

INTERNATIONAL STRATEGIC ALLIANCES IN CONSTRUCTION: PERFORMANCES OF TURKISH CONTRACTING FIRMS

ILKNUR AKINER

Mersin University, Faculty of Architecture, Department of Architecture,
Ciftlikkoy Merkez Kampusu, 33343 Mezitli / Mersin, TURKIYE
ilknurakiner@gmail.com, ilknurakiner@mersin.edu.tr

IBRAHIM YITMEN

European University of Lefke, Faculty of Architecture & Engineering, Department of Civil
Engineering, Gemikonagi - Lefke , Mersin 10, TURKIYE
iyitmen@gmail.com, iyitmen@eul.edu.tr

Abstract

Firms need various resources and capabilities in order to compete with each other effectively. These resources and capabilities can be acquired, developed internally, or obtained via an ongoing cooperative relationship with another firm through the use of a strategic alliance. The use of strategic alliances in construction industry has increased sharply over the last decade and they are particularly effective in helping a firm maintain a superior competitive position in dynamic environments. Alliances reportedly improve the competitiveness of the construction firms by providing access to external resources, by providing synergies and by fostering rapid learning and change. The purpose of this research is to identify the success factors and key components of the development process of strategic alliances, and propose a process model of strategic alliances performances based on alliance conditions in international construction industry. The research involves a questionnaire survey conducted to the Turkish contracting firms operating internationally. Different types of projects constructed by Turkish contractors in Commonwealth of Independent States, Middle East Countries, African Countries, and other regions of the world between 2002 and 2009, were analyzed and used in the developments made in this study. The results indicate that shared risk, trust between parties, and equity are found to be the most important determinants of strategic alliance success. The research findings support the contracting firms enhancing their productive capacities and acquiring competitive advantages that enable them to increase alliance performances. The study also commences on how the identified factors enhance the effectiveness of the participating firms' competitive strategies by providing for mutual resource exchanges (technologies, skills, or products).

Keywords: Strategic alliances, international construction, success factors, Turkish contracting firms

INTRODUCTION

The globalization of the construction industry is rendering the familiar model of a single firm doing all things in-house outdated. The technological, sharing sources (workmanship, machinery, equipment, etc.), political, financial and competitive capabilities that are required to operate in the global construction market means that firms need to establish alliances with other participants in order to survive. Alliances are defined as voluntary arrangements between firms involving exchange, sharing or co-development of products, technologies or services (Gulati, 1998; Ngowi, 2007). In the construction industry, alliance organizations are

employed when parties that are involved in similar activities, such as contractors joining forces to leverage their complimentary capabilities to carry out work. This occurs in situations where risks are too high for subcontracting to be viable. The cooperative aspect arises from the fact that each firm needs access to the other firm's know-how and that the firms can collectively use their knowledge to produce something that is beneficial to them all (common benefits). The competitive aspect is a consequence of each firm's attempt to also use its partner's know-how for private gains, and of the possibility that significantly greater benefits might accrue to the firm that finishes learning from its partner before the latter can do the same (Khanna et al., 1998). Interfirm collaborations, such as strategic alliances, have become important business management instruments to improve the competitiveness of firms, especially in complex and turbulent environments. Alliances help to bridge the gap between the firm's present resources and its expected future requirements (Eisenhardt and Schoonhoven, 1996). In this time of globalization and radical technological change, alliances have become important strategic manoeuvres in construction industry.

As is the case for many other export-oriented economic activities in Turkey, the unique geographical location of Turkey at the crossroads of three continents -Europe-Asia-Africa- contributes a great deal to the global competitiveness of Turkish construction products and services abroad. However, Turkey's location is only one contributing factor to this competitiveness of the sector, as the country can also boast cost effective service at international standards, high client satisfaction, credibility in partnerships, extensive knowledge and experience gained in a wide variety of projects, familiarity with the business environments in the nearby regions, qualified manpower and a calculated risk-based approach to business. The Turkish construction sector comprises a group of businessmen at the crossroads of three continents that are active in each country in the Eurasian market of 580 million people, covering an area of 26 million km². Turkish contracting firms are open to international partnerships, not only in the field of contracting but also in construction industry investments, ranging from the manufacturing of construction materials to infrastructure, housing, industry and tourism. Extensive know-how and experience gained through working abroad for nearly four decades in all kinds of challenging engineering projects and in all forms of business environment are among their distinctive strengths.

There is a significant change in the pattern of Turkish overseas contracting firms portfolios. Turkish contracting firms are now exploring the significant needs of the products and services of the countries in which they are operating or intending to operate. They are catering to those needs with whole package offers consisting of basic or process engineering, feasibility studies, equipment selection and extension of credit. So far, the total value of projects undertaken by the Turkish contractors has reached \$33 billion US (the projects still under progress amount to \$15 billion US). The present share of the Turkish construction sector in the international market is about 10% and today, Turkish contractors play a major role in the international arena and are active in more than 25 countries. The experience gained in the Middle East and Common-Wealth Independent States (CIS) carried the Turkish Contractors to an outstanding position in comparison with their competitors some additional advantages such as geographical proximity, low labor cost and high quality technical personnel make Turkish contractors noteworthy. Within the six year period between 2002 and 2009, the annual volume of business undertaken abroad increased from 1.7 billion USD in 2002; to 23.6 billion USD in 2008. In 2009, because of the affects of the global crisis, this figure decreased to 18.8 billion USD. The internal and external forces and factors that have contributed to this rapid development can be grouped under the following three categories: the attractiveness of business opportunities abroad; reduced business opportunities in Turkey;

and the increasing competitiveness of Turkish contracting firms. Further market diversification and specialization in certain types of projects were the major trends in this period. The number of countries in which Turkish contracting firms was working increased considerably, causing the percentage of work in each country to decrease relatively. Nevertheless, the Russian Federation maintained the first rank (18.90%), followed by Libya (10.73%) and Kazakhstan (8.07%). In this period, the United Arab Emirates (7.05%), Qatar (6.57%), S. Arabia (6.06%), Azerbaijan (4.12%), Romania (3.86%), Turkmenistan (3.84%), Iraq (3.33%), Oman (2.93%), Afghanistan (2.79%), Algeria (2.69%), Jordan (2.47%), Bulgaria (1.99%), Ukraine (1.85%), Morocco (1.83%) and Ireland (1.46%) emerged as new markets. In the aftermath of the interventions in Afghanistan and Iraq, the rebuilding activities in these countries were closely followed by Turkish contracting firms. The types of work undertaken during this period and their relative shares in the total business volume were as follows: road/bridge/tunnel works (15.28%), commercial centers (12.80%), housing (9.41%), industrial plants (7.56%), pipelines (7.47%), social and cultural facilities (7.39%), airports (6.98%), power plants (5.38%) and petrochemical plants (4.13%). In this period, significant progress was made in terms of the scope and size of projects being undertaken. Market, product and business diversification continued further, while several companies started to specialize in certain project types, such as international airports, railways and urban subway systems.

Firms need various resources and capabilities in order to compete with each other effectively. These resources and capabilities can be acquired, developed internally, or obtained via an ongoing cooperative relationship with another firm through the use of a strategic alliance. The use of strategic alliances in construction industry has increased sharply over the last decade and they are particularly effective in helping a firm maintain a superior competitive position in dynamic environments. Alliances reportedly improve the competitiveness of the construction firms by providing access to external resources, by providing synergies and by fostering rapid learning and change. The research focus is to 1) explore the key elements of the strategic alliance process 2) identify the potential success factors in strategic alliances, and 3) develop a conceptual framework of strategic alliance that would reflect more about the real practices of alliancing in international construction industry..

STRATEGIC ALLIANCES IN CONSTRUCTION INDUSTRY

The ensuing globalization of the construction industry as well as the highly fragmented and divisive nature of the industry are among the forces that are influencing it to seek management approaches such as strategic alliances that could leverage the capabilities of the various participants (Ngowi, 2007). Strategically, organisations may enter into alliances (a form of partnership) in order to innovate, access new markets, overcome local market restrictions, raise entry barriers and share risk for mutual benefit (Stanek, 2004).

A strategic alliance is a cooperation with a duration longer than a project, which has the intention to change the product market competence combinations of the participating partners. These partners share the rewards and risks. They conscientiously create a level of mutual dependence and exclusivity, without losing their independency. Implicit rules of trust and equality apply to the mutual interaction and attitude (Snijders and Geraedts, 2007). Alliancing is generally assumed to be a long-term business strategy linking together client, contractor and supply chain (Rowlinson and Cheung, 2004). Alliance partners are brought together for a specific outcome or project, where risks and rewards are jointly shared and there is goal alignment between parties. Alliance between firms that are engaged in similar

activities has both cooperative and competitive aspects. While the former enables the firms to leverage their complementary capabilities for common benefits, the latter tend to push the allied firms to engage in competitive racing in learning the capability of the partner(s) for private benefits (Ngowi, 2007; Khanna et al., 1998)

Research has documented numerous benefits that strategic alliances hold out for small firms, including the ability to tap into new markets, access scale economies, obtain complementary resources in under-developed value chain activities, respond to environmental uncertainties, and receive endorsements from reputable incumbents, among others (Arino et al., 2008; Deeds and Hill, 1996; Dickson and Weaver, 1997; D'Souza and McDougall, 1989; Eisenhardt and Schoonhoven, 1996; Gomes-Casseres, 1997; Hara and Kanai, 1994; Larson, 1991; Shan, 1990; Stuart et al., 1999).

Process of Strategic Alliancing

Strategic alliancing is typically characterised by a number of phases ranging from the selection of contract participants through to the completion of the correction period. There is a common premise in the management perspective of strategic alliance that the process should be composed of three stages (i.e., formation, implementation, and evaluation) (Buono 1997; Das and Teng, 1999).

In this study, the process of strategic alliance is composed of four stages unlike the past studies. These stages are Alliance Planning, Alliance Formation, Alliance Implementation, and Alliance Completion. Alliance Planning refers to strategy development and partner assessment. Strategy development involves studying the alliance's feasibility, objectives and rationale, focusing on the major issues and challenges and development of resource strategies for production, technology, and people. Partner assessment involves analyzing a potential partner's strengths and weaknesses, creating strategies for accommodating all partners' management styles, preparing appropriate partner selection criteria, understanding a partner's motives for joining the alliance and addressing resource capability gaps that may exist for a partner. Alliance Formation refers to an agreement, implicitly or explicitly, made by all key construction parties to establish an informal relationship for the purpose of accomplishing mutually agreed upon goals and objectives. During this stage, involved parties should prepare to diagnose their current practices and to address their concerns about what partnering can help them to fill the performance gap. They may be required to unfreeze their mind to accept the needs for change when they accept the concept of partnering. Alliance Implementation refers to the execution of the informal relationship to accomplish the mutually agreed goals and objectives in line with the construction project. At this stage, alliancing is operating to exert its influence on the construction projects. It is a process to learn and experience the newly adopted concepts and practices derived from alliancing. Alliance Completion refers to the intention of the construction parties to rerun an informal relationship with the same group of firms for a new project after the completion of the current project. Most often, if construction parties aim at implementing alliancing for a single project, the alliancing team will be resolved after the project is completed.

Determinants of Strategic Alliance Performance

Multiple factors determine the performance outcome of strategic alliances, ranging from the nature of the industry and institutional environment, within which the alliance operates, to the quality and commitment of the alliance management. Successful alliancing requires creativity, trust, commitment, interdependence, cooperation, open communication, goal alignment and joint problem solving (Peters et al., 2001; Howarth et al., 1995; Hampson and

Kwok 1997; Rowlinson and Cheung, 2004). Alliance structure is also a highly relevant factor in alliance performance. Parkhe (1993) reports that appropriate alliance structure curbs opportunistic behavior and leads to better alliance performance. Alliance structure serves the purpose of control in alliances, which is critical because of the shared nature of alliance governance (Das and Teng, 1999).

Collaboration between alliance partners is essential for a successful alliance project. During collaborations, alliance partners are able to share resources including professional expertise; this initiates a higher frequency of ideas flow – after all, two heads are better than one. Alliancing will not succeed without continuous flow of information and communication. Through open and honest communication, foreseeable risks are exposed and parties have a better understanding of each other’s needs. Trust, continuous open communication and knowledge sharing are the keys to successful alliancing (Rowlinson and Cheung, 2004). During the life of alliances, the internal and external circumstances may change, often in unexpected ways (in the construction industry circumstances continuously change). How partners adapt to these changing circumstances determines whether an alliance prospers or flounders (Kraar, 1989; Ngowi, 2007). Successful adaptation of these changes calls for a delicate balance between the twin virtues of reliability and flexibility. Flexibility is necessary for partners to have a viable relationship in the face of changing circumstances, yet unlimited flexibility affords companies the opportunity and incentive to cheat, reducing the reliance partners can place on each other (Heide and Milner, 1992; Ngowi, 2007). Black et al. (2000) indicated that partnering experience is a critical factor toward partnering success. Firms learn and experience the newly adopted concepts and practices derived from partnering application. Wu et al. (2009) report that previous alliance experiences is a significant criteria of strategic partner selection process. Firms with experience in international strategic alliance activities may place more value on a partner with potential for development of new technology/knowledge and learning (Nielsen, 2003).

A number of researchers gathered lists of factors that are considered to be influential upon the success of strategic alliances. Table 1. summarises the literature of key success factors for strategic alliances.

Table 1. List of Alliance Success Factors and Sources

No	Factors	Source
1	Mutual goals & objectives	Green and Lenard (1999); Haque et al. (2004); Jefferies et al. (2006)
2	Tight alliance outline	Elliot (1998); Abrahams and Cullen (1998)
3	Alliance structure	Abrahams and Cullen (1998); Haque et al. (2004)
4	Commercial incentives	Abrahams and Cullen (1998); Haque et al. (2004); Jefferies et al. (2006)
5	Stretch targets	Green and Lenard (1999); Haque et al. (2004); Jefferies et al. (2006)
6	Partnering experience	Cheng and Li (2002), Black et al. (2000); Wu et al. (2009); Nielsen (2003)
7	Open communication	Haque, Green and Keogh (2004); Cheng and Li (2002)
8	Trust Between Parties	Elliot (1998); Green and Lenard (1999); Haque et al. (2004)
9	Flexibility & adaptability	Elliot (1998); Jefferies et al. (2006)
10	Shared risk	Bennett and Jayes (1995)
11	Adequate resources	Cheng and Li (2002)
12	Equity	Green and Lenard (1999); Haque et al. (2004)
13	Cooperative spirit	Elliot (1998); Abrahams and Cullen (1998); Haque et al. (2004)
14	Facilitation	Abrahams and Cullen (1998); Haque et al. (2004); Jefferies et al. (2006)
15	Sound relationship	Elliot (1998); Abrahams and Cullen (1998)
16	Best people for project	Abrahams and Cullen (1998); Haque et al. (2004)
17	Strong Commitment by senior management	Elliot (1998); Green and Lenard (1999); Abrahams and Cullen (1998); Haque et al. (2004); Jefferies et al. (2006)

18	Good cultural fit	Black, Akintoye, and Fitzgerald (2000)
19	Joint process evaluation	Green and Lenard (1999); Abrahams and Cullen (1998)
20	Shared knowledge	Abrahams and Cullen (1998); Haque et al. (2004)
21	Dispute resolution process	Green and Lenard (1999)
22	Continuous improvement	Larson (1991)

RESEARCH METHOD

Sampling

A list of contracting firms within the construction sector operating internationally was obtained from the Turkish Contractors Association (TCA). The list consisted of 185 member organizations. The sample includes relatively medium to large companies. Company size is determined by the number of professional staff, number of construction projects per year, and the size of a typical project in US dollars. A company with more than 750-1000 employees is defined as large – 75 percent were large size companies. The numbers of international projects per year ranged from 5 to 20 projects, 60 percent were involved 5 to 10 projects. Project size ranged \$1.5 million to \$50 million (80 percent) and to over \$100 million (20 percent). Distribution of international projects by type of work is shared by building construction (32%), transportation (36%), energy (12%), hydraulic works (7%), infrastructure (6%), industrial plant (5%) and other (2%). Major regions for projects undertaken by Turkish contractors abroad were Commonwealth of Independent States, Middle East Countries and African Countries. In this study, small size companies were not taken into consideration and kept out of the survey as they are not included in the TCA main list.

Data Collection

The empirical data was collected through a questionnaire survey, which was administered to the firms registered to the TCA. During the survey, all these firms operating internationally (185 member organizations) were contacted and asked to participate in the study. They were then fully informed of the research objectives, that the research was a strictly scientific and confidential and that their anonymity was assured. A total of 135 completed questionnaires were received, giving a high response rate of 73 per cent indicating that the sampling procedure was effective and that the respondents perceived the research to be relevant and worthwhile. The respondents were asked to rate the extent to of agreement with each statement based on a five point Likert scale of 0 (No effect) to 4 (Maximum effect). Contact personnel in the companies for the questionnaire survey were either the top management or senior management in their respective departments, therefore their level of knowledge expected to provide responses was acceptable for the purpose of validity of the survey results.

The questionnaire survey consisted of 22 statements. The questionnaire covers general information about the initiatives (owners, developers, contracting firms), alliance conditions and alliance development, partnering criterion and key success factors, partnering experiences, and the nature of the benefits accrued.

FINDINGS

The participating contracting firms provided numerical scoring expressing their opinions on the significance of each factor. The weighted average for each factor was calculated and then it was divided by the upper scale of the measurements in what is referred to as “importance index” therefore the level of important of the factors categorized into four processes of strategic alliance development were calculated using the formula (Kish, 1965):

Level of Importance (Index) = $[\Sigma(aX) \cdot 100] / 4$

a= the score given to the factor by each organization (varying from 0-4)

X= n/N

n= Frequency of organizations

N= Total number of participant organizations

Table 2. shows a matrix of variations in level of important indices of the factors for determining the success factors and key components of the development process of strategic alliances. The X-axis of the matrix indicates the processes of strategic alliance classified into four categories as *Planning*, *Formation*, *Implementation*, and *Completion*. The Alliance Success factors were listed in the Y-axis of the matrix with their index values. The matrix also includes the calculated mean of importance indices and the rank orders of all the processes of strategic alliance listed at the bottom of X-axis with their index values. Studying the matrix the factors carrying the highest level of importance are mostly from the process *Planning*. These factors are “Shared Risk”, “Trust between parties”, and “Equity”. In observing the highest ranked process, *Planning* carries the highest level of importance.

Table 2. Matrix showing the Variations in the level of Importance Indices of the factors

Rank	MIP	Factors	Processes			
			Planning	Formation	Implementation	Completion
6	3,07	Adequate resources	57,00	57,00	42,75	57,00
11	1,75	Tight alliance outline	28,50	28,50	28,50	28,50
4	3,73	Alliance structure	71,25	57,00	57,00	57,00
7	2,85	Commercial incentives	57,00	42,75	42,75	42,75
15	0,88	Stretch targets	14,25	14,25	14,25	14,25
4	3,73	Partnering experience	71,25	57,00	57,00	57,00
10	1,97	Open communication	42,75	28,50	28,50	28,50
2	4,17	Trust Between Parties	71,25	71,25	71,25	57,00
13	1,32	Flexibility & adaptability	28,50	28,50	14,25	14,25
1	4,38	Shared risk	71,25	71,25	71,25	71,25
8	2,63	Mutual goals & objectives	42,75	42,75	42,75	42,75
3	3,95	Equity	71,25	71,25	57,00	57,00
13	1,32	Cooperative spirit	28,50	28,50	14,25	14,25
14	1,1	Facilitation	28,50	14,25	14,25	14,25
9	2,41	Sound relationship	42,75	42,75	42,75	28,50
15	0,88	Best people for project	14,25	14,25	14,25	14,25
16	0,66	Strong Commitment by senior management	14,25	14,25	14,25	0
5	3,51	Good cultural fit	57,00	57,00	57,00	57,00
12	1,53	Joint process evaluation	28,50	28,50	28,50	14,25
8	2,63	Shared knowledge	42,75	42,75	42,75	42,75
17	0,44	Dispute resolution process	0	0	14,25	14,25
18	0,22	Continuous improvement	0	0	0	14,25
Mean Importance Index (MIP)			13,59	12,5	11,84	11,4
Rank			1	2	3	4

Discussion of the Survey

The factor “Shared risk” is ranked #1 and is perceived by respondents to have influence on all the alliance processes with a value of importance index 71,25. The interviews and observations highlighted that alliance partners are brought together for a specific outcome or project, where risks and rewards are jointly shared. The findings are in congruence with the literature (Walker and Hampson, 2003, Peters et al., 2001). Through open and honest communication, foreseeable risks are exposed and parties have a better understanding of each other’s needs. Under the alliance, all parties should take collective ownership of all risks associated with delivery of the project, with equitable sharing of risks using a risk/reward mechanism (Rowlinson and Cheung, 2005). The risk/reward mechanism are to be adopted in the alliance project which will create financial incentives and equitable risk sharing between the alliance parties. By adopting a risk/reward mechanism, there are motivation incentives for all parties which encourage them to work towards “best for project” solutions.

The factor “Trust between parties” is ranked #2 and is perceived by respondents to have influence on the alliance processes *Planning, Formation, Implementation* with a value of importance index 71,25, and on the alliance process *Completion* with a value of importance index 57,00. The interviews and observations highlighted that trust between alliance partners creates an opportunity and willingness for further alignment (such as future job opportunities), reduces the need for continuous cross monitoring of one’s behavior, reduces the need for formal controls and reduces the tensions created by short-term inequities. It allows the partners to focus on their long-term business development as well as cutting down cost and time outlays. The findings are consistent with the literature (Rowlinson and Cheung, 2005). Without trust, there would not be sharing of resources and knowledge; without trust, there would be hidden agendas and closed communication.

The factor “Equity” is ranked #3 and is perceived by respondents to have influence on the alliance processes *Planning*, and *Formation*, with a value of importance index 71,25, and on the alliance processes *Implementation*, and *Completion*, with a value of importance index 57,00. The interviews and observations highlighted that firms try to design alliances that are efficient and equitable at the time of the alliance’s establishment. Alliances enhance the value of equity ownership ties between firms. Equity is an important ingredient in developing win-win thinking among parties. The findings reinforce the literature (Allen and Phillips, 2000; Chan et al., 2004; CII, 1991; Husted and Folger, 2004). The development of an equitable relationship between the stakeholders has been found to be necessary as equity promotes mutual motivation when “win-win” solutions were sought rather than the “win-lose” solutions of traditional relationships.

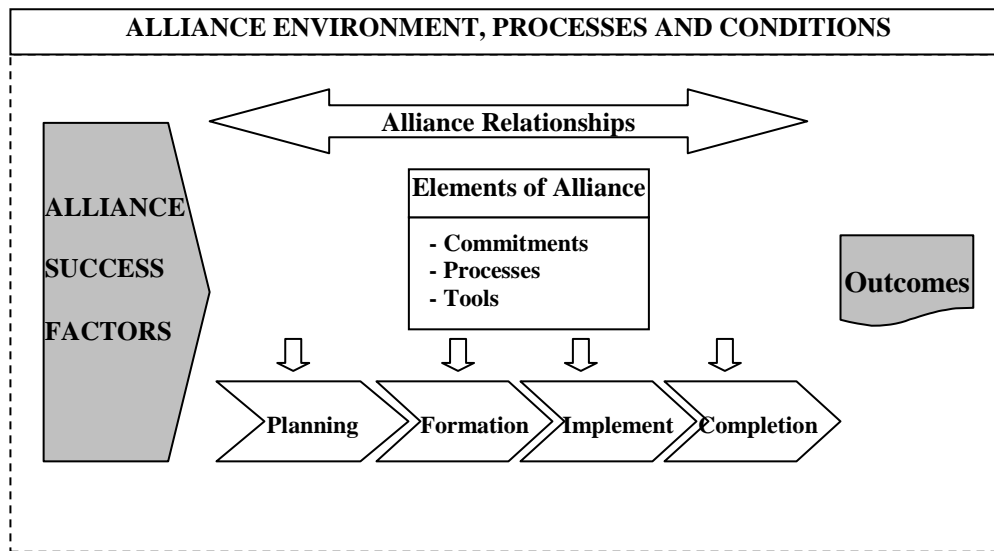


Figure 1. Model Framework of Strategic Alliance

As it is shown in Figure 1., the conceptual framework uses a four-stage process—planning, formation, application, and completion—which forms the basis for considering what factors lead to the success of each stage. In the proposed conceptual framework, it can be seen that the commitment, processes and tools criteria are considered to have the greatest bearing on the establishment and development of the alliance relationship. Successful outcomes of individual projects involving the use of strategic alliance are likely to generate shared rewards and benefits and create an opportunity for the organizations to share risk, develop and build trust and equity between parties, maintain alliance structure, good cultural fit, and achieve joint learning from the experiences. These outcomes act as feedback to the process further strengthening the role of each element and benefit the relationship development process overall. The research findings support the contracting firms enhancing their productive capacities and acquiring competitive advantages that enable them to increase alliance performances. Shared resource exchanges (technologies, skills, or products) between the parties enhance the effectiveness of the participating firms' competitive strategies. In strategic alliances, having a common strategic direction helps firms to have a better understanding of their mutual goals and expectations. Alliance structures should include a learning framework enabling open reflection of partners' knowledge whilst retaining visions and individualism. This allows all parties to benefit from shared knowledge.

CONCLUSION AND RECOMMENDATIONS

This paper presents a survey study for determining the strategic alliances' performances of Turkish contracting firms operating internationally. The success factors and key components of the development process of strategic alliances were identified and a process model of strategic alliances performances based on alliance conditions in international construction industry was proposed. It was found that "Shared risk", "Trust between parties", and "Equity" are found to be the most important determinants of strategic alliance success and *Planning* and *Formation* are the two processes which the interviewees believed would highly be influenced by the success factors mentioned above.

Managers of contracting firms can reduce the risk of alliance failure and can generate more value from their alliances by studying the detailed critical success factors. Process and content issues are equally important for alliance success. Alliance competence, i.e. knowledge of how to forge and manage alliances, could provide contracting firms with the capability to protect their independence while surviving in a tide of globalisation and rapid technological change.

Successful alliance operations require enormous inputs of physical and intangible resources: management skills, production technologies, employee motivation, adaptiveness, innovativeness, and the partners' capacities to set aside direct pursuit of their individual business interests while sharing both the benefits and risks of collaboration. The shared interests of the partners in the alliance create goal alignment which minimizes opportunism, and there is a mutual hostage situation as both partners have made substantial investments and are dependent on each other's performance. These features assist in managing relational risk. As cooperation and competition coexist between alliance partners, cooperative relationship evolves over time as partners learn more about each other's motives, capabilities and attitudes toward control, conflict, cooperation and competition. During this period, and the entire life of the alliance the partners are vulnerable in the various ways. Thus, in successful alliances, trust is often touted as a prerequisite, a necessity, an absolute must.

The challenge for the strategic alliances is minimizing the polarization of construction industry in a global environment. Furthermore, this kind of organizations provide a trigger effect for the contribution of mutual strategy between the developed and developing construction industries through the world.

LITERATURE

- Abrahams, A. and Cullen, A. 1998, 'Project Alliances in the Construction Industry', *Australian Construction Law Newsletter*, (62), 31-36.
- Allen, J. and Phillips, G. 2000, 'Corporate equity ownership, strategic alliances, and product market relationships', *Journal of Finance*, 55, 2791-2815.
- Arino, A. Ragozzino, R. and Reuer, J.J. 2008, 'Alliance Dynamics for Entrepreneurial Firms', *Journal of Management Studies*, 45(1), 147-168.
- Bennett, J., Jayes, S. (1995), *Trusting the Team: The Best Practice Guide to Partnering in Construction*, Centre for Strategic Studies in Construction, University of Reading
- Black, C., Akintoye, A. and Fitzgerald, E. 2000, 'An analysis of success factors and benefits of partnering in construction', *International Journal of Project Management*, 18(6), 423-34.
- Buono, A.F. 1997, 'Reengineering partnerships: Process intervention in strategic alliances', *S.A.M. Advanced Management Journal*, 62(2), 21-27.
- Chan, A.P.C, Chan, D.W.M., Chiang, Y.H., Tang, B.S., Chang, E.H.W., and Ho, H.S.K., 2004, 'Exploring Critical Success Factors for Partnering in Construction Projects', *Journal of Construction Engineering and Management*, 130(2), 188-198.
- Cheng, E.W.L. and Li, H. 2002, 'Construction Partnering Process and Associated Critical Success Factors: Quantitative Investigation', *Journal of Management in Engineering*, 18(4), 194-202.
- Construction Industry Institute. In search of partnering excellence. Special publication 17-1. Texas: Construction Industry Institute; 1991.
- Das, T. K. and Teng, B. 1999, 'Managing risks in strategic alliances', *Acad. Manage. Exec.*, 13(4), 50-62.

- Deeds, D. L. and Hill, C. W. L. 1996, 'Strategic alliances, complementary assets and new product development: an empirical study of entrepreneurial biotechnology firms', *Journal of Business Venturing*, 11, 41–55.
- Dickson, P. H. and Weaver, K. M. 1997, 'Environmental determinants and individual-level moderators of alliance use', *Academy of Management Journal*, 40, 404–25.
- D'Souza, D.E. and McDougall, P. P. 1989, 'Third world joint venturing: a strategic option for the smaller firm', *Entrepreneurship Theory and Practice*, 13, 19–33.
- Eisenhardt, K.M. and Schoonhoven, C.B. 1996, 'Resource-based view of strategic alliance formation: strategic and social effects in entrepreneurial firms', *Organization Science*, 7, 136–50.
- Elliot, T. 1998 'An investigation into Project Alliances: A Case Study within the Australian Construction Industry'. Unpublished Undergraduate Thesis, The University of Newcastle, Newcastle.
- Gomes-Casseres, B. 1997, 'Alliance strategies of small firms', *Small Business Economics*, 9, 33–44.
- Green, S. and Lenard, D. 1999 'Organising the Project Procurement Process'. In S. Rowlinson and P. McDermott (Eds.), *Procurement Systems: A Guide to Best Practice* (pp. 57-82). London: E and FN Spon.
- Gulati R. 1998, 'Alliances and networks', *Strategic Management Journal*, 19, 293–317.
- Hampson, K. and Kwok, T. 1997, 'Strategic alliances in building construction: A tender evaluation tool for the public sector', *Journal of Construction Procurement*, 3(1), 28-41.
- Hara, G. and Kanai, T. 1994, 'Entrepreneurial networks across oceans to promote international strategic alliances for small businesses', *Journal of Business Venturing*, 9, 489–507.
- Haque, S. M., Green, R. and Keogh, W. 2004, 'Collaborative Relationships in the UK Upstream Oil and Gas Industry: Critical Success and Failure Factors', *Problems and Perspectives in Management*, Publishing-Consulting Company "Business Perspectives", pp. 44-51.
- Heide, J.B. and Milner, A.S. 1992, 'The shadow of the future: effects of anticipated interaction and frequency of contact on buyer–seller cooperation', *Academy of Management Journal*, 35, 265–91.
- Howarth, C.S, Gillin, M. and Bailey, J. 1995, '*Strategic alliances: Resource-sharing strategies for smart companies*', Australia: Pearson Professional (Australia) Pty. Ltd.
- Jefferies, M. Brewer, G., Rowlinson, S., Cheung, Y.K.F and Satchell, A. 2006, 'Project alliances in the Australian construction industry : a case study of a water treatment project', In: Symposium on CIB W92: sustainability and value through construction procurement, 29 November - 2 December, Digital World Centre, Salford, UK.
- Husted, B. W. and Folger, R. 2004, 'Fairness and transaction costs: the contribution of organizational justice theory to an integrative model of economic organization', *Organization Science*, 15, 719–29.
- Khanna T., Gulati R. ve Nohria N. 1998, 'The dynamics of learning alliances: competition, cooperation, and relative scope', *Strategic Management Journal*, 19, 193–210.
- Kish, L. 1965. 'Survey sampling', Wiley, New York, 162.
- Kraar, L. 1989, 'Your rivals can be your allies', *Fortune*, 27, 66–76.
- Larson, A. 1991, 'Partner networks: leveraging external ties to improve entrepreneurial performance', *Journal of Business Venturing*, 6, 173–88.
- Ngowi, A.B. 2007, 'The role of trustworthiness in the formation and governance of construction alliances', *Building and Environment*, 42 (4), 1828–1835.
- Nielsen, B.B. 2003, 'An Empirical Investigation of the Drivers of International Strategic Alliance Formation', *European Management Journal*, 21(3), 301–322.

- Parkhe, A. 1993, 'Strategic alliance structuring: A game theory and transaction cost examination of interfirm cooperation', *Academy of Management Journal*, 36, 794–829.
- Peters, R., Walker, D. and Hampson, K. 2001, 'Case study of the Acton Peninsula development, Australia: Research and Case Study of the Construction of the National Museum of Australia and Australian Institute of Aboriginal and Torres Strait Islander Studies', School of Construction Management and Property, Queensland University of Technology.
- Rowlinson, S. and Cheung, Y.K.F. 2004, 'A review of the concepts and definitions of the various forms of relational contracting', S.N. Kalidindi and K. Varghese, eds., Proceedings of International Symposium of CIB W92 on Procurement Systems, Chennai, India, 227-236.
- Rowlinson, S. and Cheung, Y.K.F. 2005, 'Success Factors In An Alliancing Contract – A Case Study In Australia', Conference Proceedings, The Queensland University of Technology Research Week International Conference, 4-8 July 2005 Brisbane, Australia.
- Shan, W. 1990, 'An empirical analysis of organizational strategies by entrepreneurial high-technology firms', *Strategic Management Journal*, 11, 129–39.
- Snijders A.F. and Geraedts R.P. 2007, 'Strategic Alliance For The Dutch Construction Industry', Second International Conference World of Construction Project Management, Prof. H.A.J. de Ridder, Prof. J.W.F. Wamelink (Eds.), TU Delft, The Netherlands.
- Stanek M.B. 2004, 'Measuring alliance value and risk: a model approach to prioritising alliance projects', *Management Decision*, 42(2): 182–204.
- Stuart, T. E., Hoang, H. and Hybels, R. C. 1999, 'Interorganizational endorsements and the performance of entrepreneurial ventures', *Administrative Science Quarterly*, 44, 315–49.
- Walker, D. H. T. and Hampson, K. 2003, '*Procurement Strategies - A Relationship-based Approach*', Oxford: Blackwell Science Ltd.
- Wu, W.Y., Shih, H.A., and Chan, H.C. 2009, 'The analytic network process for partner selection criteria in strategic alliances', *Expert Systems with Applications*, 36, 4646–4653.