can then be tested rigorously using questionnaires and quantitative analysis. These hypotheses should relate to the ways in

which institutional conflicts are resolved as well as to the types of institutions that affect global projects greatly. Validated hypotheses that describe behavior on global projects can then be used to develop representations and reasoning logic to build cause and effect models or “computational simulations” [e.g., Horii et al. (2005); Jin and Levitt (1996)], which can be used to make predictions.

Practitioners can also use such models to perform “what-if” analysis and virtually test out different strategies to minimize the added cross-national institutional costs on their multinational projects. These models can then be calibrated using real-world data and further refined using optimization techniques. Such techniques can be used to suggest interventions that will minimize cross-national conflicts on global projects. By generating findings throughout this research process, we can make recommendations to practitioners on ways to mitigate institutional conflicts.

Conclusion

The aim of this paper is not to demonstrate methods and tools to eliminate all cross-national conflicts on global projects. It was also not our intention to comprehensively document the kinds of issues that construction firms are likely to face as they expand globally. Rather, we see this research as the first in a set of stepping stones that will help us enhance our understanding of the issues unique to global projects.

The primary contribution of this paper has been to identify a comprehensive analytic framework (institutional theory) that can be used to understand the cross-national challenges on global projects. This framework helps to explain the occurrence of cross-national issues on global projects as resulting from one of three kinds of differences among project participants: those in regulative, normative, and cognitive or value-based institutions.

Using the evidence from the Kattadam case studies, we have shown that each instance of cross-national conflict on the global projects we studied arose as a result of one of these three kinds of differences. We have also demonstrated how institutional theory’s extant findings such as the dynamics behind institutional persistence help us better understand the drivers behind cross-national conflicts. This in turn helps us develop a richer taxonomy and a more accurate formulation of the problem of issues arising due to cross-national differences, as opposed to merely classifying them as cultural differences.

We have also shown that this framework can already begin to be useful to practitioners faced with real cross-national conflicts on global projects, who can use this framework to classify the cross-national issues they encounter. This classification can help practitioners determine the causes behind the conflicts, the relative ease with which each type of conflict can be resolved, and preliminary strategies that can be used to solve them.

However, institutional theory does not provide all the answers in terms of resolving cross-national conflicts. Institutional conflicts on global projects have not been studied closely enough for us to predict the specific kinds of conflicts that will occur on a given global project and to design specific strategies to mitigate them. The role of factors such as the presence of participants with global project experience in determining our choice of strategy is still unclear. We have consolidated these issues in the form of two broad research questions that need to be answered and have proposed one possible methodology to answer these questions.

Our primary purpose in writing this paper was thus to set out a promising framework that allows us to conceptualize and ana-

lyze cross-national issues on global projects. In this paper we have also proceeded a step further in identifying the limitations of this framework, as well as the intellectual gaps in current knowledge, and have laid out the groundwork for future research. We now invite researchers and practitioners to further critique this framework and help extend it. We also call upon them to contribute toward answering the research questions we have identified through further analysis of global projects, so that our understanding of the nature of cross-national issues on global projects and the ways in which they can be overcome can be increased.

The problem of cross-national issues on global projects has not been adequately addressed thus far. Enhanced understanding of the causes of and remedies for institutional conflict on global projects undertaken to provide drinking water, sanitation, transportation, telecommunications, and housing for the more than one billion additional inhabitants of our planet in the next decade can help to enhance the welfare and security of mankind in an increasingly interconnected and global world. We present this paper as the start of a much-needed dialogue on the mitigation of cross-national issues on global projects.

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