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Creating synergy for cross-cultural teams in international R&D projects

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Cross-cultural management is often regarded as one of the disciplines in international management focusing on cultural encounters between what are perceived as well- defined and homogeneous entities: the organization and the nation-state and offering tools to handle cultural differences seen as sources of conflict or miscommunication. Hence, there is a pressing need to understand the cultural diversity and exercise proper measures to manage it. This paper explores the factors affecting cross-cultural management in R&D projects using Principal Component Analysis (PCA). Using the method of PCA, this paper explores the factors affecting international R&D project management under a combination of Chinese and Western cultures. Eight principal components are extracted and labeled, and the top two include: (1) behavioral characteristics; and (2) social environment. In behavioral characteristics, it is found that Chinese prefer to work in a stable environment and they may find difficulties in adapting to an unfamiliar environment comparing to the West. They would strongly react to losing face events such as being criticized by managers publicly, or being evaluated by an unfamiliar performance evaluation method, etc. Under the social environment, the Chinese government, as an indispensable mediator in the social environment of projects, plays an important role in approving projects, allocating resources, and arranging finance. For multinational corporations in China, the skills of managing corporate-government relations and communications are essential. From the above study, it is hoped that some recommendations can be generated on how people with different cultural and valuing background can create synergy for effective management of R&D projects in multinational firms.

Key words: International project, cross-cultural management, R&D, multinational firm, principal component analysis.

INTRODUCTION

Under the globalized environment of business, management of "international project" becomes a major trend today (Kealey et al., 2006). The question of running international projects characterized with cross-culture has come to the forefront of management thinking (Evans, 2006; Kauser and Shaw, 2004). Over the past ten years, much has been researched about management in cross-cultural organizations. Cross cultural management is often regarded as a discipline of international manage-ment focusing on cultural encounters between what are perceived as well-defined and homogeneous entities: the organization and the nation-state, and offering tools to handle cultural differences seen as sources of conflict or miscommunication (Jassawalla et al., 2004; Søderberg and Holden, 2002). In this context, it is important to emphasize the cultural diversity (Iguisi, 2009; Haslberger, 2005) . This diversity in backgrounds and cultural heritage offers a big challenge to project managers as most of these projects are temporary and of short life cycle, giving little time for the project team to iron out the cultural

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diversity (Zwikael et al., 2005).

People involved in international projects from different countries and with different skills and talents come together to achieve the same project goal. The social factors also contribute to difficulties in management of cross-cultural projects. As a result, conflicts are inevitable if they are not managed properly and speedily (Suen et al., 2007; Zhou et al., 2005). This requires understanding and appreciation of the diversity in cultures, values and styles of people involved in the international project team. Also it requires knowledge of what motivates team members, e.g. achievement, recognition, advancement and responsibility, the work itself, feelings about other team members, their management, and their situation (Johns, 1995; Kanter and Corn, 1994).

International projects share no small number of difficulties precisely because they are workplaces where local people and expatriates from different cultures must interact, produce together, and innovate together. Studies reported that as many as 50% of the foreign assignments of international business personnel are considered failures (Nauman, 1993).

In recent years, China has entered the mainstream of world business (Wright et al., 2003; Zeng et al., 2009a). Some large multinational companies have begun transferring their R&D centers to China (Lin, 2004; Zeng et al., 2009b). An estimate focusing on joint ventures in China placed success rates at only 6%, although the authors believe it would probably improve as experience gained (Hu and Chen, 1996). There is a pressing need to understand the cultural diversity and exercise proper measures to manage it. Hence, foreign project managers dealing with projects in China should be adept in cross-cultural management (Chen and Tjosvold, 2005; Hong et al., 2007; Selmer, 2005).

The objective of this study is to explore the factors affecting cross-cultural management in R&D projects using Principal Component Analysis (PCA). It is hoped to provide some recommendations on how people with different values can create synergy for effective management of R&D projects in multinational firms.

LITERATURE REVIEW

In a cross-cultural organization, changes in personnel, clientele, production line, financial climate, and even corporate philosophy and/or vision will happen. Cultural difference arises due to a variety of factors. Individual differences in goals, expectations, values, proposed courses of action, and suggestions about how to best handle a situation, are unavoidable (Darling and Fogliasso, 1999) . Baba (1996) classified differences in cultures into three categories: (1) traditional organization structure; (2) managerial differences; and (3) differences in fundamental concept and philosophy which contracts and laws were based on.

By comparing perceptions of importance of 18 traits for effective low-level leaders and high-level leaders in Australia and China, Casimir and Waldman (2007) revealed cultural differences in terms of which traits were regarded as important for effective leadership. Using managerial competency assessment method, Chong (2008) appraised managers from four East Asian countries and managers from the United States. He found that the assessed competencies of managers from different nationalities were subject to cultural factors that shaped personality and behavioral choices. Outcomes of the assessed managerial competencies were likely to be influenced by perceptions of status, the need for consultation and the degree of openness of communication between managers and their subordinates.

Yan (2005) developed a theoretical model to explain how societal/cultural settings might influence the leadership perception processes of followers and the ways perceived leadership effectiveness could be achieved. He adopted five cultural dimensions - collectivism/individualism (CI), masculinity/femininity (MASC), power distance (PD), uncertainty avoidance (UA) and fatalism (FT), and related them to two types of leadership perception modes - recognition-based and inference-based processes, and perceived leadership effectiveness. Yan (2005) proposed that in some cultural settings, fitting leadership behaviors and traits to leadership prototypes would be more likely to lead to perceived leadership effectiveness. In other cultural settings, more positive group or organizational performance outcomes would be more likely leading to perceived leadership effectiveness.

Based on two series of cross-national studies that successfully employed multilevel modeling, Xu and Vliert (2003) contended that the cross-level approach might offer an alternative theoretical perspective for researchers to map and explain cross-national variation in organizational behaviors. Employing the cross- cultural communication competence model, Matveev and Nelson (2004) compared American and Russian managers working in multicultural teams and examined how the national culture affected team members' perceptions of cross-cultural communication competence. The confirmed hypothesized relationship and salient effects of national culture on cross cultural communication competence led to theoretical and practical implications for multicultural organizational settings. They found that cross-cultural communication competence affected the performance of multicultural teams. Based on both Western and Chinese management thoughts, Chen (2005) developed an organizational learning model, which consisted of nine interrelated organizational learning sub-systems including "discovering", "innovating", "selecting", "executing", "transferring", "reflecting", "acquiring knowledge from environment", "contributing knowledge to environment", and "building organizational memory".

Moreover, it seems to have more challenge in cross-

cultural management for a project team due to the characteristics of short life-cycle. Project managers, who want to transcend state, regional, national cultural and organizational industrial boundaries in today's global economy, need to develop flexible and new coping skills to continue functioning in a positive, productive way in the midst of these sometimes unsettling events. Cross-cultural awareness facilitates successful performance of a set task (Ramaprasad and Prakash, 2003).

Marrewijk (2007) explored the development of the project culture in the project life cycle. Project cultures run the risk of becoming dysfunctional in transition to a new project phase. He suggested the necessity of project managers and project organizations to reflect upon the development of project culture during the project life cycle.

Zwikael et al. (2005) examined differences in project management style, between the two different cultures: Japanese and Israeli. Significant cultural differences were found between the two. They found that Israeli project managers were more focused on performing "scope" and "time" management processes, while formal "communications" and "cost" management were more frequently used by Japanese project managers. Japanese organizations used clear and measurable success measures for each project, while project objectives in Israel were often quite foggy. They also demonstrated differences in efforts made by project managers and management of the organization on specific project processes. These differences were manifested by smaller costs and schedule overruns in Japanese organizations, while Israeli customers of local projects seemed to obtain better technical performance at the end of the project.

Using a sample of workgroup personnel for new product development in New Zealand, the Western cultural environment, and Singapore, Garrett et al. (2006) measured national culture and determined the applicability of different organization integration mechanisms.

Low and Christopher (2000) addressed the key concepts in cross-cultural management as well as key functions in construction project management with specific reference to China. Using a real-life case study of a new Chinese hotel project in China, they examined how the interaction between cross-cultural management and project management could affect the outcome of a project. Using the four dimensions of a national culture established by Hofstede, Low and Shi (2002) examined what constitute the Singaporean culture and Chinese culture. Through a survey of Singaporean and Chinese respondents working in China and an analysis of Hofstede's four dimensions of a national culture, they extrapolated the cross-cultural dimensions brought about by the two cultures within the context of construction projects.

Chen and Partington (2004) reported an empirical comparison of matched samples of Chinese and Western construction project managers' conceptions of their work. Fundamental differences in conception of meaning and

significance of different forms of relationship were highlighted in construction project management that had implications for practice.

RESEARCH METHODS

The sample

In order to understand cross-cultural management in R&D projects at multinational firms in China, a questionnaire survey was conducted, in which thirty questions were determined from relevant literature. Questionnaires were sent to employees engaged in relevant project management teams involved in new product development in foreign-invested enterprises. A total of 94 questionnaires were received. The 94 respondents are composed of 36 Chinese (38.3%) and 58 foreigners (61.7%). The latter includes 53 (56.4%) people from the western countries. Among the 94 respondents, 76 (80.9%) were directly involving in R&D works, 7 (7.4%) responsible for human resources management, 7 (7.4%) for logistic services, and 3 (3.2%) in the other categories. Sixty-four respondents (68.1%) claimed that they had experience in project management of over five years; 22 (23.4%) between three and five years; and the remaining less than three years.

Methodology

Using a structured questionnaire in this survey, respondents were asked to evaluate factors affecting cross-cultural management in R&D projects according to their experience. The five-point Likert scale was used, in which 5 represents the most important and 1 the least.

To identify the principal factors affecting cross-cultural management, PCA is used, which is used to summarize the information contained in the original variables into a new and smaller set of uncorrelated dimensions (factors) with a minimum loss of information. Detailed descriptions of the theoretical aspects of PCA can be found in Johnson and Wichern (1988).

RESULTS AND ANALYSIS

In this survey, the value of KMO (Kaiser-Meyer-Olkin) - Measure of Sampling Adequacy is 0.818 (larger than 0.5, a demarcation value in the application of Factor Analysis (FA) in which the bigger the KMO-value, the better the analysis will be). Moreover, the results indicate the correlation matrix is not a unit matrix as the value of Bartlett's Test of Spherical is 1316.423. Hence, it is suitable to use FA for the study. Table 1 lists the results of the communalities analysis.

Using PCA, uncorrelated linear combination of eight principal components is extracted. The cumulative percentage of error of the eight principal components achieves a value of 66.11%, revealing that the information embedded in the 30 variables can be reflected from the eight principal components. Table 2 shows the results of the total variance explained.

To illustrate the significance of factor, load factor is rotated to make the typical variables of each principal factor more prominent. The method of Varimax is employed, which is an orthogonal rotation method for generating

Table 1. Results of communalities analysis.

Factors	Initial	Extraction
The whole project group agrees that achievement of the objective of a project is their common target.	1.000	0.793
It is necessary for your project leader to prepare a definitive working schedule for you.	1.000	0.636
In resource allocation, project managers would consider your opinions.	1.000	0.609
Your manager always pays attention to your progress.	1.000	0.734
In running project, language communication is an obstacle.	1.000	0.777
You prefer to cooperate with people with similar cultural background.	1.000	0.769
You attend project meetings on time.	1.000	0.750
New employees need at least half a year to adapt to the work.	1.000	0.757
Personal achievement is more important than team success.	1.000	0.724
You avoid any conflict with your manager.	1.000	0.621
Relying on your manager's opinion in running projects means incompetent.	1.000	0.523
You could accept your manager criticizing your mistake in public.	1.000	0.721
You like to do works with a clear definition of scope.	1.000	0.544
You are quite familiar with competitors' similar products.	1.000	0.557
You like to face new challenges every day.	1.000	0.694
You can adapt to an unfamiliar environment quickly.	1.000	0.691
You do not mind the methods used for your performance evaluation.	1.000	0.593
All your team members try their best to run the project.	1.000	0.568
The government's attitude is important for the smooth start-up of a project.	1.000	0.610
Projects supported by the government have more chance to be successful.	1.000	0.579
You try hard to improve relationship among colleagues.	1.000	0.614
Project scope statements can be modified according to customers' new request.	1.000	0.630
Contract management is important for R&D projects.	1.000	0.763
You must finish one task on hand before you start a new one.	1.000	0.488
It is common for the actual cost of a project exceeding the planned budget for R&D projects.	1.000	0.747
The difference in legal systems in different countries will create problems.	1.000	0.552
Execution of projects must follow the original plan strictly.	1.000	0.754
Specific quality standard is important for R&D projects.	1.000	0.723
You spend a lot of time on communication.	1.000	0.568
You feel that the balance of schedule, cost and quality has been done very well.	1.000	0.745

factors with the least number of variables but having the maximum load. The rotated component matrix is shown in Table 3.

Rotation is converged in 16 iterations. The factors are attempted to be labeled, which are shown as follows:

(1) First dimension; Behavioral characteristics: That dimension is dominated by the following factors:

(i) You can adapt to an unfamiliar environment quickly.
(ii) You feel that the balance of schedule, cost and quality has been done very well.
(iii) You like to face new challenges every day.
(iv) You are quite familiar with competitors' similar products.
(v) You attend project meetings on time.
(vi) All your team members try their best to run the project.
(vii) Specific quality standard is important for R&D projects.

(viii) Execution of projects must follow the original plan strictly.
(ix) You do not mind the methods used for your performance evaluation.
(x) You could accept your manager criticizing your mistake in public.
(xi) You spend a lot of time on communication.

(2) Second dimension; Social environment: This dimension is dominated by the following factors:

(i) You try hard to improve relationship among colleagues.
(ii) Projects supported by the government have more chance to be successful.
(iii) The government's attitude is important for the smooth start-up of a project.
(iv) You avoid any conflict with your manager.
(v) Project scope statements can be modified according

Table 2. Total variance explained.

Component	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	9.190	30.632	30.632	9.190	30.632	30.632
2	2.723	9.078	39.711	2.723	9.078	39.711
3	1.842	6.139	45.850	1.842	6.139	45.850
4	1.480	4.935	50.784	1.480	4.935	50.784
5	1.298	4.327	55.111	1.298	4.327	55.111
6	1.225	4.082	59.193	1.225	4.082	59.193
7	1.042	3.472	62.665	1.042	3.472	62.665
8	1.034	3.446	66.110	1.034	3.446	66.110
9	0.951	3.170	69.280			
10	0.867	2.890	72.171			
11	0.817	2.725	74.895			
12	0.739	2.464	77.360			
13	0.737	2.457	79.817			
14	0.694	2.313	82.130			
15	0.665	2.217	84.346			
16	0.564	1.879	86.225			
17	0.507	1.690	87.915			
18	0.487	1.622	89.537			
19	0.420	1.399	90.936			
20	0.400	1.333	92.269			
21	0.361	1.205	93.474			
22	0.338	1.127	94.601			
23	0.309	1.029	95.630			
24	0.259	0.864	96.493			
25	0.245	0.816	97.309			
26	0.202	0.674	97.983			
27	0.178	0.594	98.577			
28	0.172	0.574	99.151			
29	0.139	0.464	99.615			
30	0.115	0.385	100.000			

to customers' new request.

(3) Third dimension; Organizational empowerment: This dimension is dominated by the following factors:

(i) It is necessary for your project leader to prepare a definitive working schedule for you.
(ii) Personal achievement is more important than team success.
(iii) You like to do works with a clear definition of scope.
(iv) The difference in legal systems in different countries will create problems.
(iv) You must finish one task on hand before you start a new one.

(4) Fourth dimension; Team cooperation: That dimension is dominated by the following factors:

(i) New employees need at least half a year to adapt to the work.
(ii) It is common for the actual cost of a project exceeding the planned budget for R&D projects.
(iii) Relying on your manager's opinion in running projects means incompetent.

(5) Fifth dimension; Organizational structure: This dimension is dominated by the following factors:

(i) In resource allocation, project managers would consider your opinions.
(ii) Your manager always pays attention to your progress.
(iii) You prefer to cooperate with people with similar cultural background.

(6) Sixth dimension; Language communication: This

Table 3. Rotated component matrix.

Factors	Component							
	1	2	3	4	5	6	7	8
You can adapt to an unfamiliar environment quickly.	0.764	0.205	0.079	-0.045	0.079	-0.218	-0.020	-0.049
You feel that the balance of schedule, cost and quality has been done very well.	0.760	0.189	0.136	0.134	-0.092	0.054	0.238	0.166
You like to face new challenge every day.	0.749	0.087	0.144	0.066	0.225	-0.074	-0.176	0.120
You are quite familiar with competitors' similar products.	0.697	-0.076	0.160	0.016	0.101	0.127	0.112	-0.022
You attend project meetings on time.	0.693	0.318	0.236	0.097	0.011	0.157	0.218	0.180
All your team members try their best to run the project.	0.639	0.252	0.135	0.084	0.138	0.162	0.161	-0.012
Specific quality standard is important for R&D projects.	0.630	0.074	0.415	0.187	0.220	0.093	0.233	-0.047
Execution of projects must follow the original plan strictly.	0.609	0.313	0.262	0.014	0.045	0.283	0.365	0.023
You do not mind the methods used for your performance evaluation.	0.606	0.029	0.201	0.330	0.139	0.090	0.040	0.217
You could accept your manager criticizing your mistake in public.	0.578	-0.278	-0.098	0.407	-0.026	-0.191	-0.154	0.272
You spend a lot of time on communication.	0.524	0.353	0.030	0.173	0.178	0.223	0.173	0.164
You try hard to improve relationship among colleagues.	0.181	0.747	-0.041	-0.015	0.018	-0.097	0.055	0.092
Projects supported by the government have more chance to be successful.	0.102	0.682	0.049	0.073	0.116	0.174	-0.089	0.210
The government's attitude is important for the smooth start-up of a project.	0.464	0.611	-0.064	0.003	-0.001	0.102	0.010	0.083
You avoid any conflict with your manager.	-0.035	0.590	0.319	-0.065	0.134	0.241	0.232	-0.191
Project scope statements can be modified according customer's new request.	0.018	0.534	0.311	0.185	0.322	0.251	0.182	-0.116
It is necessary for your project leader to prepare a definitive working schedule for you.	0.214	-0.078	0.717	0.010	0.054	0.132	0.180	0.134
Personal achievement is more important than team success.	0.127	0.147	0.607	0.407	-0.124	-0.194	-0.217	-0.227
You like to do works with a clear definition of scope.	0.416	0.001	0.526	0.038	0.135	0.174	0.066	0.200
The difference in legal systems in different countries will create problems.	0.419	0.122	0.472	0.101	0.290	-0.183	-0.026	-0.101
You must finish one task on hand before you start a new task.	0.268	0.238	0.466	-0.053	-0.293	-0.157	-0.055	0.161
New employee needs at least half a year to adapt to the work.	-0.009	0.198	0.271	0.730	0.221	-0.099	0.107	0.200
It is common for the actual cost of a project exceeding the planned budget for R&D projects.	0.197	0.101	0.003	0.635	0.041	0.347	0.309	-0.275
Relying on your manager's opinion in running projects means incompetent.	0.386	-0.194	-0.051	0.538	-0.149	0.010	-0.149	-0.008
In resource allocation, project managers would consider your opinions.	0.252	0.143	-0.010	-0.052	0.681	0.077	-0.019	-0.227
Your manager always pays attention to your progress.	0.357	0.101	0.031	0.150	0.630	-0.043	0.310	0.279
You prefer to cooperate with people with similar cultural background.	0.041	0.219	0.499	0.085	0.553	0.352	-0.156	0.093
In running project, language communication is an obstacle.	0.153	0.260	0.032	0.005	0.101	0.806	-0.153	0.036
Contract management is important for R&D projects.	0.260	0.088	0.032	0.057	0.049	-0.161	0.805	0.078
The whole project group agrees that achievement of the objective of a project is their common target.	0.263	0.254	0.146	0.013	-0.094	0.039	0.091	0.787

dimension is dominated by the following factor:

(i) In running project, language communication is an obstacle.

(7) Seventh dimension; Documentation management: This dimension is dominated by the following factor:

(i) Contract management is important for R&D projects.

(8) Eighth dimension: Team goals. This dimension is dominated by the following factor:

(i) The whole project group agrees that achievement of the objective of a project is their common target.

IMPLICATIONS FOR PROJECT MANAGERS

Behavioral characteristics

"Behavioral characteristics" have obvious impact on the success of international projects (Evans, 2006; Suen et al., 2007). In China, the predominant influence upon Chinese culture is *Confucian* in origin (Jaw et al., 2007). Confucianism inculcates a desire for accomplishment and seriousness about tasks, jobs, family and obligations (Ahmed and Li, 1996). Whilst *Confucianism* encourages people to be hardworking, responsible, knowledgeable and active in helping others, it accords lower emphasis to the advancement of individual interests (Jacobs et al., 1995). Generally, it can be said that *Confucian* philosophy advocates the importance of commitment and patience, orders relationships by status, requires respect for tradition, frugality in consumption, reciprocation of greeting, favours and gifts, and imbues a sense of shame through its construction of the concept of '*Mianzi*', which is the Chinese concept of giving "face". This translates into giving one's respect and recognizing the status and moral reputation in public, indeed enhancing this status by whatever ways possible. It is important to protect one's "face" but it is perhaps even more important to give "face" to others (Buttery and Leung, 1998). To "give face" means to give praise to someone in an organization. To get someone to "lose face" is to denounce his status or reputation. As Yang (1989) indicated, it was very important for Chinese to have harmony maintenance, impression management, face protection, social acceptance and avoidance of punishment, embarrassment, conflict, rejection, ridicule and retaliation in a social situation. It represents a tendency for Chinese to act in accordance with external expectations or social norms. The need to maintain "face" in public also serves as a negative force for complaint behavior because not getting a satisfactory result from the complaint means losing "face" in front of people, even if these people are not

significant to them (Lowe and Corkindale, 1998; Yang, 1989).

As a result, comparing to the West, Chinese prefers to work in a stable environment and they may find difficulties in adapting to an unfamiliar environment. They consider the whole universe should preferably be run in a balance condition and thus they value a balanced work target such as schedule, cost and quality. Chinese is more disciplined and would follow the original plan strictly, good time keeping and avoiding challenges. They would strongly react to losing face events such as being criticized by the manager in public, being evaluated by an unfamiliar performance evaluation method, etc. Keeping silent can hide their ignorance and is considered as polite, and thus communication is kept to a minimum.

Social environment

On the other hand, there is a cultural difference of collectivist belief in China and individualist in the West (Soontiens, 2007). Chinese culture stresses group harmony, trust, sensitivity and social cohesion. It encourages complex hierarchically based interrelationships and interdependencies. Essentially, the culture is collective oriented, in which individualism is regarded to be expressive of selfish behavior rather than an extension of personal identity and responsibility (Hofstese and Bond, 1988). Chinese collectivism, harmony, out- directed and relationship culture may have implications for Chinese ways of experiencing and resolving conflicts. Chinese employees are likely to pay greater attention to group harmony and relationship with all involved when resolving conflicts. They would try to avoid direct debates or confrontation and always try to get through conflicts quietly. In contrast, Western employees may encourage open discussion, and the use of disagreements and conflicts in order to get problems solved quickly (Chen and Partington, 2004; Hoon-Halbauer, 1999) . Hence, managers of international projects are under constant pressure to monitor their employee's behaviors. In an international project team, imbalance is often caused by individuals not being fully conversant or appreciative of others' cultural norms. Often this culminates in acrimonious claims against each other. Such misunderstandings can be diminished through a process of appreciating each others' aims, needs and expectations. This paves the way for a better and smoother conduct of international projects (Ahmed and Li, 1996; Pukthuanthong and Walker, 2007).

The importance of "social environment" for effective project implementation is becoming well recognized (Bresnen et al., 2003). "Social environment" including the economic, social, and political environment affects the success of a project. The social environment could be encapsulated by the concepts of 'social networks' and 'social capital' (Abereijo et al., 2007; Brookes et al., 2006).

A social network can be defined as a finite set or sets of actors (discrete individual, corporate or collective social units) and the relational links between them (Wasserman and Faust, 1994; Zeng et al., 2010). "Social capital" can be defined as the sum of actual and potential resources embedded within, available through and derived from the network of relationships possessed by a social unit (Nahapiet and Ghoshal, 1998: Yang et al., 2010).

Hence, comparing to the West, Chinese people value the relationship with their colleagues and try to avoid conflict with their superiors. Government officials are highly respected, who are considered as people's parents. Thus, the government's support and attitude are highly weighted.

In fact, in China, the government, as an indispensable mediator in the social environment of projects, plays an important role in approving projects, allocating resources, and arranging finance (Luo, 2001). One study of Canadian firms operating in China found this to be the biggest single issue: Insufficient understanding of the political, regulatory, and market realities led to a sense of having a lesser ability than at home to predict and proactively influence the Chinese social environment (Abramson and Ai, 1999). For multinational corporations, the skills of managing corporate-government relations and communications are essential (Fan, 2007).

Conclusion

Cross-cultural projects share no smaller number of difficulties because they are workplaces where local people and expatriates from different cultures must interact, produce and innovate together. Cross-cultural management is the essence of success. Cross-cultural management for R&D projects is not an easy task, as there are significant barriers to developing an effective relationship between employees with cultural diversity. Hence, there is a pressing need to understand the cultural diversity and exercise proper measures to manage it. Foreign project managers dealing with projects in China should be adept in cross- cultural management. Using the method of PCA, this paper explores the factors affecting cross cultural management between Chinese and Western cultures in running international R&D projects. Eight principal components are extracted and labeled. The top two include: (1) behavioral characteristics; and (2) social environment.

In behavioral characteristics, Chinese prefers to work in a stable environment and they may find difficulties in adapting to an unfamiliar environment comparing to the West. Chinese are more disciplined and would follow the original plan strictly, good time keeping and avoiding challenges. They would strongly react to losing face events such as being criticized by the manager in public, being evaluated by an unfamiliar performance evaluation method, etc.

In the social environment, the Chinese government, as an indispensable mediator in social environment of projects, plays an important role in approving projects, allocating resources, and arranging finance. Insufficient understanding of the political, regulatory, and market realities led to a sense of having a lesser ability to predict and proactively influence the Chinese social environment. For multinational corporations in China, the skills of managing corporate-government relations and communications are essential.

When these principal components are defined, co-workers from different cultural background can be more appreciative to one another. Foreign project managers dealing with projects in China can then harness these differences to achieve synergy and success in project management.

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