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Multinational teams incorporating freelance expatriates in the construction industry: case studies of high-speed railways in China and Taiwan

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Freelance expatriates are an important element of the workforce in international projects that are relatively knowledge-intensive and highly specialized. Their expertise and knowledge, accumulated through experience gained by travelling from project to project, is a crucial asset for projects. Incorporating freelance expatriates into project teams allows firms to be flexible and competitive in the international market. However, despite a wide range of research on expatriation in fields such as human resource management and international business management, studies of freelance expatriates in the international construction industry have just begun. Little is known about the major challenges impeding their working relationship with their local colleagues. This paper addresses this question in four ways: (1) we identify eight challenges—expectation gaps, outsider effects, client–contractor tensions, cultural differences and subgroup formation, different values, different norms, different practices and language barriers in communications—from previous studies on 'boundaryless careers' (i.e., the careers of freelancers) and on international project teams; (2) we elaborate and refine the eight challenges via case studies on freelance expatriates' working relationships in three high-speed rail projects in China and Taiwan; (3) we discuss the nature of these challenges from an institutional perspective—i.e., based on role definitions and division of labour in a labour market, signalling systems and reputational networks and (4) we identify potential strategies that could be used to deploy freelance expatriates more effectively in the construction industry.

Keywords: Freelance expatriates, high-speed rail projects, international construction, multinational teams, work relationship.

Introduction

While freelance professionals have become an increasingly important workforce providing core skills and knowledge in a knowledge economy (Arthur and Rouseau, 1996; Barley and Kunda, 2004), *freelance expatriates* in the construction industry, a temporary workforce with specialized technical expertise, have a long history of working across organizational and national borders. Since the product of construction projects is immobile, highly skilled professionals have to travel to where projects need their specialized expertise. For example, in medieval Europe, English, French and German masons moved to where cathedrals were being built internationally.

Freelance expatriates are an important workforce in international projects that are relatively knowledge-intensive and highly specialized. Although technical skills and expertise have been the primary motives of employing freelance expatriates, international firms have begun to realize the potential of acquiring implicit knowledge of local institutions (i.e., regulations, routines, norms and cultures) from these expatriates (Javernick-Will and Levitt, 2010). Their multi-cultural experience can help to mitigate conflicts between contractual parties in international construction projects (Mahalingam and Levitt, 2005). Their domain-specific expertise and knowledge are partly contextual and implicit, accumulated through experience by travelling from project to project. As a result, these professionals,

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rather than firms, become repositories and channels of specialized engineering expertise, which is a crucial asset for projects. Therefore, managing and appreciating these professionals' expertise and knowledge are critical elements of knowledge management for global engineering and construction firms.

Despite a wide range of research on expatriation in fields such as human resource management and international business management, most of the studies to date have focused on the international assignment of managers and long-term technical employees of multinational enterprises, for example, expatriate managers sent to subsidiaries in foreign markets (Black, 1988; Aycan, 1997; Riusala and Suutari, 2004). They have emphasized internal management processes such as expatriate training and selection (Tung, 1998); acculturation (Mendenhall and Oddou, 1985; Black *et al.*, 1991; Aycan, 1997); compensation (Reynolds, 1997) and inter-unit integration, e.g., knowledge transfer to subsidiaries (Riusala and Suutari, 2004). Yet, expatriates in project organizations and their work in the context of host countries have been understudied (Brewster and Scullion, 1997; Brewster and Suutari, 2005). In particular, freelance expatriates—also called self-initiated expatriates, cosmopolitan managers or international itinerants—in the international business world have just begun to gain academic attention (Brewster and Scullion, 1997; Brewster and Suutari, 2005; Mahalingam and Levitt, 2005).

In an increasingly competitive and challenging international construction market, firms need a high level of flexibility and responsiveness to meet the various needs of the international market. So the workforce of freelance expatriates, an important source of firms' repertoire of expertise and local knowledge, cannot be ignored. Firms must understand critical issues of integrating freelance expatriates in project teams in order to tap into resources embedded in their external professional networks and to improve the efficiency and effectiveness of project teams that incorporate freelance expatriates. This paper addresses this need by identifying (1) major difficulties hindering freelance expatriates' working relationships with their local colleagues in international construction projects and (2) some organizational strategies that help to integrate freelance expatriates more effectively in global project teams.

Freelancers and expatriates

Freelancers are individuals with 'boundaryless careers' who contract contingent jobs (i.e., short-term employment arrangements) (Kunda *et al.*, 2002), whereas expatriates are professionals who work overseas. Research on freelancers and research on expatriates in the context of international construction projects offer useful points of departure.

Itinerant professionals with boundaryless careers

More and more professionals have chosen a 'boundaryless career' (Arthur and Rousseau, 1996; Barley and Kunda, 2004). They become independent contractors, no longer relying on traditional employment to provide benefits, job security and learning opportunities. Perhaps, the most well-known examples are fluid and competitive job markets in Silicon Valley (Saxenian, 1996; Barley and Kunda, 2004) and the film industry (Jones, 1996).

According to Barley and Kunda's (2004) ethnographic study on technical contracting of freelancers in Silicon Valley, their work characteristics raise three challenges for their work relationships.

(1) *Expectation gaps*: Defining a technical skill is not always straightforward. There is often a gap between what freelance professionals believe or say they can do and what the clients claim they want. Clients or recruiters need considerable skill and effort to navigate the market for expertise required on a given project, so their expectations may be escalated. In contrast, freelance professionals can be incented or compelled to package their expertise and experience in ways that attract more job offers. This can increase the expectation gap between the clients and freelance professionals that lead to disappointments. How to identify and bridge this gap is a challenge.

(2) *Outsider effects*: Despite freelance professionals' well-defined positions in organizations, the fact that they are 'outsiders' to the organizations and can walk away any time is apparent. This presents a challenge for managers to integrate freelance professionals into organizational routines and relationships in order to make the most of their expertise and increase their work commitment.

(3) *Client–contractor tensions*: Freelance professionals are simultaneously employers and employees. Focusing on technical work is no longer sufficient for their career. They need to spend their own time on accumulating social and human capital and gathering market information. They thus become acutely aware of the opportunity cost of their time and can be strategic in terms of how much of their time they should spend on their current freelance job versus searching for their next job. At the same time, their expertise is evaluated as a commodity a firm buys and uses, rather

than a human resource in which a firm invests and which it nurtures. This can create a tension between freelance professionals and their clients.

To date, little is known about whether similar issues arise in freelance expatriates' work in the context of international construction or other project teams.

Challenges in international project teams

International project teams comprising participants from multiple nations often encounter unique challenges in coordination. Institutional differences—including regulatory, normative and cultural-cognitive elements—often lead to misunderstandings and conflicts (Orr and Scott, 2008; Mahalingam *et al.*, 2010). Studies observe that cultural differences across national borders facilitate subgroup formation ('fault lines') within project teams (Cramton and Hinds, 2004) and that different values, organizational norms and professional practices often create conflicts (Horii *et al.*, 2005; Nayak and Taylor, 2009; Mahalingam *et al.*, 2010). Moreover, language barriers are found to impede communications (Nayak and Taylor, 2009) and create tensions in multinational teams (Beyene *et al.*, 2009). Although these studies focus on interorganizational relationships of joint-venture (JV) teams, internationally distributed teams or between clients and outsourcing contractors, they offer a useful starting point for understanding interpersonal work relationship among freelance expatriates and other members of a global project organization.

Strategies bridging the institutional differences

Researchers have observed several mechanisms that can help to bridge these institutional differences in international projects. At the individual level, boundary spanners who possess cultural knowledge of two cultural distinct subgroups can facilitate communication and coordination between these two subgroups in project teams (Di Marco *et al.*, 2009). Some freelance expatriates who accumulate rich cultural experience are found to emerge as boundary spanners in international projects (Mahalingam and Levitt, 2005). At the organizational level, while some computational models that incorporate cultural factors can be used to explore effective organizational designs (Horii *et al.*, 2005), specific strategies for organizational designs that bridge institutional gaps are limited. Whitley's (2006) conceptualization of project organizations provides one way to begin to understand the nature of the aforementioned challenges and to explore potential strategies by elaborating three institutional systems that support project coordination.

Supporting institutional systems

Projects, as economic activities with goals and outputs, require material inputs and supportive institutional systems in order to reduce transaction and coordination costs (Whitley, 2006). For instance, complex construction projects produce singular products involving high levels of uncertainty and thus require different compositions of skills in different sequences within short periods. For such a highly skilled, temporary workforce to be assembled and their expertise evaluated at short notice, at least three institutional systems have to be in place to keep coordination and transaction costs low:

(1) *a fluid labour market* with standardized skills, well-defined roles and a stable division of labour, where requisite skills and knowledge can be found with minimum effort and time (Jones, 1996);

(2) *effective signalling systems* (e.g., qualifications or certifications) offering credible indicators of the specialists' expertise, knowledge and performance, which allow employers' needs to be expressed and freelancers' skills and performance to be advertised and evaluated with less ambiguity (Jones, 2002);

(3) *reputational networks* 'in technical, industrial, and geographical communities [which] are often the primary means of generating reputation for competence and effectiveness' (Whitley, 2006, p. 88), especially when formal qualifications cannot sufficiently represent ability and practical performance (Grabher, 2002).

These institutional systems provide a common ground for strangers who need to work together to know how to interact and what to expect. Note that these three systems are interrelated. For instance, when certain skills and competencies are difficult to be standardized and evaluated through formal qualification systems, reputations in personal and professional networks become more important as an alternative indicator. Table 1 lists the aforementioned factors, references and definitions. This helps to identify the key issues impacting freelance expatriates' working relationships. We next identify strategies that mitigate these challenges in international project teams.

Research method

We consider case studies the most appropriate method to examine and understand the nature of the difficulties hindering freelance expatriates' work relationships in international projects within a local context. Case

Table 1 References and definitions of major factors relevant to the study

Factors	Definitions
Challenges of freelance professionals (Barley and Kunda, 2004)	
Expectation gaps	Differences between the expectation of clients/managers on freelance professionals' work and what the employed freelance professionals expect to do
Outsider effects	Difficulties for freelance professionals to fit in the teams in which they are working
Client–contractor tensions	Adversarial relations between the client/manager and freelance professionals when they negotiate their work value and performance or when the freelance professionals' commitment is considered low
Challenges of international project teams	
Cultural differences and subgroup formation (Cramton and Hinds, 2004)	Subgroups are formed along 'fault lines' between different nationalities (national cultures)
Different values (Horii *et al.*, 2005; Mahalingam *et al.*, 2010)	Different preferences in decision-making and communication
Different norms (Horii *et al.*, 2005)	Different norms and routines of adopting specific coordination and control mechanisms
Different practices (Nayak and Taylor, 2009)	Different ways of completing a task
Language barriers in communications (Beyene *et al.*, 2009; Nayak and Taylor, 2009)	Different levels of proficiency in the official language of projects and difficulties in understanding each other in verbal or written conversations
Strategies bridging institutional gaps	
Boundary spanners (Di Marco *et al.*, 2009)	Project participants who facilitate communications and mutual understandings between parties with different cultural backgrounds
Supporting institutional systems (Whitley, 2006)	
Fluid labour market	Standardized skills, well-defined roles, stable division of labour
Signalling system	Credible indicators (e.g., certifications or evaluation systems) of the specialists' expertise, knowledge and performance
Reputational network	Technical, industrial or geographical communities that share similar interests and ideologies

studies are suitable for exploiting the dynamic relationship between the context and the phenomenon observed (Eisenhardt, 1989; Yin, 2003). Most important, case studies help to address the important questions of how certain effects occurred, supplementing information relating to what factors were involved in their occurrence. We followed Eisenhardt's (1989) systematic process of case studies coupled with techniques of qualitative data analysis (e.g., Miles and Huberman, 1994).

Case selection

We chose three cases, two in China and one in Taiwan, which were the first high-speed rail (HSR) projects undertaken by governmental agencies, each of which lacked the expertise and technology required to develop this type of project. We selected these three cases for their attributes permitting meaningful case comparison. All three projects were similar in terms of type of project and technical attributes. The two cases

in China provide a cross-case comparison with conditions of different project organizations within the same set of national institutions; the Taiwan case provides comparisons with the Chinese projects under conditions of different organizations *and* institutions.

Data collection

The first author collected data from three main sources: open-ended interviews, observation and secondary archival data. Due to the tight schedule of the three selected cases, interviews were approved and arranged by responsible project managers. Because we considered locals' perspectives important to a more comprehensive understanding of expatriate–local work relationships, we interviewed freelance expatriates and their local colleagues. A total of 38 interviews were conducted with 14 expatriates in English and 24 locals in Chinese (Table 2), lasting from 20 to 120 min. All of them covered expatriates' interactions with locals and their work, including their motivations, responsibilities,

Table 2 Numbers of interviewees in the three case studies

Cases	Expatriates	Locals	Total
CHSR A	5	4	9
CHSR B	3	16	19
THSR	6	4	10
Total	14	24	38

daily tasks and ways of tackling challenges. Local informants, who worked closely with the expatriates, including their local assistants, colleagues and supervisors, were also asked about their expectation and experience in working with expatriates. The fact that the eight expatriate informants in the two cases in China had previously worked in the case in Taiwan offers a rare opportunity to compare work relationships within two different institutional contexts directly. Though personal experience can produce biased opinions, it enables these informants to capture important differences more precisely (Corbin and Strauss, 2008). In particular, we focus on participants' behaviour, perception and responses. The eight informants provided valuable data when they invariably used their experience in the Taiwanese case as a comparative baseline to illustrate their situation in the Chinese cases (e.g., ". . . this situation was not seen in the Taiwan HSR project"). The first author's fluency in both languages permitted interviews to be conducted without the assistance of a translator.

The first author conducted interviews for the Chinese cases in August and September 2007. Due to the informants' requirement for confidentiality, only note-taking (not audio recording) was allowed, and the two specific project names are replaced by labels: 'CHSR A' and 'CHSR B'. For the case of the Taiwan HSR (THSR) project, conducted in December of the same year, digital audio recording was permitted and was thus employed in all the interviews.

During the time when interviews were conducted, the first author followed expatriates while they visited jobsites, had meals with locals during breaks and participated in formal meetings when allowed, observing their interactions with other project participants in foreign settings. Secondary archival data such as formal organization charts, budgets, schedules, internal memos or letters, emails, newspaper articles and other project-related publications were also collected. Follow-up information was obtained via emails. The three case studies were conducted with the projects at different degrees of completion, but all had at least commenced the civil construction work. The case comparison was, therefore, based only on the civil construction aspects of these three projects, not their core electro-mechanical systems (locomotives, carriages, signalling and control systems, etc.), which were procured separately and installed when the civil phase was largely complete.

Coding

We transcribed and coded the data with the coding software, QSR NVivo®, to manage multiple sources of data simultaneously, including transcripts, secondary data and memos taken by the first author when conducting the field work. NVivo allows highly iterative coding and cross comparison between multiple sources of data to be administered systematically, which strengthens validity and effectiveness of the data analysis. We discussed the cases openly in four research seminars in order to deepen our understanding of the differences between the three cases and the nature of the difficulties in the informants' work relationships.

Through multiple rounds of coding, we identified 173 quotes referring to the difficulties in the work relationships between expatriates and their local colleagues and categorized these quotations into the eight categories (i.e., expectation gaps, outsider effects, client–contractor tensions, cultural differences and subgroup formation, different values, different norms, different practices and language barriers in communications) abstracted from prior studies. To further improve the internal validity of the categorization, we administered an inter-rater reliability test, initially used in evaluating the writing skills assessment (Bers and Smith, 1990) and later applied in validating quotation categorization (Nayak and Taylor, 2009). We clearly explained the definition of the eight factors to a researcher who did not participate in this research project but had studied international construction projects. The researcher was then asked to categorize the set of quotes into the eight factors. We then divided the number of categorization cases all raters agreed upon by the total number of quotes to determine the extent of agreement between two sets of categorization (Nayak and Taylor, 2009). The calculation generated a high inter-rater agreement of 0.78, compared with normal acceptable scores of 0.65 or 0.7 (Bers and Smith, 1990, p. 20), which validates our final categorization (Table 3).

Institutional contexts

The two HSR projects in China

The Ministry of Railways (MOR) was and remains the highest authority in the China railway sector. In the two HSR projects, a total of 25 contractors, along with the design institutes, were spinoffs from two giant railway group companies that had split from the MOR

Table 3 Relative frequency of key factors

Key factors	Relative frequency of quotes		
	CHSR A	CHSR B	THSR
Expectation gaps	3	10	17
Outsider effects	9	2	6
Client–contractor tensions	0	4	10
Cultural differences and subgroup formation	0	0	13
Different values	40	20	8
Different norms	20	32	31
Different practices	17	26	4
Language barriers and communications	11	6	10
Total	100	100	100
No. of quotes	35	90	48

Note: Column totals may not add up to 100 due to rounding.

earlier. The client companies newly established for the two projects comprised the MOR elites, and as the informants stated, the MOR remained the 'true boss' and 'true decision makers'. Based on the interviews, the civil work was executed under fixed-price contracts with a unit price much lower than international averages (RMB 29 000/m versus RMB 50 000–60 000/m).

Local firms entered JVs with international firms, who recruited expatriates based on technical requirements and their proprietary human resource databases. Local JV leaders interviewed the recommended candidates and made final hiring decisions. Small numbers of the expatriates were employed—about 10 to 16 expatriates in an 'engineering consultant' group of the CHSR A and three in the 'project supervision' group of CHSR B. They constituted less than 5% of the skilled workforce of their groups. Expatriate informants found it difficult to match their roles precisely with their prior experience. The 'engineering consultant' group said that their work included 'project management' and 'design consultancy'. Although construction supervision was included within the scope of the JV, the JV had limited authority to perform this duty. On the other hand, the 'project supervision' group said that their job was actually 'project managers' and 'resident engineers'. Mandarin was the predominant language used for documents and meetings in the two Chinese projects.

The THSR case

The THSR was once the largest Build-Operate-Transfer (BOT) project worldwide with a total cost of some

US\$ 15 billion (NT\$ 513.3 billion) (BOHSR, 2007). Under the BOT scheme, a private consortium, Taiwan High-Speed Rail Corporation (THSRC), was formed to construct and operate the project for 35 years. According to the local informants, the above 60% syndicated loan produced a heavy interest burden, which led to a strict and aggressive schedule requirement and a plan that emphasized minimizing maintenance costs and recouping the investment during operation.

To fulfil these requirements, the THSRC employed large numbers of freelance expatriates. In 2003, expatriates constituted about 23% of the skilled workforce with 39 nationalities. They were recruited mostly via its human resource procedure based on technical requirements and some through contracting with international firms to send expatriates with specified expertise. They worked in a wide variety of roles as engineers, quantity and quality surveyors and managers, occupying critical positions. English was used as the official project language. In addition, all 12 civil engineering contractors were international firms that formed JVs with local firms and were retained through design-build contracts.

Challenges in work relationships

The two CHSR cases had different organizational arrangements for freelance expatriates, whereas the THSR case differed from these two Chinese cases in terms of organizational arrangement and surrounding institutions. Comparing the relative frequency of quotations of the three cases (listed in Table 3) enables us to explore the possible sources (i.e., different arrangements of project organizations and national institutions) that give rise to the major issues hindering expatriates' work relationships. We examined the similarity of frequency distribution of the three cases by calculating the correlation coefficients listed in Table 4. The two cases in China have a higher correlation (0.7) than that of the other two pairs of comparison (0.4 and 0), which indicates that, to some extent, the difference of larger institutional contexts (i.e., China versus Taiwan) affects the types of challenges arising in work relationships in a multinational team. On the other

Table 4 Correlation test

	CHSR A	CHSR B	THSR
CHSR A	1	0.7	0
CHSR B	–	1	0.4
THSR	–	–	1

hand, the THSR case has a medium correlation of 0.4 with China B but nearly no correlation with China A, which suggests that the organizational arrangement of individual projects also have important effects on the types of challenges hindering work relationships.

To delve into the differences between these three cases, we sorted the relative frequency of quotes in a descending order to show the highest frequency of CHSR A first. We then marked the factors with the top 3 frequencies in each case. In both CHSR cases, more than 77% of the response falls into the same three categories: different values, different norms and different practices; in THSR, the top 3 factors only account for 61% of the response. This suggests that the informants in the CHSR cases emphasized similar issues, whereas the informants in THSR perceived more diverse issues. We next discuss the issue commonly emphasized in all three cases and then turn to issues emphasized only in the CHSR cases and those emphasized only in the THSR case (Table 5).

The common challenge: different norms

In this study, norms are defined as socially approved routines for specific coordination and control mechanisms. The three cases demonstrate similar, salient organizing rules characterized by centralization, formalization and a relatively strong top-down influence. Informants stated that a long decision-making process and bureaucratic organization slowed down the project progress and that strong governmental and political requirements needed to be fulfilled. The expatriate

Table 5 Coding results ranking in descending order

Key factors	Relative frequency of quotes		
	CHSR A	CHSR B	THSR
Different values	40	20	8
Different norms	20	32	31
Different practices	17	26	4
Language barriers and communications	11	6	10
Outsider effects	9	2	6
Expectation gaps	3	10	17
Client–contractor tensions	0	4	10
Cultural differences and subgroup formation	0	0	13
Total	100	100	100
Standard deviation	13	12	9

Note: Column totals may not add up to 100 due to rounding.

informants in these three cases perceived that their local colleagues attended to their vertical relationships (including the government, supervisions and subordinates) much more than they did to their horizontal relationships (including colleagues and other departments).

Issues with centralized authority were particularly salient in the CHSR cases. Expatriates in both cases expressed the deep frustration resulting from their lack of decision-making power to 'make a difference' in their projects. The MOR possessed the centrality of power and authority; as a contractor put it, it was 'just like God for us'. The designers were another incontestable power described by several interviewees as 'monopolies without responsibilities'. To change or modify a decision required a long process of negotiating through layers of hierarchies. As stressed by a contractor, '[translated from Chinese] basic concepts are that dignitaries lead every decision and that political power is above regulations or specifications'.

We observed from the responses in this category that, in a project organization, when formal and informal operations are decoupled in the local normative system, it becomes difficult for expatriates to grasp, and for local participants to explain, the appropriate ways of doing things. For instance, in all three cases, local informants pointed out that expatriates were unaware of informal approaches that locals used to speed things up or correct mistakes and thus tended to handle these matters rigidly. A salient example is the different approaches that the contractors and the expatriates considered appropriate in handling design changes and one-sided contracts in the CHSR cases. Some expatriates suggested to the local contractors that they should follow a practice common in the international market—that of filing claims. This suggestion struck the contractors as out of the question. The contractors emphasized that it was important to consider the clients' difficulties and that a moral principle was violated if contractors thought only of their own interest.

Another example is project meetings with the client. In one meeting that the author observed, the seating was arranged according to status hierarchy, and name cards stating positions were placed on the table in front of each seat. The speeches given by the client representatives took most of the time and individuals could speak only when addressed by the client and only when seated in a designated chair. The expatriate invited to the meeting had listed issues to bring up that day but had no chance to speak. This reflects not only different channels for 'true discussions' but also cross-cultural interpretations about the role of a meeting—as formal presentations versus forums for vigorous discussion and negotiation.

Challenges emphasized in the CHSR cases

Different values

Values are defined here as preferences related to decision-making and communication. Both expatriate and local informants reflected two major issues in this category: project priority and relational-based communication. In the CHSR cases, there was a strong pressure to meet the perceived-unreasonable budget and schedule specified by the MOR. To comply with the requirements, contractors were willing to take risky measures, which often caused accidents. But it was difficult for expatriates to accept the lowered standards of safety and quality. For example, the contractors disagreed when expatriates commented that they did not care about environmental protection and safety. They argued that China had promulgated many regulations safeguarding environment and safety, with which they strove to comply; expatriates focused on details and equal relationships, but ignored their pressure to meet the clients' requirements with a low contract price. Some actions expatriates expected local contractors to implement were simply unaffordable. For instance, although the contractors hoped to improve safety, they could not afford the safety equipment the expatriates requested. A contractor commented:

> [translated from Chinese] In China, national conditions and design philosophy are different from those of foreign countries: priority of Safety, Quality and Duration is different. Duration is the first priority [because] we have to follow the client's rule.

Moreover, the informants pointed out that expatriates emphasize 'roles' whereas locals emphasize 'people relationships'. Some expatriates sensed that locals tended to have a fear of losing face in discussions of technical issues and that they worried excessively about hurting relationships or carrying responsibilities. Expatriates were perceived as overly straightforward, sometimes blunt or even rude. These different preferences regarding communication are reflected in the fact that expatriates issued hundreds of formal letters but the clients did not respond. Both expatriate and local informants stated that locals prefer to communicate verbally or keep silent when their opinions may be undesirable, and normally, it was necessary to build a relationship before one could have a genuine discussion with locals.

Different practices

The CHSR cases employed many conventional construction methods which relied on a great amount of manpower and used limited management tools prevalent in the international construction field. For example, the 'critical path method' is commonly used for scheduling and planning in international construction practices. This method involves logical linking between activities, sequencing of construction operations and time and resources required. Local participants in the CHSR cases were not using this method and, therefore, they were not on the same page when talking about the project progress with expatriates.

Locals could quickly learn some international practices (e.g., critical path method and professional procedures for search and rescue used in tunnelling accidents) from training sessions provided by expatriates. But some other practices persisted. For instance, the design was done by a highly privileged, under-staffed group of designers and was still in progress when the construction phase began. The contractors had to work with incomplete drawings based on preliminary field survey data. This process was not uncommon during China's rapid development, but it was unexpected by the expatriates responsible for reviewing design. They found their workload increased when the design documents were given to them separately. They constantly had to press the client to get information necessary for their document review and consultant work. During the stay of the first author, they had just received the document, 'Commissioning Test', after a two-year demand. Another example was that the contractors stopped operations to clean up the sites prior to governmental officials or authorities' frequent visits. One expatriate commented on this practice in a report on the delay of a tunnel project:

> the first change that would improve morale and provide less interruption to production is to get control of the number of visits by higher ups to the site as well as get these higher ups to recognize that requirements to clean the tunnel before such visits, park the trucks outside the tunnel, etc. are all disruptive and interfere with desired progress.

Locals were fully aware of the significant difference between prevalent practices and expatriates' suggestions. They said that lack of resources prevented them from using advanced technology. In addition, some current practices had their roots in tradition and the larger institutional environment and were thus difficult to change.

Challenges emphasized in the THSR case

Expectation gaps

Responses of expatriates and local informants consistently pointed to two factors, resulting in expectation gaps. First, because it was difficult to display expatriates'

competence and to describe their work and performance with adequate precision, some expatriates and locals found that what expatriates offered was not what locals expected. Especially, local informants invariably compared expatriates' performance with perceived average performance of local engineers. For example, the assistant vice president commented that about 20–30% of them were not adequately qualified and about 10% of them should be replaced by local engineers. Secondly, most local informants expected expatriates to understand local culture and conditions, whereas some expatriates suggested the opposite because they were hired to provide different viewpoints and practices.

Cultural differences and subgroup formation

The THSRC had a diversified team comprised of some 39 nationalities in addition to its 12 international contractors. The informants said that their organizations truly 'divided' along fault lines between cross-national groups of workers. The gap between expatriates and locals worried the vice president of the THSRC. In his words:

> [Translated from Chinese] Expatriates formed a closed society. It reduced opportunities for local engineers' participation. . . They grouped up by nationalities. Sometimes they grouped up by disciplines too. Just like many 'islands' in the company.

The gap made it difficult to transfer expatriates' knowledge to locals, so that locals could take over and continue the work when the expatriates left. Even if expatriates left all relevant documents, tacit knowledge was difficult to capture. Moreover, the expatriates coordinated via their professional networks built within the project organization, talking things through in a way that circumvented time-consuming formal procedures, which unintentionally deepened the gap between locals and expatriates.

This challenge is related to employing a large number of expatriates and thus can be attributed to the project arrangement of the THSR case rather than the larger institutional environment. This can be further supported by the lack of responses referring to subgroup formation in the CHSR cases, where the much smaller number of expatriates said that they were 'isolated'.

Discussion

We began the discussion from a broader institutional level, attempting to place the major challenges aforementioned in context and to deepen our understanding of the nature of these challenges.

Standardized expertise and role definition

Whitley (2006) suggests that standardized skills, well-defined roles and stable divisions of labour are fundamental for combining a temporary, multi-disciplinary workforce in projects over short periods of time. Yet, a unified labour system for the kinds of expertise required by international projects is not yet in place. Consequently, expatriates' work and roles can be ambiguous and confusing in different institutional systems, due to different local role definitions and expectations.

The CHSR cases have a less consistent definition of roles and of the division of labour between expatriates and locals. In both cases, local organizing and managerial rules along with local language were used dominantly, whereas international practices and knowledge were introduced via a small number of expatriates. No perceivable efforts were made to mitigate conflicts between local and international systems. All of the eight expatriate informants in the two CHSR cases had worked in the THSR case. Compared with their experiences in Taiwan, they found it more difficult to fit into the team and were more uncertain about their roles in the Chinese projects, in which communication was more difficult and professional training was more different.

In contrast, the THSR case introduced international standards and roles, used English as the official language and relied on large numbers of experienced expatriates to introduce international practices. In addition, most informants perceived that Taiwan was a relatively westernized region, and many local engineers had studied in the western countries. The dominant use of international role definitions, processes, practices and foreign professionals provides a relatively unified coordination system. It reduces the difference of professional training, practices and languages between the expatriates and locals in the project. Far fewer issues of different values and practices were reported in the THSR case than in the CHSR cases. Our interviews indicate that whether or not this is desirable for the host country's long-term development, it helps to facilitate expatriates' work efficiency and contributions to projects.

Effective signalling systems (e.g., qualification or certification)

The effective signalling systems Whitley (2006) suggested provide the credibility that is critical to building the required initial trust for a new project team to work together effectively from day one. Since there were no available certification or evaluation systems signalling freelance expatriates' expertise and performance, a few local informants in all three cases voiced

the difficulties of evaluating expatriates' performance. This is partially because expatriates' expertise involves tacit and situated knowledge that cannot be formulated explicitly and universally. The nature of expatriates' work seemed to increase tension in their working relationships with locals.

In this study, we observed that international firms played the role of an intermediary temporary worker agency that has worked with some expatriates in the past and has built up a human resource database. More importantly, the reputation of the international firms and contracts serves as a regulatory substitute for the lack of common signaling systems and trust between contractual parties in attempting to match labour skill requirements and capabilities.

Technical, sectoral and geographical reputational networks

Whitley (2006) suggests that reputational networks are fundamental to self-employed careers. Networks serve as channels of information and influence as well as learning systems. In particular, self-employed, highly skilled experts perceived that 'reputation was the currency of social capital'.

Our expatriate informants universally stressed the importance of reputational networks. They developed and sustained their professional networks as instrumental sources of technical knowledge and job information. For instance, in the Taiwanese case, some freelance expatriates worked in the client organization, whereas some worked for the contractors. They sometimes talked through problems informally. Even in the CHSR cases in which a much smaller group of expatriates was employed, the emails we collected recorded their discussions of the difficulties they were facing.

However, in these three cases, reputational networks were not used as a major channel to display expatriates' ability and performance, as suggested in Whitley's work. The network may not be a familiar or useful signalling system between people across cultural or professional boundaries. In addition, the network can generate a strong identity that can increase conflict when it activates subgroup formation, which hinders interactions between blocks of expatriates versus blocks of locals (Cramton and Hinds, 2004), as we observed in the THSR case. The question of how to leverage expatriates' professional networks when a project recruits expatriates needs further study.

Differences in freelance expatriates' work relationship

We have examined eight difficulties impacting freelance expatriates' work relationships with locals in three HSR projects. These difficulties unintentionally created misunderstandings and misperceptions, which eroded interpersonal relations in project teams. Most of these challenges were mutually agreed by local and expatriate informants. This validates our assumption that the work relationship is bi-directional. Replicating the eight challenges derived from previous studies on internationally distributed teams (Cramton and Hinds, 2004; Nayak and Taylor, 2009), freelancers in a single industry (Barley and Kunda, 2004) and US-Japanese JVs (Horii, 2005) permits a deeper understanding of the nature of difficulties facing the global freelance expatriate, an individual who is collocated with his/her multinational colleagues, in their work relationships.

Expatriates versus freelance expatriates

To answer the question: what challenges in working relationships differentiate corporate expatriates (sent by international firms) from freelance expatriates in the construction field? We scrutinize the responses of the three challenges—expectation gaps, outsider effects and client–contractor tensions—that were found in Barley and Kunda's (2004) work on freelance professionals. The first two challenges are unrelated to whether expatriates are freelancers or not. Expectation gaps are largely related to the nature of expatriates' work and knowledge. Outsider effects are related to the temporal nature of their assignments or the perceived isolation resulting from being in a project with a highly different culture, norms and language.

However, client–contractor tensions are specifically related to the nature of freelance expatriates' work. In the THSR case, the vice president reported that

> [Translated from Chinese] The productivity of expats was low when they just arrived . . . and it dropped to one third in the last half year of their expatriation. They were looking for their next jobs and preparing to leave.

Even worse, a few competent expatriates left early because their reputation built in this project easily won them another desirable job. Some local informants voiced their concerns about these freelancers. Because they only stayed in the project for a short time and were free to leave even before the project was completed, it was difficult to hold them responsible for any problem that might arise from their poor performance.

Internationally distributed teams versus collocated international teams

In this study, we only looked at expatriates working in international teams collocated in one region. Some

informants were collocated in the same office building. We found that in all three cases, communication and language barriers were not emphasized as much as they are in internationally distributed teams. Two possible reasons can explain this difference: (1) communication issues can be mitigated by more frequent face-to-face interactions or (2) issues of different norms and values become more salient in close interactions. Our interviews do not support the first explanation. The expatriate informants in the CHSR cases found that communication remained difficult after two years of working in the projects. One expatriate informant in the THSR case found that communication became difficult when most expatriates left the project and locals began to speak Mandarin in meetings.

However, we found that it is likely to confirm evidence for the second explanation. We observed that the language difference created tension between expatriates and locals and escalated to a cross-cultural division that discouraged coordination. For example, in the CHSR cases, Mandarin was used in all discussions both formal and informal, which often made expatriates feel isolated and made it difficult for them to build relationships with locals. In the THSR case, English was used as the official language for the project to facilitate communication between the client team and international contractors. However, the vice president of THSRC stated that if he could start all over again, he would translate into English only those documents necessary. He stated that, unexpectedly, this simple rule became a disadvantage to local engineers and discouraged them from committing both to the project and to knowledge transfer. Moreover, English proficiency became a necessity in personnel selection for key positions and therefore determined power distribution, which created tensions in working relations between locals and expatriates.

The use of language and terminologies is a habitualized practice that reveals perceptions, feelings and intentions and underpins different cultural activities such as asking for favours or making promises (Clark and Clark, 1977, pp. 3–4). The cultural nature of language explains our observations that the language issue often spilled over from the professional domain to the interpersonal domain. The issue regarding disruption to collaboration and negative emotions in project teams that resulted from a discrepancy in levels of English proficiency has just begun to draw academic attention (Beyene *et al.*, 2009). As collaboration across national boundaries becomes more and more common, the issue needs to be further addressed.

In this study, we observed a few cases in which communication and language issues were mitigated. A few freelance expatriates from Hong Kong and Singapore spoke fluent Mandarin and had no communication issues related to language barriers. Another few expatriates reported that the difficulty was eased by partnering with capable local engineers who had international experience. This indicates that employing or seeking cooperation with 'boundary spanning' engineers who speak multiple languages and understand multiple cultures (Di Marco *et al.*, 2009) can be an effective strategy for coping with communication and language issues. Candidate boundary spanners can be found in the talent pool of freelance expatriates who are experienced in working in multi-cultural teams.

Conclusion

We have investigated challenges in expatriates' work relationships with their local colleagues. We have placed these challenges in an institutional context and have incorporated local participants' viewpoints to understand the nature and sources of these challenges. By doing so, we move one step further from identifying challenges to recognizing potential strategies for coping with these challenges.

International projects often need to assemble professionals from different institutional systems with different role definitions, divisions of labour and signalling systems. These differences lead to confusion regarding responsibilities, expectation gaps and evaluation difficulties between expatriates and locals. They also impact expatriates' work effectiveness and efficiency. Adopting an internationally prevalent system with formal efforts to integrate differences within multinational teams (e.g., the THSR case) helps to reduce perceived differences in values and practices. But perceived normative differences are salient in all three cases, regardless of the project arrangement. This implies that the normative system prevalent in a project is closely connected to the larger institutional environment of the host country where the project is located. This is apparent in our content analysis: the normative differences reflect higher levels of centralization, formalization, strong top-down influence and emphasis on vertical relationships, which closely match the institutional systems of China and Taiwan (Dickson, 1997; Wu, 2005). Moreover, the decoupling of formal and informal operations in this type of normative system creates fundamental difficulties for expatriates to grasp, and for locals to explain, appropriate approaches for communication and coordination in projects.

This study focuses on eight key challenges for expatriates derived from previous studies, which allows us to compare the results with previous findings. The comparison enables us to distinguish issues originating from the nature of freelancers' work (i.e.,

client–contractor tension) and to discuss the repercussions of communication and language barriers in collocated cross-cultural teams in-depth. Future research can look into freelance expatriates' networks to help clients in different cultural and professional regions effectively find appropriate professionals with required skills and abilities.

Multinational teams, if managed well, can turn subgroup conflict into cross-national learning and creativity (Cramton and Hinds, 2004). Our open-ended interviews focusing on individual work relationship enabled us to collect a few cases of cooperative work relationships. To facilitate such coordination and to bridge institutional gaps in practice, we identify three potential strategies for clients and their organization design consultants on international construction projects.

(1) Galbraith (1974, p. 32) suggests that *the 'decision-making language' needs to be formalized* to minimize communication costs. In international projects, language formalization should go beyond technical perspectives, such as project targets, budgets and schedules. Adopting a set of unified standards and processes like that in the THSR is one approach. Creating clear job descriptions and role and authority definitions—not just position titles—at the outset of projects will help participants recognize their institutional differences in terms of role definitions and division of labour and reduce ambiguities in expectations. Additionally, establishing formal procedures and roles to address differences in practices and communications raises awareness of possible misunderstandings in projects.

(2) *Expatriate selection procedures should include institutional capabilities* and not focus only on 'technical competence'. Firms should add expatriates' previous acculturation and institutional adaptability into their expatriate database, if they have one. They should make use of freelance expatriates' reputational networks that provide norms and motives for freelance expatriates to perform well. However, as suggested by the vice president of THSRC, given the informal and subjective nature of such networks, multiple references are necessary for a savvy hiring decision.

(3) Among all of the possible HR strategies for supporting expatriates, *employing 'boundary spanners'* is best for handling unexpected or unrecognized differences in values, norms and practices. Boundary spanners are able to bridge gaps in signalling systems and communication between participants of both sides proactively and continuously with social skills and sensitivity. For example, one assistant of expatriates in the

CHSR B helped to avoid conflicts between locals and expatriates by filtering inappropriate words when translating expatriates' comments. Some boundary spanners possess critical positions in local networks such as supportive JV partners in the CHSR B. Their established local positions and networks increased the legitimacy and acceptance of freelance expatriates' ideas by other local participants. Firms should actively search for and employ boundary spanners as liaisons in international projects to support and enhance freelance expatriates' professional performance. Experienced local professionals with international experience can be ideal boundary spanners, such as the intermediary managers in the THSR who were assigned to work side by side with expatriates and to deal with non-technical issues that arose. Freelance expatriates experienced in working in multicultural teams can also be effective boundary spanners (Mahalingam and Levitt, 2005).

Acknowledgements

References

Arthur M.B. and Rousseau D.M. (eds) (1996) *The Boundaryless Career: A New Employment Principle for a New Organizational Era*, Oxford University Press, USA.

Aycan Z. (1997) Expatriate adjustment as a multifaceted phenomenon: individual and organizational level predictors. *The International Journal of Human Resource Management*, **8**(4), 434–56.

Barley S.R. and Kunda G. (2004) *Gurus, Hired Guns, and Warm Bodies: Itinerant Experts in a Knowledge Economy*, Princeton University Press, Princeton, NJ.

Bers T.H. and Smith K.E. (1990) Assessing assessment programs: the theory and practice of examining reliability and validity of a writing placement test. *Community College Review*, **18**(3), 17–27.

Beyene T., Hinds P.J. and Cramton C. (ed.) (2009) Walking through jelly: language proficiency, emotions, and disrupted collaboration in global work. Working paper 09-138. Harvard Business School, Cambridge, MA.

Black J.S. (1988) Work role transitions: a study of American expatriate managers in Japan. *Journal of International Business Studies*, **19**(2), 277–94.

Black J.S., Mendenhall M. and Oddou G. (1991) Toward a comprehensive model of international adjustment: an integration of multiple theoretical perspectives. *The Academy of Management Review*, **16**(2), 291–317.

BOHSR T.B. o. H. S. R. (2007) *Taiwan hsr launches a new era* 台灣鐵路啓航新紀元, Bureau of High Speed Rail, Taipei, Taiwan.

Brewster C. and Scullion H. (1997) A review and agenda for expatriate HRM. *Human Resource Management Journal*, **7**(3), 32–41.

Brewster C. and Suutari V. (2005) Global HRM: aspects of a research agenda. *Personnel Review*, **34**(1), 5.

Clark H.H. and Clark E.V. (1977) *Psychology and Language*, Harcourt Brace Jovanovich, San Diego, CA.

Corbin J.M. and Strauss A.L. (2008) *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, 3rd Edn. Sage Publications, Inc. LA.

Cramton C.D. and Hinds P.J. (2004) Subgroup dynamics in internationally distributed teams: ethnocentrism or cross-national learning. *Research in Organizational Behavior*, **26**, 231–63.

Dickson B.J. (1997) *Democratization in China and Taiwan: The Adaptability of Leninist Parties*, Oxford University Press, New York, NY.

Di Marco M., Taylor J.E. and Alin P. (2009) Cultural boundary spanning in global project networks. in *LEAD 2009 Conference*, South Lake Tahoe, CA, 5–7 November. Available at: http://academiceventplanner.com/LEAD2009/themes.htm [Accessed 4 July 2011].

Eisenhardt K.M. (1989) Building theories from case study research. *Academy of Management Review*, **14**(4), 532–50.

Galbraith J.R. (1974) Organization design: an information processing view. *Interfaces*, **4**(3), 28–36.

Grabher G. (2002) Cool projects, boring institutions: temporary collaboration in social context. *Regional Studies*, **36**(3), 205–14.

Horii T. (2005) *Impact of Multiple Normative Systems on the Organizational Performance of International Joint Ventures*, Stanford University, Standford, CA.

Horii T., Levitt R.E. and Jin Y. (2005) Cross-cultural virtual design team: cultural influence on team performance, in *Construction Research Congress (CRC) 2005*, San Diego, CA, 5–7 April, ASCE, Vol. 183, p. 49.

Javernick-Will A. and Levitt R.E. (2010) Mobilizing institutional knowledge for international projects. *Journal of Construction Engineering and Management*, **136**(4), 430–41.

Jones C. (1996) Careers in project networks: the case of the film industry, in Arthur M. and Rousseau D. (eds) *The Boundaryless Career: A New Employment Principle for a New Organizational Era*, Oxford University Press, Inc, NY, pp. 58–75.

Jones C. (2002) Signaling expertise: how signals shape careers in creative industries, in Peiperl M., Arthur M. and Anand N. (eds) *Career Creativity: Explorations in the Remaking of Work*, Oxford University Press, NY, pp. 209–28.

Kunda G., Barley S.R. and Evans J. (2002) Why do contractors contract? The experience of highly skilled technical professionals in a contingent labor market. *Industrial and Labor Relations Review*, **55**(2), 234–61.

Mahalingam A. and Levitt R.E. (2005) Understanding and mitigating challenges on global projects: the role of the freelance expatriate. in *Proceedings of the ASCE Construction Research Congress*, San Diego, CA, 5–7 April pp. 248–53.

Mahalingam A., Levitt R.E. and Scott W.R. (2010) Rules *vs.* results: sources and resolution of institutional conflicts on Indian metro railway projects, in Scott W.R., Levitt R.E. and Orr R.J. (eds) *Global Projects: Institutional and Political Challenges*, Cambridge University Press, Cambridge, UK.

Mendenhall M. and Oddou G. (1985) The dimensions of expatriate acculturation: a review. *Academy of Management Review*, **10**(1), 39–47.

Miles, M. B. and Huberman, A. M. (1994) *Qualitative data analysis: an expanded sourcebook*. Sage Publications, Thousand Oaks, CA.

Nayak N.V. and Taylor J.E. (2009) Offshore outsourcing in global design networks. *Journal of Management in Engineering*, **25**(4), 177–84.

Orr R.J. and Scott W.R. (2008) Institutional exceptions on global projects: a process model. *Journal of International Business Studies*, **39**(4), 562–88.

Reynolds C. (1997) Expatriate compensation in historical perspective. *Journal of World Business*, **32**(2), 118–32.

Riusala K. and Suutari V. (2004) International knowledge transfers through expatriates. *Thunderbird International Business Review*, **46**(6), 743–70.

Saxenian A.L. (1996) Beyond boundaries: open labor markets and learning in Silicon Valley, in Arthur M. and Rousseau D. (eds) *The Boundaryless Career: A New Employment Principle for a New Organizational Era*, pp. 23–39. Oxford University Press, New York.

Tung R.L. (1998) A contingency framework of selection and training of expatriates revisited. *Human Resource Management Review*, **8**(1), 23–37.

Whitley R. (2006) Project-based firms: new organizational form or variations on a theme?. *Industrial and Corporate Change*, **15**(1), 77–99.

Wu Y. (2005) *A Political Explanation of Economic Growth: State Survival, Bureaucratic Politics, and Private Enterprises in the Making of Taiwan's Economy, 1950–1985*, Harvard University Press, Cambridge, MA.

Yin R.K. (2003) *Case Study Research: Design and Methods*, Sage Publications, Thousand Oaks, CA.