

JOINT VENTURE PROJECTS IN MALAYSIAN CONSTRUCTION INDUSTRY FACTORS CRITICAL TO SUCCESS

Hamimah Adnan¹ and Roy Morledge

School of Property & Construction, The Nottingham Trent University, NG1 4BU

This paper argues a case that there is a need to identify the primary criteria which need to be achieved in each joint venture project if the future of such an initiative is to be assured. The paper analyses existing interpretations of Critical Success Factors (CSFs) to assist in establishing a new definition addressing the CSFs for joint venture projects particular in the Malaysian Construction Industry. The main factors considered to be crucial to joint venture success were identified from a wide literature review. The opinion of civil and building contractors, housing developers, specialist sub-contractors was sought in relation to these factors through a pilot study. An analysis of the responses identified twenty-one factors to be accepted as critical to the success of joint venture projects. Following the pilot study, those considered to be critical will be identified and subject to further empirical testing to confirm the potential critical success factors for any joint venture in Malaysia and each CSF is defined.

Keywords: critical success factors, joint venture projects, Malaysian construction industry.

INTRODUCTION

A joint venture is a procedure used to respond to specific business phenomena such as access to new markets, specific government policy, business capacity, technology transfer or economies of scale. Joint venture has been recognized as an attractive strategic option for various industries such as telecommunication, manufacturing, services and others. An international joint venture is a separate legal organizational entity representing the partial holdings of two or more parent firms, in which the headquarters of at least one is located outside the country of operation of the joint venture. This entity is subject to the joint control of its parent firms, each of which is economically and legally independent of the other (Shenkar, Zeira, 1987).

Joint ventures while offering the promise of economic and other benefits often entail significant costs in their implementation. Shared decision-making makes them difficult to manage and consequently, joint ventures tend to be fragile relationships with a high failure rate as much as 45-50% percent according to studies by Beamish (1988). Typically, a variety of behavioural, cultural and administrative impediments make the management of a joint venture a demanding task in terms of time and effort. Managers contemplating such ventures need, therefore, to make a careful analysis of the pros and cons of any venture in evaluating the probabilities of success of the joint ventures (Datta, 1987).

¹ Hamimah.adnan@ntu.ac.uk

The feasibility and the desirability of a joint venture must be assembled by careful analysis of the economic, political, social and the cultural environment within which the venture will be implemented and managed. A planned approach to joint ventures necessitates a thorough and careful evaluation of these aspects by both partners to ensure successful implementation.

MALAYSIAN CONSTRUCTION INDUSTRY

Past and Present Joint Venture Projects in Malaysia

The Malaysian economy has achieved over the past decade an average annual GDP growth of over 6% despite having suffered a contraction in 1998 caused by regional financial crisis. The sector contribution to the GDP over the past five years had been on an average of 3.8% worth RM7.5 billion annually. The growth of the sector in 2001 doubles that of previous year at over 2%. Infrastructure projects, particularly roads, railways (especially electrifying the national railway system) and utilities will continue to drive the sector. This is endorsed under the Eighth Malaysian Plan by the Government with an allocation of RM27 billion for their development. Implementation of some of them has spilled over to 2002.

Construction joint ventures in Malaysia are becoming increasingly popular both in multinational construction firms and local government in order to achieve their individual objectives. Since the 1990s, the business environment for Malaysian construction companies has become more demanding and challenging (Chua, 1998).

There are already established joint ventures between Malaysian and foreign contractors (CIDB, 2000). The government of Malaysia is encouraging and supporting local contractors to participate in regional and global markets based on their expertise and experience of construction of buildings, infrastructure projects, highways, power generation, port and airport construction.

Foreign firms are often required to bid on large infrastructure projects in JV with local partners. JV bids must have at least 30% bumiputera (indigenous Malay) participation. Malaysia's open-door policy to foreign participation is evidenced by the amount of Malaysia's payments for contract and professional services. The Malaysian government announced in March 1998 the liberalization of policies with regard to foreign participation in several sectors including privatized infrastructure projects.

Notwithstanding, the completion of the Petronas Twin Towers, the tallest buildings in the world, as well as the Second Link to Singapore together with the Kuala Lumpur International Airport in Sepang, Selangor, there are still many infrastructure projects underway or to be implemented. The Multimedia Super Corridor (MSC) south of Kuala Lumpur is under construction as some phases of the new Federal Administration Centre at Putra Jaya. The East Coast Highway costing about RM 3 Billion is to go ahead. Within the Klang Valley, the new Pantai Expressway, the Guthrie Corridor, The People Mover Rapid Transit (PRT), the new transportation hub at Kuala Lumpur Sentral are some of the major privatized projects under construction.

Malaysia companies have already ventured into India, China, Bosnia-Herzegovina, parts of Africa and South America, besides the ASEAN region and Australasian.

These projects should provide excellent opportunities for Malaysian companies to combine and for foreign contractors to team up with Malaysian contractors to explore business opportunities in achieving the Malaysian Government policy of becoming

fully industrialized as part of a contribution towards VISION 2020 (Mohammed, 2000).

What are Critical Success factor (CSF)?

Rockart (1982) defines critical success factor as those few key areas of activity in which favourable results are absolutely necessary for a particular manager to reach his or her own goals ... those limited number of areas where “thing must go right”.

Smith and Walker, 1994; Tiong (1992); Turner (2002) define CSFs as those factors in which success is necessary in order that each of the major projects participants in a project has the maximum chance of achieving the goals. Morledge & Owen (1997) in their study on Private Finance Initiative projects defined CSFs as those few factors which, when judiciously applied to a PFI scenario, have led to, and/or will actively contribute to, a particular conclusion for one or more of the parties involved.

The CSF methodology according to Rockart’s research is a procedure that attempts to identify factors vital to the success of the industry, organization or the individual’s work. Rockart’s methodology consists of identifying key goals from the organization’s strategies and objectives. From these, factors are determined which are critical to obtaining the identified goals. The procedure begins by conducting interviews with senior management using the “CSF interview process” (Bullen and Rockart, 1981). Each interviews begins with the interviewer outlining the concept and methodology of CSFs; the interviewee then describes the company’s mission and the role that they play in the company. Following a discussion of the interviewee’s goals, CSFs are developed which are designed best facilitate the interviewee in meeting their goals. General indications are then sought as to how the interviewee would prioritize the identified CSFs before attempts are made at determining suitable measures for each CSF. The collective sets of CSFs from all interviewees in the organization are reviewed to check for areas that some interviewees may have failed to cover, this collective set of factor is then analysed to identify the general areas considered as critical for success (Owen, 2003). In Rockart’s studies, the final set of CSFs was used to develop the required information databases.

Analysing the above definitions, new definition of a Critical Success Factor, which can be applied particularly to joint ventures projects is proposed as follows:

‘Those few factors, which, when judiciously applied to a joint venture scenario, have led to, and/or will actively contribute to, a profitable conclusion for one or more of the parties involved. (Adnan & Morledge, 2002)

This definition has been used in the determination of the CSFs throughout the research underpinning this paper.

RESEARCH METHOD

Following a thorough literature review search, 21 factors critical to the success of construction JV projects was identified. These factors were then assembled into a questionnaire survey that was distributed to 1630 selected Chief Officers of registered Malaysian and 70 foreign contractors working in Malaysia on construction joint ventures. As there are about 32000 contractors registered with CIDB Malaysia, the population of the study comprises all Malaysian and foreign contractors registered with the Construction Industry Development Board working in Malaysia in categories G7 (with unlimited amount of work- more than Ringgit Malaysia \$10 million (approx.

Table 1: Percentage of the company status (owned) majority involved in domestic and international joint venture construction projects in Malaysia

Company Status (Owned)	Numbers(N)	Percentage	DJV	IJV
1) Malay	126	60%	118	29
2) Chinese	65	31%	61	16
3) Indian	2	0.0009%	2	0
4) Foreign	17	0.07%	17	17
Total	210			

GBP £60 million) and G6 (work consisted or more than Ringgit Malaysia \$5 million (approx. GBP£ 30 million). The registration of these firms with Construction Industry Development Board, Malaysia is based upon fulfilment of a number of identified requirements.

The purpose of the questionnaire survey was to discover which companies had experience of JV projects, the extent of that experience and their views of key factors associated with joint ventures.

However, the paper will only discuss the first part of this on-going research based upon the pilot surveys. The questionnaire requested participants to identify, from a list of factors, which they agreed were critical in JV projects.

The survey was conducted from the end of August 2002 to the end of October 2002. Survey papers were sent to Malaysia. A response rate of 20 percent was obtained from respondents (341 respondents), whereby 210 respondents (62% percent) confirmed that they involved in joint venture projects with local and foreign partners in Malaysia. Seventeen foreign construction companies responded and are still active in Malaysia. These were checked by means of email, letter or the telephone operator's enquiry service. On the basis of the number of responses received and the degree of consistency of responses from the wide range of respondent organizations, it is considered that the response rates to the survey were adequate for the purpose of the present research.

RESULT AND ANALYSIS

The questionnaire was divided into three parts.

- Part One: General information about the JVs – company status, nature of business, involvements in JV projects numbers, operation structure.
- Part Two: A list of 21 possible success variables was selected as a result of a review of the literature review. A Likert scale of 1-5 was used in the questionnaire. The respondents were required to indicate the 5 “Very Important” 4 “Important”, 3 “Moderately Important”, 2 “Less Importance and 1 “Not Important” A pilot test was implemented prior to the mailing of the questionnaires in Malaysia.
- Part Three: For companies with no experience of joint venturing

The respondents in the questionnaire survey were involved in various JV projects, from residential, commercial, industrial & public building, housing, civil engineering and others. The JV works were carried out throughout the last 5 years.

Table 1 shows the percentage of the company status (owned) majority involved in domestic and international joint venture construction projects in Malaysia

The type of the construction projects undertaken by companies was noted in order to provide background information of the nature of their business. Each company had

Table 2: Objectives to be achieved through the joint venture works

Variables	Mean	Std Dev.	Rank
New market opportunity	4.09	1.032	1
Profit	4.02	1.000	2
Financial Objectives	3.95	.996	3
Increased Project Scale	3.91	.999	4
Reducing risks	3.88	1.022	5
Organizational learning	3.71	1.073	6

undertaken more than one type of project. They are ranked from the highest at the top to the lowest at the bottom listed below:

(Only the top 4 nature of business are listed)

- 1) Building Contractors (70%)
- 2) Civil Engineering Contractors (66%)
- 3) Housing Developer (21%)
- 4) Specialist Sub-Contractors (14%)

The completed JV projects since 1995 were from the public buildings (241 projects), residential building (158 projects), civil engineering (155 projects) and industrial building (146 projects) in addition to on-going JV and projects currently started.

JVs seem to increase from 1995 to 1997(34.6% of 210 companies) to the year 2001(53.4% of 210 companies). The rising trend indicates the changing attitude towards JVs in the construction industry after the economic downturn late 1997. 65% of the company was involved in equal share (e.g. 50-50), 20% as majority partner and 15% as minority partners.

The respondents also were asked to rate the objectives that needed to be achieved through the joint venture projects.

The main objectives of new markets and profitability are emphasized as stronger objectives than financial objective and increased project scales. Reducing risks and organizational learning were in the 5th and 6th rank of these contractors objective.

The main partners which these companies had participated in JVs, which are ranked as follows:

1. General Contractors (123 nos. with local partner and 16 nos.with FP partner)
2. Specialist Sub-Contractors (62 nos. with local partner and 13 nos.with FP partner)
3. Housing Developers (39 nos. with local partner and 1 number with FP)
4. Client (29 nos.with local partner and 1 with FP)
5. Project Management Consultant (29nos with local partner and 5 with FP)
6. Suppliers (20 nos. with local and 5 numbers with FP)
7. Consultants (17 numbers with local and 3 with FP)

The main JV partners were general contractors, followed by specialist contractors, housing developer, clients, project management consultant and suppliers. The partnership with other general contractors also indicates a high proportion with foreign partners. There is an indication that most international JVs were with general contractors. There were also other JV partners involved in railway engineering, wharf construction and dredging.

Table 3 show the mean and standard deviation of the responses from the 210 contractors involved in JV projects in Malaysia. Overall, if there was at least 90%

Table 3: Perception of Malaysian and foreign contractors towards potential success factors (mean value)

Variables	Mean	Std.Dev	Rank
Mutual Understanding	4.65	.702	1
Inter-Partner Trust	4.53	.788	2
Agreement of Contract	4.50	.796	3
Commitment	4.41	.757	4
Cooperation	4.33	.769	5
Financial Stability	4.32	.696	6
Coordination	4.31	.729	7
Communication/Information	4.24	.823	8
Management Control	4.20	.785	9
Profit	4.12	.995	10
Partner's Experience	4.10	.891	11
Criteria For Partner Selection	4.03	1.062	12
Organizational Structure	3.95	.904	13
Compatibility of Objective	3.95	.909	14
Equity Control	3.88	.988	15
Effective Human Resources Mgmt	3.84	.945	16
Motivating For Forming JV	3.76	.946	17
Knowledge Transfer	3.67	.961	18
Size Compatibility of Partner's Firm	3.63	.988	19
Cultural Understanding	3.57	1.065	20
Conflict	3.04	1.272	21

agreement of the importance of a particular factor across the responding sample. These were considered to be relevant Critical Success Factors. These factors were taken from the results ranked by order of importance from Survey 1.

Analyses of CSFs on JV projects were carried out as shown in Table 3 based on mean values, standard deviation and ranking. The mean values for the CSF vary from the highest 4.65 to the lowest 3.04. From the table, the first 12 high ranking CSF were selected. The cut off point was determined using the critical point of 4.0 on the 0-5 Likert Scale. Although the mean value did not show much difference between the factors, the 2nd part of this research will be in-depth interview, which has taken place in Malaysia from end November 2002 to mid February 2003. This will provide detail information on the company structure, management and performance to confirm/validate the above findings.

A comparison between the perceptions of Malaysian and foreign contractors will be made possible through a selection of identical factors perceived to be key success factors on JV projects. This will identify the degree of similarity or divergence in the pattern of the respondents' perceptions towards key success and failure of the joint venture. This will also to confirm/validate the finding from the Survey 1. Each of these factors for success is now briefly considered.

1. Mutual Understanding

Joint ventures are a means of creating strengths by the partners complementing each other and with proper matching; both partners should perceive a vested interest in the success of the joint venture (William and Lilley, 1993). This factor received very high values of 4.65. It is extremely important that friendly personal contact is regularly maintained between the leaders of the cooperating organizations. The careful selection of people who are to work in an alliance will also assist the prospects of mutual bonding. They should be selected not merely on the basis of technical competence but

also on an assessment of their ability to form good relationships with people from other organizational and national cultures.

2. Inter-partner trust

The need of trust between partners in a joint venture has been identified as an important element of a long-term joint venture relationship (Parkhe, 1993; Inkpen 1993; Madhok, 1995). Trust is often considered to be a very important ingredient of managing relationships. Within organizations, trust contributes to more effective implementation of strategy, greater managerial coordination and more effective work teams. This factor is the 2nd highest rank and therefore, a high level of trust might be crucial for joint venture success

3. Agreement of Contract

A good JV agreement is an essential success factor and can avoid a great deal of trouble and conflict in future JV operations. This factor received high values of 4.49 and rank 3rd place a good JV agreement must be drafted in clear terms and conditions that can be easily understood by all partners as well as the working staff, and each partner's authority and responsibility in the JV must be clearly understood. (Li Bing, 1999).

4. Commitment

The Malaysian and foreign contractors in Malaysia perceived this factor as critical and it has a high value of 4.41. Commitment reflects the actions of some key decision-makers regarding continuation of the relationship, acceptance of the joint goals and the values of the partnership, and the willingness to invest resources in the relationship. Commitment is important as it provide a long-term basis, resources and capabilities to the specific needs of the JV for its success. In order for the JV to succeed, all the partners to the JV agreement should have total commitment to the JV as well as to each other (Srintharan, 1995).

5. Cooperation

Cooperation plays an important factors and was ranked 5th the contractors. Shared problems solving reflects the degree to which the parties share responsibility both for dealing with problems and maintaining their relationship. Cooperation behaviour between the parent companies help to reduce potentially burdensome monitoring and safeguards costs within the JV. Changes in the environment, of strategies, and bargaining power over the life of the venture can affect cooperation dramatically.

6. Financial Stability

It is essential to be sure that a prospective partner can generate sufficient financial resources to maintain the ventures' efforts. It received a mean of 4.32. Thus, the credit-worthiness of a prospective JV parties' parent company should be scrutinized and its current management competence and resources must be ascertained. It is advisable to include a clause in the joint venture agreement to cover this factor or aspect of the JV.

7. Coordination

For success, the partners must have a willingness to cooperate and share information and resources to enable essential coordination of activity. It received a mean of 4.31.

8. Communication/Information

The ease of communication between the partners is another potential problem which should be considered when evaluating a potential partner's suitability therefore both contractors perceived that this factor is critical and received a 8th ranking. Without proper communication, problems can occur as a result of differences between national or ethnic cultures, including language, as well as differing corporate cultures.

9. Management Control

Management control refers to the influence major stakeholder groups have on the organization's decision and activities (Yan & Gray 1994). Management control in joint ventures can be achieved by resorting to both majority shareholders and received a mean value of 4.20 which is place 9th in ranking from both Malaysian and foreign contractors.

10. Profit

Joint ventures are created for business purposes, to generate a profit for the participating parties. The profits from such ventures will then be apportioned in relationship to the different input of the parties concerned (Ashworth, 1996). The profitability attribute will also indirectly influence the joint venture's capital structure, financing costs and leverage (Luo, 1998). It received a 10th ranking.

11. Partner Experience

Firms with multinational experience are considered more likely to have the ability to manage and monitor appropriately to the joint venture. Greater experience, understanding, competence and confidence in managing inputs will result in a more detailed and accurate perceptions of risks (Agarwal, 1994). With good background experience, these partners are expected to provide better local culture, politics and market conditions all at a lower cost than would be incurred by the investor to obtain equivalent information (Beamish and Banks, 1987)

12. Criteria For Partner Selection

The choice of partner is critical for completion of the particular assignment (Li Bing, 1999). The selection of an appropriate partner, therefore, is a paramount in importance if the joint venture is to succeed (William & Lilley, 1993). In this pilot study, selecting a partner that is important which received a mean of 4.02. .

CONCLUSION

The pilot survey found a consensus of opinion thereby identifying 12 factors of success which, when judiciously applied to a JV project in Malaysia will actively contribute to a profitable conclusion for one or more of the parties involved. These are considered to be the 'Critical Success Factors of JV' in Malaysia.

There are limitations, however, to the use of the CSF methodology. The CSF methodology tends to present the ideal situation and not all the factors will be found in one project. However, the CSF methodology provides a good basis to identify possible solutions in an endeavour to seek continuous improvement.

Furthermore, the initial ranges of CSFs, which result from the survey, have been determined by an overall agreement between all the respondents from the Malaysian local and foreign contractors working on JV projects in Malaysia. However, there is need to validate the factors and this is now the focus of current/further research which

will involve in-depth interview with both Malaysian and foreign contractors. This will then followed by an- expert group who will be used to validate the final findings.

This paper has, however, identified 12 Critical Success Factors of JV projects in Malaysia, which can be used by other contractors, clients, financiers and operators to assist various processes in procuring JV projects towards a successful conclusion. It does not suggest that a project will succeed automatically for all the parties involved as a result of addressing all the issues, but that the project will be more inclined to fail if these factors are ignored.

REFERENCES

- Agarwal, S (1994) Socio-cultural distance and the choice of joint venture; a contingency perspective. *Journal of International marketing*, **2**(2), 63-80.
- Beamish, Paul W (1988), *Multinational JV in Developing Countries*, London.
- Beamish, P.W and Banks, J.C (1987) Equity joint ventures and the theory of multinational enterprise. *Journal of International Business Studies*, **17**, 1-26.
- Chua S.L. (1998) EU-Asean Construction Business Forum: The Malaysian Construction Industry: Issues and Challenges, Papers presented at the EU-ASEAN Construction Business Forum 1-3rd September 1998 Kuala Lumpur.
- Datta, D.K (1988) International joint ventures: a framework for analysis, *Journal of General Management*, **14**, 78-91.
- Luo, Y (1998) Joint venture success in China: how should we select a good partner? *Journal of World Business*, **33**(2), 145.
- Madhook, A (1995) Revisiting multinational firms' tolerance for joint ventures: A trust-based approach. *Journal of International Business Studies*, **26**, 117-137.
- Mohd Nuruddin, M (2000) 6th Asia Construct Conference- *Malaysia's Country Report 2000-2001*, Master Builders, 4th Quarter, pp70-83.
- Morledge, R. and Owen, K. (1998) Critical success factors in PFI projects. In: Hughes, W P (ed) *Procs 14th Annual ARCOM Conf Sep 9-11*, University of Reading **2**, 565-574.
- Owen, K (2003) *Critical success factors in private finance initiative projects*. Unpublished PhD Thesis, The Nottingham Trent University.
- Rockart, J.F (1982) The changing role of the information systems executive: a critical success factors perspective. *Sloan Management Review*. **24**(1), 3-13.
- Shenkar, Oded & Zeira Yoram (1987) Human Resources Management IJV: Directions for Research, *Academy of Management Review*, **12**(3), 546-557.
- Smith, A.J & Walker, C.T (1994) BOT: Critical Factors for Success. A paper submitted at the "Investment Strategies and Management of Construction" Conference. September 20-24, 1994. Brijuni, Croatia, pp 247-254.
- Sridharan, G (1995) *Determinants of the JV success in Singapore construction industry*. Unpublished PhD Thesis. University College London.
- Tiong, R.L.K, Khim-Teck, Yeo & McCarthy, S.C (1992) Critical success factors in winning BOT contracts. *Journal of Construction and Engineering and Management*, **118**(2). 217-228.
- Turner (2002) Project Success Criteria. *Project, Magazine of the Association for Project Management*, **14**(10), 32-33.

William, R.G & Lilley, M.M (1993) *Partner Selection For Joint Venture Agreement*, International Journal of Project Management, Vol 11(4), November.

Yan, Aimin & Gray, B (1994) Bargaining Power, Management Control and Performance in United States – China Joint Ventures: A Comparative Case Study. *Academy of Management Journal*, **37**, 478-517.