

Cultural Diversity and Its Effect on Construction Project Team Effectiveness

Mohammed Dulaimi, Amjad Hariz
*The British University in Dubai, PO Box 502216, Dubai, UAE
mohammed.dulaimi@buid.ac.ae.*

Abstract

Dubai has become the destination of many multinational companies attracted by the buoyant construction activities. One of the main drawbacks of such business environment is the increasingly high competition between such companies to recruit and retain the needed human resources that have the desired expertise and skills. This led these organisations to recruit from wide and far increasing the cultural diversity of their project teams. Not surprising that diversity management is becoming an important management tool for the effective delivery of projects.

This paper reports a research that has investigated the *cultural diversity* phenomenon within construction projects in Dubai and its affect on project team effectiveness. The main aim of the paper is to assess the effectiveness of a culturally diverse project team and the effectiveness of project managers in dealing with such culturally diverse teams on construction projects. The paper reports the results of an empirical study into the relationship between the extent of cultural diversity and project team effectiveness. The empirical study was complemented by a series of interviews with senior managers and project managers. The findings of the empirical study suggest that there is no significant relationship between the degree of project team cultural diversity and their overall performance measure. However, the results showed that there is a negative relationship between the degree of cultural diversity and *output, productivity, and efficiency* (OPE). OPE being one of the main components of the project team overall effectiveness.

Keywords

Cultural diversity, Leadership, Project team, Dubai

1. Introduction

Dubai has become the destination for many multinational companies attracted by the massive development programme especially that in construction. This Emirate, one of seven Emirates making the United Arab Emirates, is long-recognized as a leading multicultural construction development region in the Middle East. Dubai has grown rapidly to expand its construction development activity beyond the traditional bases in the region. This has led many construction firms to recruit staff from across the world. Hence, diversity management is expected to feature as a priority for management to be able to deal with differing personal cultures, national cultures, and organisational cultures.

This aim of this paper is investigate the phenomena of culture diversity. The objectives are to examine the influence of cultural diversity in construction projects on the project team effectiveness and the likely impact of project management approaches in enhancing team effectiveness.

2. Culturally Diversified Project Teams

Culturally diverse teams are teams with a mixture of people from different group identities. Cultural diversity exists when people with distinct group affiliations of cultural significance are found within a larger group or organisation (Cox, 1993). Richard *et al.*, (2007) defined racial diversity as the presence of employees from multiple racial categories in a firm as opposed to belonging to one category.

The primary dimensions of diversity include “inborn differences, or differences that have an ongoing impact throughout one’s life. These include learning style, types of intelligence, age, ethnicity, gender, physical abilities, race and sexual orientation. These dimensions are core elements through which people shape their self-image and world view” (Vecchio and Appelbaum, 1995). Daft (2003) differentiates diversity at two different dimensions, basic dimension and secondary dimension. Basic dimensions are: race, ethnicity, gender, physical or cognitive capability, which depict differences which are inborn or have influence on individuals during their life span; these are also the core elements shaping perspectives or self-images of individuals. Secondary dimensions are the characteristics which individuals have possessed throughout their lives; in other words, the qualities acquired later on and usually changeable. These appear less effective compared with basic dimensions and have influence on individuals’ self-identity and approach while at the same time presenting how these individuals are perceived by others.

Teams can be divided into two types with regards to its cultural differences: homogenous teams, who are the members coming from the same cultural group, and multicultural teams, who are the members coming from more than one culture. Teams, whose all members come from the same cultural background except one member, are referred to as *token teams*. This case can be seen in project having team members all form the same nationality except one from different country. The second is the *bicultural teams* where there are two distinct cultures in the team. This case can be seen also in fifty-fifty partnership projects. The third is the *multicultural teams* with three or more cultures. The situation in construction projects is expected to be of this last type.

Cultural diversity can have positive and negative impacts on teams’ performance. The expectation is that teams from different cultural backgrounds can perform better than more than homogenous teams, but they also risk experiencing greater losses due increased conflict in agreeing on working processes (Adler, 2002). In addition, research have shown that diverse teams suffer more from poor cohesion and social integration than more homogeneous teams (Hambrick, 1994), conflict, turnover, low trust, low job satisfaction, stress, absenteeism, and communication difficulties (Adler, 1991). Dulaimi (2008) argued that such diverse teams have the opportunity to create new solutions. Watson *et al.*, (1993) suggested that well-led diverse teams can outperform homogenous teams by as much as 15 percent. Williams and O’Reilly (1998) reviewed the literature in this field and conclude that heterogeneity generally leads to low satisfaction, low commitment, and low social integration. The same study showed that heterogeneity in functional background and race/ ethnicity may improve group performance through the contribution of diverse information and skills. Management of cultural diversity is the management behaviour that would enable the organisation to realise the benefits of cultural diversity and limits its negative effects (Dessler, 1998). Cultural diversity management can be seen as the answer or reaction of organisations to be competitive and at the same time to the increasing diversity of its workforce (Fleury, 1999). Management therefore should adopt a more employee oriented approach emphasising the need to improve staff motivation through empowerment, recognitions, and continuing educations.

Richard *et al.*, (2007) in their research and based on Blau’s (1977) theory of heterogeneity with knowledge-based view provided evidence of the curvilinear relationship between racial diversity and intermediate performance. They discovered a stronger effect of racial diversity would be found for service-oriented firms. However, Kock (2003) research of major security companies in South-Africa found no significant effect of cultural diversity on the team performance. Fellows and Liu (2006) argued that the project performance is dependent and it is value-determined, as well as culturally-based. They

explained that many factors affect performance on construction projects but “to date, the majority of research has, at best, only identified culture as a construct which impacts on performance”.

3. The Research

This research is focused on understanding the impact of cultural diversity in construction projects teams on their performance. The research has collected data from current projects in Dubai that described the extent of diversification. The research objectives are addressed by collecting and analysing data that would allow the research to examine the relationship between the extent of cultural diversity and project team performance as well as project management style. The research has used both of qualitative and quantitative research methods by conducting a survey and a series of interviews with project managers. The research approached one of the largest contractors in Dubai to take part in the study and allow a sample to be selected from their existing pool of projects. This approach will eliminate variations in the sample that are related to different companies rules and regulations and hence differences in the sample can be confidently related to what happens within the project.

The research main variables are the extent of cultural diversity in the project team, project team performance and project management approach/style. The survey consisted of two main parts. Part 1 of the questionnaire measures the project team performance. It was important to measure performance using different criteria rather than the traditional cost, time and quality. The research had to also consider the practical difficulties involve in collecting some of the data related to performance of projects. The research identified a measure used by the target firm to evaluate the performance of the different project teams. Table 1 shows the adapted appraisal system that the research has deployed in the survey. The use of such measure limit the research findings by using such measure however this step gave advantage to the research that the project managers are already familiar with the tool and will be able to respond without a risk of misinterpretation. In this company project managers evaluate the performance of teams bi-annually.

Each criterion of the appraisal has a different weight based on its importance to the company, and this is given in the number of points that each criterion scores. The total score for the appraisal represents the overall team performance out of 60 points which can be turned into percentage. It can be said that all these parameters are critical in measuring any team or team member performance and the way they were weighted was found efficient to be used in the same way in this research.

Table 1: Project Performance Measure

CRITERA		SCORE									
JOB KNOWLEDGE & EXPERIENCE		8	7	6	5	4	3	2	1		
1.	(Degree of error-free work: Accuracy that requires minimum supervision)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
OUTPUT, PRODUCTIVITY & EFFICIENCY (Quantity & quality of work produced with maximum dispatch & the minimum expenditure of time, money & energy)					5	4	3	2	1		
2.					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
COMMUNICATION (Ability to convey and understand ideas & concepts)					5	4	3	2	1		
3.					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
QUALITY (knowledge, attitude & adherence to the Quality Management System)					5	4	3	2	1		
4.					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
SAFETY (Knowledge, attitude and adherence to the Safety Processes)					5	4	3	2	1		
5.					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
6.	LOYALTY, MOTIVATION & RESPONSIBILITY (Showing commitment and best service for the success of the project and the company)	10	9	8	7	6	5	4	3	2	1
7.	GENERAL PRESENTATION (Ability to present themselves appropriate to their duties)								3	2	1
8.	LEADERSHIP CAPABILITY (Ability to handle people and supervise, monitor and ensure the implementation of the project)				7	6	5	4	3	2	1
9.	TEAMWORK & COOPERATION (Ability to work with each other and with other employees)				7	6	5	4	3	2	1
10.	CONFIDENCE & DECISION MAKING (Ability to identify & analyze problems and make the correct decision)						5	4	3	2	1
TOTAL SCORE										/60	

Part 2 of the questionnaire measures the management style of project managers using the Least Preferred Co-worker (LPC). LPC measure has been used to evaluate the extent which the project manager is more task oriented or relationship oriented in their management of their team (Robbins, 2005). This tool has shown to distinguish between the different construction project managers' approaches (Dulaimi and Langford, 1999).

The questionnaire also collected data to measure the extent of cultural diversity using Blau's Index of diversity (1977). Blau's Diversity Index = $(1 - \sum P_i^2)$, where P_i is the proportion of group members in category i . category will be the nationality of team members in this research (Richard *et al.*, 2007). The index ranges from 0 – 0.8. As the cultural diversity degree of the team members increases, as the diversity index increases in its value, 0 index means one-culture project team members, which is the lowest degree of diversity can be, 0.8 diversity index means the highest degree of cultural diversity within a project team, it means actually that all team members are distributed equally on each cultural category. In addition, the research collected data on project team size, project duration and value. The research secured the agreement of 31 project managers currently working on projects in Dubai whom all filled in and returned the questionnaire.

4. Data Analysis

Team performance, diversity index, and LPC score measures were calculated for each questionnaire and summarized. The scores given for each performance parameter in each questionnaire were turned to percentages by dividing each score result on the weight of that performance parameter.

Figure 1 shows the relationship between the cultural diversity given by Blau's Diversity Index and the project team performance. This relationship is linearly negative, which means that as the diversity index increases the team performance decreases; in other words, the national diversity of a project team has a negative impact on the whole project team performance. The correlation coefficient of this relationship is $r = -0.285$ ($R^2 = 0.0815$). In the multiple regression analysis the coefficient of correlation for X_1 variable (cultural diversity) is $\beta_1 = -0.46$ and $P\text{-Value} = 0.217$ ($P > 0.05$), which means that the correlation between the overall project team performance and team national diversity is not significant at 95% confidence level. This reveals to that negative correlation between the cultural diversity and the team performance for a project is there but not significant for the sample studied in this research.

One of the reasons behind the insignificance of the correlation between cultural diversity and team performance may refer to the small sample size that has been studied; only 31 questionnaires were applied in this research. Another major reason may be the neglecting of some other important factors that may affect this correlation, i.e. time effect on a diverse project team. Long-term diverse team performs better than short-term diverse team as Richard *et al.*, (2007) shown in their research, actually, according to them, the relationship between the project team diversity and its performance takes a curvilinear shape over time, so it starts improving over time after getting over the diversity problems that occur at the starting of the project team. This important time or term-relationship was not considered in the analysis and so the results may were not accurate.

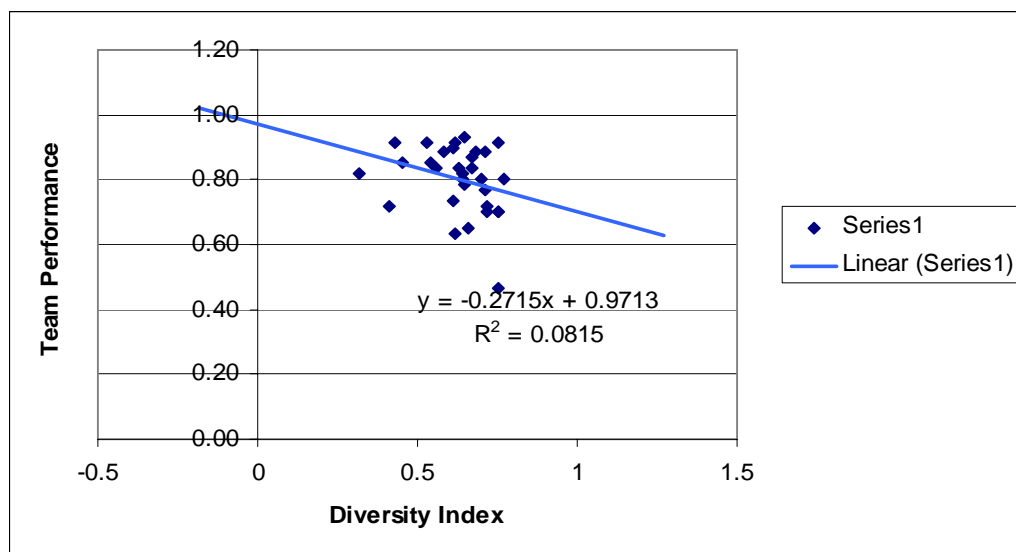


Figure 1: National Diversity and Team Performance Relationship

The relationship between the diversity index of a project team and the project management/ leadership orientation measured using the LPC. This relationship is very weak with the correlation coefficient at $r = 0.063$ ($R^2 = 0.004$). This means that there is no significance relationship between the team diversity and project management style. Similarly the LPC score relationship with the team performance is found not significant at 95% confidence level, $\beta_2 = 0.020$ and $P\text{-Value} = 0.483 > 0.05$.

believe that they would be more comfortable and confident, these groups are not necessarily formed based on people's nationalities or cultures, but may have different reasons. The management role is to eliminate these groups and concentrate on getting people in a team work." A2 preferred to create a system of strong rules and regulations, and to have a strong organisational culture which can overcome the cultural differences between individuals. Moreover, he suggested having multiple internal programmes and activities that enhance individuals' behaviour and break out cultural barriers between them. A3 agreed to avoid informal cultural groups within the organisation, it's necessary to have strong organisational culture and strong rules, and also to have an open door policy for the top managers. If informal organisations or groups phenomenon is not solved immediately, it can take over the system and be the decision maker in the organisation.

5. Conclusion

The research quantitative data did not provide the strong lead one was expecting to explain the nature of the relationship between cultural diversity and project team performance. The performance parameter that was proved to be more affected by the cultural diversity effect was *output, productivity, and efficiency*, which is actually a very critical parameter in the team performance measurement. The interviews with management have revealed some clear differences in attitude to the issue from people with different ethnical backgrounds. Project Managers in UAE and Dubai should be aware of cultural diversity challenges in this part of the world, and they should realise that managing diversity is a worldwide concept and that employing multinational workforce and expertise is a practice adopted by large companies.

6. References

- Adler, N. J. (1991). *International Dimension of Organizational Behavior*, PWS-Kent Publishing Company, Boston, MA, pp. 20-21; 67-83; 126-7.
- Adler, N. J. (2002). *International Dimensions of Organisational Behaviour*, 4th edition, South-Western.
- Blau, P. M. (1977). *Inequality and Heterogeneity*, New York: Free Press.
- Cox, T. H. (1993). *Cultural Diversity in Organisations: Theory, Research and Practice*. Berrett-Koehler: San Francisco, CA.
- Daft, R.L. (2003). *Management*, 6th ed., Thomson Learning, London.
- Dessler, G. (1998). *Management*, Prentice-Hall, Inc., New Jersey, NJ.
- Dulaimi, M. F., and Langford, D. (1999). "Job behavior of construction project managers: Determinants and assessment", *Journal of Construction Engineering and Management*, Vol. 125, No. 4, pp. 256-264.
- Dulaimi, M. (2008). Who Moved the Melting Pot, *Construction Week*, 02 February 2008.
- Fellows, R., and Liu, A. (2006). "Culture as a category of risk in construction", *Joint International Conference on Construction Culture, Innovation, and Management (CCIM)*, 26-29 Nov. 2006, pp. 138-147, The British University in Dubai, Dubai, UAE.
- Fleury, M.T.L. (1999). "The management of culture diversity: Lessons from Brazilian companies", *Industrial Management and Data Systems*, Vol. 99, No. 3, pp. 109-14.
- Hambrick, D.C. (1994). "Top management groups: A conceptual integration and reconsideration of the 'team' label", In Shaw, B.M. and Cummings, L.L. (Eds), *Research in Organizational Behavior*, JAI Press, Greenwich, CT, pp. 171-213.
- Kokt, D. (2003). "The impact of cultural diversity on work team performance: A South-African perspective", *Team Performance Management: An International Journal*, Vol. 9 (3/4), pp. 78-83.
- Richard, O. C., Murthi, B. P., and Ismail, I. (2007). "The impact of racial diversity on intermediate and long-term performance: The moderating role of environmental context", *Strategic Management Journal*, Vol. 28, pp. 1213-1233.
- Robbins, S. (2005). *Organisational Behaviour*, 4th edition, Prentice Hall.

- Vecchio, R.P., and Appelbaum, S.H. (1995). *Managing Organizational Behavior: A Canadian Perspective*, Dryden-Harcourt Brace and Co., Toronto, Canada, 696 pp.
- Watson, W. E., Kumar, K., and Michaelsen, L. K. (1993). "Cultural diversity's impact on interaction process and performance: Comparing homogeneous and diverse task groups". *Academy of Management Journal*, 36: 590–602.
- Williams, K.Y., and O'Reilly, C.A. (1998). "Demography and diversity in organisations: A review of 40 years of research", *Research in Organizational Behaviour*, Vol. 20, pp. 77-140.