

Partnering Awareness in the Malaysian Construction Industry: A Study on Consultant Engineers

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Abstract: The traditional procurement system which is applied through the formation of temporary organizations has led to the segmented approach in construction projects delivery in the Malaysian construction industry. Consequently, in dealing with these issues, the Malaysian Construction Industry Development Board (CIDB) has identified and recommended partnering as a method to overcome the problems in the construction industry. Partnering is believed to be a viable approach to integrate the construction industry and construction project implementation, as well as creating conducive environment for innovations. The awareness of the consultants towards partnering is crucial as they are at a pivotal stage of introducing innovation in construction projects. This study, aims to explore the awareness of consultants towards partnering in the Malaysian construction industry through the use of qualitative methods. Findings indicate that although the consultant in Malaysia are positive towards partnering, there exists some hesitation in fully engaging in partnering ventures due to dissimilarities in organizational culture among firms in the partnering team.

Key words: Partnering, consultant engineers, team integration, Malaysian construction industry, firms

INTRODUCTION

Construction management includes various methods which help to create efficiency in managing construction projects. In the construction industry, the team normally comprise of multiple parties with different expertise, coming together in temporary organizations and working towards the same aim. The success of project is depend on smooth coordination among the member firms in the temporary organizations. The projects are also subject to risk of dispute among member firms which in turn could cause potentially beneficial relationships becoming adversarial relationship. Due to the practice of temporary organization, the construction industry is commonly being cited as a multifaceted industry of many adversarial relationships due to different parties collaborating in temporary organizations working together towards completing a project (Nifa and Ahmed, 2010; Bygballe *et al.*, 2010). Therefore, the industry is widely being cited as being the least susceptible to innovation as compared to manufacturing and other service industries. It is with this backdrop that partnering is suggested as a useful element in improving the state and quality of relationships in the construction industry.

Malaysian Construction Industry Development Board (CIDB) has proposed the 10-year Malaysian Construction Industry Master Plan which identified and recommended partnering as a method of overcoming the issue within the construction industry. The partnering strategy in construction industry was newly introduced in the last decade and since then has been implemented successfully in the USA, UK and Australia. These countries have been chosen as point of reference due to their success in establishing suitable procedures for the selection of subcontractors in public sector contracts (Naoum, 2003). In UK, partnering strategy has been implemented widely since the recommendations in the Latham Report in 1994 and the Rethinking Construction (Egan) report in 1998 (Mason, 2007; Jones and Kaluarachchi, 2008).

With the execution of mega projects in Malaysia, the government has encouraged the implementation of Public Private Partnerships (PPP) in these projects which also imposes an urgent need for a relationship-based approach in procurement in substitution to the traditional method. However, partnering is still in its infancy in the Malaysian construction industry and the industry stakeholders should make full use of this opportunity to ensure that

partnering is implemented the best possible way as well as taking in consideration the risks and other issues which may come associated with the implementation of partnering.

A study conducted by Ali *et al.* (2010) on the performance of partnering projects in Malaysia has revealed that although the partnering practice is new to Malaysia and has not been widely practiced, the performance of these pioneer projects were satisfactory. Contrastingly, Sulaiman in her study concluded that the partnering concept did not work in the project and the partners involved failed to meet their mission as agreed. This was due to practitioners were not able to relate the objective for partnering implementation as instructed by the Public Works Department (PWD). The partnering concept also was not implemented throughout the entire lifecycle of the project, contrary to the partnering charter signed at the onset of the project.

Therefore, to ensure continuous improvement and development of the partnering concept and to enable all parties involved to benefit from the concept, the Malaysian stakeholders must ensure that every component of the construction industry are fully aware of the partnering concept before proceeding to implement this concept to the entire industry. This study, aims to investigate the awareness of consultant firms in Malaysian construction industry towards the implementation of partnering in Malaysia. The study is a part of a doctoral research on the link between partnering success and similarities in organizational culture between partner firms.

Definition of partnering: Partnering originated from strategic alliances among manufacturers and suppliers, an effort to strengthen the supply chain which has been used extensively in the automobile and manufacturing industry. In partnering, competitive tendering by suppliers is replaced by relatively informal agreements within the suppliers. In the context of the construction industry, partnering is defined in many ways. However, for the context of this study, the definition provided by Naoum will be used: “partnering is a concept which provides a framework for the establishment of mutual objectives among the building team with an attempt to reach an agreed dispute resolution procedure as well as encouraging the principle of continuous improvement.” As the key definition in this paper because it describing the mutual objectives among participants is crucial and also as the definition includes the components of a dispute resolution process for continuous improvement. These components set partnering apart from its project delivery predecessors. Current trends in the world economy imply that the trend of partnering with less organizations which is evident in other industries such as

automobile and manufacturing will be imminent in the construction industry. Organizations that refuse to adapt to this trend may find it hard to sustain their existence in the industry. Therefore, in order to reap the many benefits of partnering in construction, it is critical to identify the dimension of successful partnering and the specific conditions that enable successful partnering in construction. The next section discusses the dimensions of partnering, as compiled from the literature study for this research.

The dimensions of partnering: Partnering can be assisted with the presence of a number of factors. The literature review conducted revealed 8 factors for partnering which can make or break the effort of partnering between construction firms. These factors are cooperation and collaboration, commitment, communication, procurement, trust, tools, policies and culture.

Cooperation and collaboration: In order to overcome the problem of adverse relationships in construction industry, partnering is advocated as the best solution which will enhance collaboration and cooperation for better relationships. This is supported by Nystrom which identified partnering as a remedy for the negative attitude of construction participants from confrontational to cooperative. More recently, Benton and McHenry (2010) highlighted how the traditional adversarial attitude needs to be transformed into more positive and collaborative thinking to propel the construction industry forwards.

Commitment: It is only natural that the partnering process should be implemented over a certain period of time for its benefits to be fully realized. However, one of the common problems with firms initially venturing into partnering relationships is that the drive and main reason for partnering may be forgotten along the course of project. Commitment acts as the ‘glue’ that keeps the partnering team striving towards their shared goals and this is a critical component of a successful partnering project (Bisschoff and Benade, 2008). Commitment in this context can be top management commitment or project participants’ commitment in implementing the partnering relationship and staying with the same ideology throughout the entire project. It can be concluded that long-term commitment is necessary for successful partnering relationships as noted by Othman and Abdellatif (2011) and Yeung *et al.* (2012).

Communication: Several studies conducted on construction partnering have concluded that communication is a critical success factors (Aziz and Kassim, 2011; Meng, 2012). The importance of communication as an element of partnering can be

reflected by some studies conducted looking to improve ways of communication between construction partners, specifically network communication in the construction industry (Ruan *et al.*, 2013; Hosseini *et al.*, 2012). In a study conducted among key individuals in a public-private partnership, Jacobson and Choi (2008) identified that a project team would be more effective if communication is open and honest with strong willingness to compromise and collaborate to achieve the project shared vision.

Procurement: One of the main strength of partnering lies in its procurement systems where contractors are included in the design stage earlier in order to come up with the best solution and higher quality standards in the construction project without compensating their profit margin. Cooperative procurement methods eliminates adversarial relationships between client and contractor by encouraging the parties to work together towards shared objectives and achieve mutual benefits and therefore is a crucial component of a partnering relationship (Eriksson and Westerberg, 2011). In developing countries, an effective procurement system is a crucial component to the success of partnering relationships as found in the studiesby (Alinaitwe and Ayesiga, 2013).

Trust: The degree of trust affects the success of a partnering relationship. A positive atmosphere based on trust between all parties involved is required to engage in a partnering relationship (Laan *et al.*, 2011). It entails to what extent the partners are willing to share their knowledge and resources (Yiu and Cheung, 2007) and in some cases possibly sensitive information that may jeopardize an organization’s competitiveness in the industry but essential to the partnering success. The issue of trust in partnering has been widely researched and is commonly cited as one of the important factors to successful partnering (Jiang *et al.*, 2011; Gadde and Dubois, 2010; Meng, 2012). Trust-based relationships are needed to maximize positive economic outcomes form partnering and may be necessary to keep the owner/contractor relationship from deteriorating.

Tools: Tools are an essential element of partnering as they provide the necessary reinforcement throughout the partnering relationship. Whilst moving towards a culture of complete trust and mutual commitments, it is still necessary to install some checks to avoid abuse and misuse of such relationship (Palaneeswaran *et al.*, 2003). This is where partnering tools becomes indispensable. Common tools used for partnering process include workshops, meetings, partnering charter and partner

Table 1: List of effective partnering tools from various partnering literatures

Source	Type of partnering tools
Cheung <i>et al.</i> (2012)	Parterin Temperature Index (PTI)
Bayliss <i>et al.</i> (2003)	Monthly review meeting and incentivisation agreement
Yiu and Cheung (2007)	Construction mediator tactics: reality test and trust building
Li	Co-operative benchmarking
Jones and Kaluarachchi (2008)	Partnering traning
Anderson	Partnering workshop, meeting and project online rating systim

feedback monitoring system. Some partnering relationships may develop their own specific tool better suited to monitor their partnering initiative and interests. Table1 lists the examples of partnering tools as compiled in Nifa.

Policies: The construction industry is normally bounded by governmental policies and regulations. Governmental policies and regulations may affect the industry’s receptiveness towards partnering. The importance of policies in achieving successful partnering can be reflected in the findings of the study conducted by Eriksson *et al.* (2008) among swedish construction clients. They had established that in countries which industry norms of partnering exist there may be also a need to increase understanding of how to interpret policies and implement partnering. A recent study by Nifa also has concluded the importance of having appropriate policies in place to promote partnering in the Malaysian construction industry (Table 1).

Culture: Culture is a vital element of construction partnering as it affects the way partners behave around each other. Sharing culture by partners in an alliance made it easier for them to trust each other and allow them to progress further to building the alliance faster (Ngowi and Pienaar, 2005). This is confirmed by Fletcher and Fang (2006) who stated that a key element in successful partnering is the need for executives to understand the impact of culture on the relationships they create and the networks they form. It can be said that culture is an important variable in relationship creation and network formation. The learning process and knowledge sharing between partners is greatly assisted when trust is present and because of this fact culture is also important in improving the industry’s innovativeness as described by Ivory (2005).

More recently, the critical nature of culture in partnering relationships can be best described by the findings by Cheung *et al.* (2012) in their study on partnering in construction. Partnering requires sensitivity to the underlying factors that influence specific ways of working; an understanding of the possible impact

on individuals and group motivations and interest and a full appreciation of the complex dynamic of implementation process. A comprehensive literature study by Bygballe *et al.* (2010) has revealed that in many studies, culture is identified as one of the components crucial to relationship building in partnering.

MATERIALS AND METHODS

The research described in this study leans toward the constructivist ontological stance, as well as assuming the interpretivist epistemological position. The axiological standpoint undertaken is that research is value-laden, thus reflected in the inductive approach where theory is generated from the richness of information obtained from the participants in this research. In order to enable a robust theory building, it is necessary to have an in-depth knowledge obtained from the engineering designer (consultants) firms. They are chosen as the target group for their potential in introducing innovations to improve performance in partnering projects. Studies (Ling, 2003; Shen *et al.*, 2010; Wong and Fan, 2013) indicated the potential of designers and consultants in promoting new methods in construction projects.

The use of semi-structured interviews will give the researcher the opportunity to retrieve detailed information of the current partnering practices. In total, 14 participants in 4 consultants engineering firms (civil and structural consultants) were interviewed. These participants are varying in their level of management and experience and the firms were located in different region in Malaysia with 2 located in the capital of Malaysia, Kuala Lumpur and the remaining located in the northern region of Malaysia.

The main criteria for the firms selected in this research are as follows; the firms are actively involved in the industry and have been established for >10 years. It is important that the firms have been active and has had more than a decade of experience as they would have experienced how policies set by the government or trends in the current construction industry affected their business and changed how they manage their projects. All of the firms included in this research are categorized as Small and Medium sized Enterprises (SMEs) having <50 employees and their nature of business are mainly civil and structural design. SMEs are at the core of Malaysian construction industry and account for about 90% of companies undertaking construction work in the country (Kamal and Flanagan, 2012).

For the purpose of an onymity and keeping in line with the ethical approval requirement, the participants were labelled P1-P3 and so on without any order of importance, as with the name of the firm; F1-F4. The following Table 2 shows the details of the sample interviewed for this research.

Table 2: Detail of sample for interview

Organization	No. of participants	Participant labels	Managerial level
F1	1	P6	Director/Principal
	4	P2	
		P8	
		P10	
F2	1	P11	Senior Engineer/Middle Manager
	1	P7	Director/Principal
		P4	Senior Engineer/Middle Manager
F3	1	P5	Director/Principal
	4	P1	Senior Engineer/Middle Manager
		P3	
		P13	
F4	1	P14	Director/Principal
	1	P12	
		P9	

With Table 1, the participants interviewed in this research are in the top or middle manager position. This is due to the fact that these 2 groups are commonly involved in decision making in the construction industry. The views of top and middle management are important to this research as they will be the key person working in a partnering project and will have the authority to decide on behalf of their firm.

Semi-structured interview was conducted to obtained the research and analysed in two different stages. The first stage of analysis put the data through a structural coding approach. Structural coding applies a content-based or conceptual phrase representing a topic of inquiry to a segment of data that relates to a specific research question used to frame the interview. The similarly coded segments were then collected together for more detailed coding and analysis (Saldana, 2015).

The second stage of the qualitative analysis employed the content analysis which required the text to be coded or broken down, into manageable categories on a variety of levels word, word sense, phrase, sentence or theme and then analysed to see the relationship between each theme. The content analysis approach was applied with the aid of a coding scheme to distinguish different categories of thinking among the respondents. Content analysis is a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use (Krippendorff, 2004). It is essentially a method for systematically describing the meaning of qualitative material, done by classifying material as instances of the categories of a coding frame (Schreier, 2012; Morgan, 1993) implied that the qualitative content analysis uses code categories which emerges from the data themselves, applies these codes through careful reading of the data and treats counting as the detection or patterns to guide the further interpretation of the data. The data collection was set under two themes namely understanding of the partnering concept and awareness of partnering practices. The NVivo 10 Software was used to assist in managing and analysing the interview data.

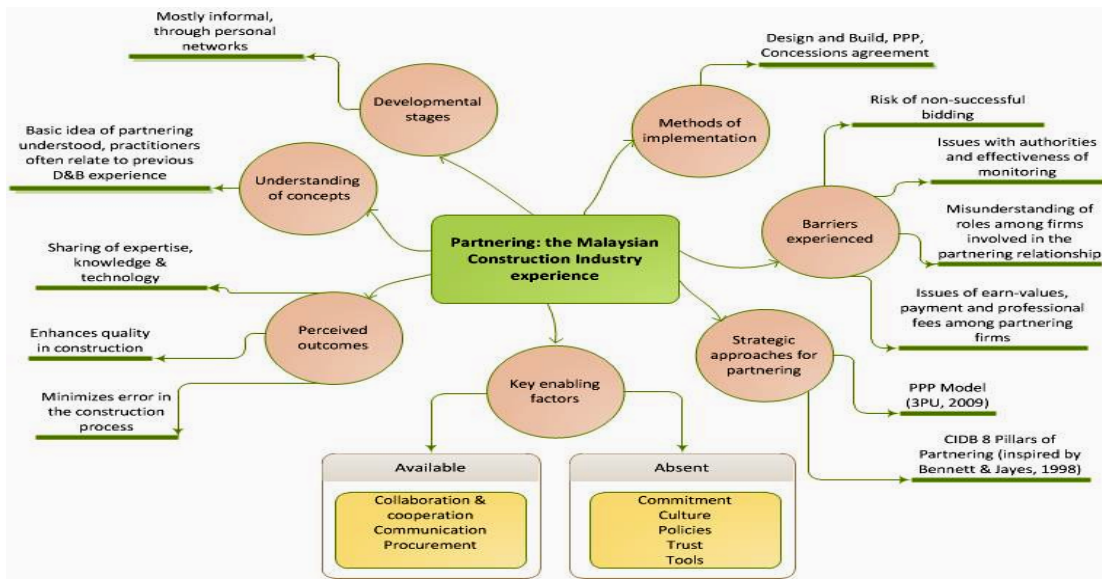


Fig. 1: Partnering-the malaysian construction industry experience

RESULTS AND DISCUSSION

Although, partnering is still considered a recent practice within the Malaysian construction industry, the practitioners are in agreement of its shared benefits and opportunities. The barriers to partnering in Malaysia were also identified in the data collection. Similarly, this research presents partnering factors which will provide a benchmark to authorities to develop an effective partnering. These findings are important as they are context-specific and will be included in the recommendations for implementing effective partnering in Malaysia. This study discusses the findings according to two themes namely; the understanding of partnering concept and the awareness of partnering concept. Figure 1 shows out the findings from the data collection in identifying the awareness in partnering activities among Malaysian consultants.

Awareness of partnering practices: Each of the participants was asked whether or not they have heard of construction partnering that has been implemented in the UK and other countries where it had been applied successfully. It was discovered that all of the participants have never heard of partnering being implemented in the UK, although they might have a general idea of what partnering should be. This could signify either one of two things; firstly, the authorities governing the Malaysian construction industry did not have an effective channel to spread the current information about construction practices in other country or secondly, the construction professionals in Malaysia have no interest in seeking

new information unless it is required by the project. The comment made by P3, “there is no formal information given out by the government regarding it... sort of we just know because we are working in the industry not really sure about partnering in the UK though” and P4 “no, not really. I do understand the idea of partnering, though the industry here might have been applying it for all that we know” falls into the first category where the government is not seen as being very effective in giving out information for the industry. In cases where it is required to know, the construction professionals seem to be taking extra effort as best portrayed by the response given by P9. “It is not an entirely a new thing people know about it. Just us (Malaysians) are exposed much later to it. Unless we travelled or worked overseas read more maybe we are more aware of such developments (chuckles). Another thing, unless there is a ministry who wants to do this, then only they will release the information required.”

Although, it was discovered that all of the participants are not aware of UK partnering practices in general most of them have positive impressions on partnering practices and its promised benefits. The comments given by P1, “it could be a good thing it would mean that there is continuity of business for firms in the construction industry” and P8, “I think it is a positive thing we might be able to improve the industry. Solve many problems that we currently have like sometimes we have disagreement with other companies, maybe because we don’t understand each other” reflects this finding. However, it should be noted that, there appears to be some reservation towards partnering among the participants which is reflected in the comments from P7,

“there is still a lot to be understood like D and B, there is still a lot of things we have to understand. How can we move towards partnering, if this is the case?” This response gave the researcher the impression that the participant appears to be hesitant towards partnering not because it is not a beneficial move but more dominantly because there isn't much knowledge about it in the industry, based on their experience when something new is implemented in the industry.

The participants are also asked of the similarity between Malaysian and UK partnering practices. Mainly, 9 out of 14 participants believe that the practices would be different, factoring in cultural aspects as mentioned by P5 “they have been doing it for some time while we are just beginning to adapt to it there has to be some amount of adjustment before we fully implement it” and partnering experience among the industry players which was implied by P8, “Malaysians do not share the same mentality like the British. Developing countries and developed countries possess different mentality. I think our way of partnering would have to be different, it is just the way our culture is.” The importance of culture in partnering is highlighted in the literature review and this statement by P8 also confirms the understanding of the researcher that there is some level of cultural influence in ensuring partnering success.

While the participants are positive about the possibility of partnering success in Malaysia, most of them highlight the need of some adjustments to the industry prior to the implementation of partnering as commented by P10, “if we adapt totally without reviewing our own industry, we might find that their policies are not suitable to be adopted in Malaysia. Maybe we can adapt some of the generic partnering practices, not entirely.” This shows that there is need to study the suitability of other partnering practices in the Malaysian context and further confirms the need for this research. However, the researcher feels the need to highlight the pessimistic opinions of some of the participant in thinking that partnering is quite impossible to implement in Malaysia; as mentioned by P1, “the problem with here in Malaysia is even though all is stated in the contract in the BQ (bill of quantities) but the implementations were done halfway, same thing with enforcement” and P3, “the issue of trust and cost. We might be better off in Malaysia doing things the usual way rather than the (partnering) practice in the UK”. These responses reflect the problem of authorities and monitoring, the issue of trust among construction parties and cost which is a known problem in Malaysian construction industry.

The second theme also explores the requirement for partnering success in Malaysia. It is again discovered that

the issue with authorities and monitoring is a critical issue in nature as it is repeatedly being mentioned to be one of the most important requirements to enable partnering success in Malaysia. The 10 out of 14 participants feels that the government should play an important role in promoting, enforcing and monitoring partnering efforts within the industry as reflected by P2, “we need the government to monitor the efforts. In terms of implementation to make sure everything is done to certain standards”. Another important requirement as viewed by the participants is the need for a proper guideline for partnering efforts and an improved channel of knowledge and training from the government. The dependency on the government as the source of knowledge and enforcement are probably due to the fact that the government is indeed the single largest client in the Malaysian construction industry which can be seen in the response of P8, “the government will have to monitor all partnering efforts, then perhaps it has a better chance to be successful. Normally the government is the client but as usual, there is a lot of bureaucracy in the government.” In general, the results shown that there are 5 basic requirements for partnering in Malaysia which are as follows in the order of importance based on the findings: government enforcement and monitoring, guidelines, knowledge and training support, trust between partners, change of culture and Involvement of financial institutions.

The findings reflect that the consultant engineers' awareness of partnering are due to lack of interest in current knowledge which can be remedied through fostering the appropriate culture of knowledge sharing and innovativeness.

CONCLUSION

It is apparent from the findings that although the participants do not know the exact meaning of partnering in the context of construction industry, they have been already practicing collaborative working with other organizations. Although, it is done informally in Malaysia, they are able to understand the many benefits that could result from partnering and what issues that may arise from collaborative working with other parties. Design and Build (D and B) projects were taught to be one of the most similar methods to partnering and it is clear that the participants are not entirely sure of the difference between D and B and partnering. In general, most of the participants are optimistic about partnering and the authorities governing the construction industry should play a role in educating the industry about partnering if that is the way forward.

It can also be noted that most Malaysian construction professionals lacked the initiative to seek knowledge on new practices in sources other than the information channels from the government or their professional bodies. Most of the participants interviewed have never heard of partnering practices in the UK or other countries while admitting that unless it is required by the government or client, such new information will not be searched at their own leisure. However, their optimism for partnering should be credited and having a general idea of what partnering might be, the participants had deduced what is required to enable partnering success in the Malaysian construction industry. They also generally agreed that a proper guideline is needed for partnering to be implemented which confirms the need for the direction research.

This study has determined that the awareness in partnering practices is still minimal within the Malaysian construction industry and had highlighted the need for active involvement by the authorities in providing guideline for implementing partnering in the industry. With the industry being very receptive to the idea, it is crucial that the authorities take this opportunity in steering the practitioners towards partnering for project delivery and business sustainability in the construction industry.

REFERENCES

- Ali, A.S., Z.M. Don, A. Alias, S.N. Kamaruzzaman and M. Pitt, 2010. The performance of construction partnering projects in Malaysia. *Int. J. Phys. Sci.*, 5: 327-333.
- Alinaitwe, H. and R. Ayesiga, 2013. Success factors for the implementation of public-private partnerships in the construction industry in Uganda. *J. Constr. Dev. Countries*, 18: 1-14.
- Aziz, A.R.A. and P.J. Kassim, 2011. Objectives success and failure factors of housing public-private partnerships in Malaysia. *Habitat Int.*, 35: 150-157.
- Benton, W.C. and L.F. McHenry, 2010. *Construction Purchasing and Supply Chain Management*. McGraw-Hill, New York, USA., ISBN: 978-0-07-154886-1, Pages: 257.
- Bischoff, H. and S.J. Benade, 2008. Partnering on information management projects in South Africa. *Proceedings of the PICMET'08-2008 Portland International Conference on Management of Engineering & Technology*, July 27-31, 2008, IEEE, Cape Town, South Africa, ISBN: 978-1-890843-17-5, pp: 1363-1370.
- Bygballe, L.E., M. Jahre and A. Sward, 2010. Partnering relationships in construction: A literature review. *J. Purchasing Supply Manage.*, 16: 239-253.
- Cheung, S.O., P.S. Wong and A.L. Lam, 2012. An investigation of the relationship between organizational culture and the performance of construction organizations. *J. Bus. Econ. Manage.*, 13: 688-704.
- Eriksson, P.E. and M. Westerberg, 2011. Effects of cooperative procurement procedures on construction project performance: A conceptual framework. *Int. J. Project Manage.*, 29: 197-208.
- Eriksson, P.E., T. Nilsson and B. Atkin, 2008. Client perceptions of barriers to partnering. *Eng. Constr. Archit. Manage.*, 15: 527-539.
- Fletcher, R. and T. Fang, 2006. Assessing the impact of culture on relationship creation and network formation in emerging Asian markets. *Eur. J. Marketing*, 40: 430-446.
- Garde, L.E. and A. Dubois, 2010. Partnering in the construction industry-Problems and opportunities. *J. Purchasing Supply Manage.*, 16: 254-263.
- Hosseini, M.R., N. Chileshe, J. Zuo and B. Baroudi, 2012. Approaches of implementing ICT technologies within the construction industry. *Australas. J. Constr. Econ. Build. Conf. Ser.*, 1: 1-12.
- Ivory, C., 2005. The cult of customer responsiveness: Is design innovation the price of a client-focused construction industry?. *Constr. Manage. Econ.*, 23: 861-870.
- Jacobson, C. and O.S. Choi, 2008. Success factors: Public works and public-private partnerships. *Int. J. Public Sector Manage.*, 21: 637-657.
- Jiang, Z., S.C. Henneberg and P. Naude, 2011. Supplier relationship management in the construction industry: The effects of trust and dependence. *J. Bus. Ind. Market.*, 27: 3-15.
- Jones, K. and Y. Kaluarachchi, 2008. Performance measurement and benchmarking of a major innovation programme. *Benchmarking Int. J.*, 15: 124-136.
- Kamal, E.M. and R. Flanagan, 2012. Understanding absorptive capacity in Malaysian small and medium sized (SME) construction companies. *J. Eng. Des. Technol.*, 10: 180-198.
- Krippendorff, K., 2004. Reliability in content analysis. *Hum. Commun. Res.*, 30: 411-433.
- Laan, A., N. Noorderhaven, H. Voordijk and G. Dewulf, 2011. Building trust in construction partnering projects: An exploratory case-study. *J. Purchasing Supply Manage.*, 17: 98-108.
- Ling, F.Y.Y., 2003. Managing the implementation of construction innovations. *Constr. Manage. Econ.*, 21: 635-649.
- Mason, J.R., 2007. The views and experiences of specialist contractors on partnering in the UK. *Constr. Manage. Econ.*, 25: 519-527.

- Meng, X., 2012. The effect of relationship management on project performance in construction. *Int. J. Project Manage.*, 30: 188-198.
- Morgan, D.L., 1993. Qualitative content analysis: A guide to paths not taken. *Qual. Health Res.*, 1: 112-121.
- Naoum, S., 2003. An overview into the concept of partnering. *Int. J. Project Manage.*, 21: 71-76.
- Ngowi, A.B. and E. Pienaar, 2005. Trust factor in construction alliances. *Build. Res. Inf.*, 33: 267-278.
- Nifa, F.A.A. and V. Ahmed, 2010. Effective partnering in construction-A critical literature review. Proceedings of the 4th International Conference on Built Environment in Developing Countries, December 1-2, 2010, University of Salford, Greater Manchester, England, pp: 95-106.
- Othman, A. and M. Abdellatif, 2011. Partnership for integrating the corporate social responsibility of project stakeholders towards affordable housing development: A South African perspective. *J. Eng. Des. Technol.*, 9: 273-295.
- Palaneeswaran, E., M. Kumaraswamy, M. Rahman and T. Ng, 2003. Curing congenital construction industry disorders through relationally integrated supply chains. *Build. Environ.*, 38: 571-582.
- Ruan, X., D.E.G. Ochieng, A.D. Price and C.O. Egbu, 2013. Time for a real shift to relations: Appraisal of social network analysis applications in the UK construction industry. *Australas. J. Constr. Econ. Build.*, 13: 92-105.
- Saldana, J., 2015. *The Coding Manual for Qualitative Researchers*. Sage Publisher, Thousand Oaks, California, ISBN: 978-1-4739-0248-0, Pages: 345.
- Schreier, M., 2012. *Qualitative Content Analysis in Practice*. Sage Publications, Los Angeles, California,.
- Shen, L.Y., V.W.Y. Tam, L. Tam and Y.B. Ji, 2010. Project feasibility study: The key to successful implementation of sustainable and socially responsible construction management practice. *J. Cleaner Prod.*, 18: 254-259.
- Wong, K.D. and Q. Fan, 2013. Building Information Modelling (BIM) for sustainable building design. *Facil.*, 31: 138-157.
- Yeung, J.F., A.P. Chan and D.W. Chan, 2012. Defining relational contracting from the Wittgenstein family-resemblance philosophy. *Int. J. Project Manage.*, 30: 225-239.
- Yiu, K.T. and S.O. Cheung, 2007. A study of construction mediator tactics-Part II: The contingent use of tactics. *Build. Environ.*, 42: 762-769.