

# Factors for Selecting Joint Venture Partner for Construction Project in South Africa

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## Abstract:

The construction industry plays a vital role in South Africa's economic and social development where this industry provides the physical infrastructure and backbone for economic activity while providing a large-scale provider of employment. In a world of rapidly increasing global competition, enterprises partake in joint ventures in order to stay competitive and strategically flexible. Even though, one of the most prevalent types of business arrangements that are being used by South Africans, in the tender environment, is Joint Venture, risks are innate in JV construction projects and lead to at least 40% to 70% of JVs failure. As a result, the success of a joint venture evidently depends on the synergy created by the individual contributions of each partner, and thus, a good joint venture management lies not only in the implementation of the project, but also a proper partner selection. Therefore, the purpose of this study is to identify the factors to select JV partner. A quantitative research methodology was adopted and the data was collected through the use of questionnaires. Key findings reveal that the selection criteria of JV partner(s) include the commitment between the partners, complementary technical skills, compatible management teams, complementary resources, commitment to joint venture objectives as well as trust between partners. Other selection criteria which appear to be neutral to respondents relate to mutual dependency and relative company size. As the study reveals these findings, interested and concerned parties (contractors, consultants, owners of construction companies) are able to improve by far the performance of JV construction projects in South Africa before signing contracts agreement.

## Keywords:

Construction Industry, Joint Venture, Partners, Projects, Selection Criteria

## 1 Introduction

Despite the fact that international construction firms have extensively used joint ventures as a vehicle to enter new construction markets in South Africa, the failure rate of such ventures has been quite alarming through delays and disruptions, poor site management (Govindan, 1995). Indeed, according to Farrel (2014), It is estimated that at least 40 percent and up to 70 percent of joint ventures fail. Issues related to the formation and operation of joint ventures for construction projects have been the subject of considerable commentary. As innovative opportunities are constantly developing as a result of globalization which allows local firms to enter into international construction markets to compete worldwide (Misbah *et al.*, 2008), majority of multinational enterprises (MNEs) will have to participate in international joint ventures in order to remain competitive and strategically flexible. In order to get benefit in global competition, construction firms should have to plan for their survival and development by entering into joint ventures (Gunhan & Arditi, 2005). Even though, one of the most prevalent types of business arrangements that are being used by South Africans, in the tender

environment, is Joint Ventures according to Rooyen (2014), risks are innate in joint venture construction projects such as agreement of the contract, partner selection, potential financial distress, improper project feasibility study, project delay, inadequate forecast about market demand, loss due to bureaucracy for late approvals and design changes (Kwok *et al.*, 2006 & Shen *et al.*, 2001). Thus, the researcher has found interest to research on this specific area on partner selection to reevaluate joint venture formation.

## **2 Partner selection criteria for successful joint venture**

Before enumerating and explaining all the relevant selection criteria for JV partners involved in construction projects, it is important to first gain knowledge of what a joint venture entails. Indeed, a joint venture is the most common form of organizational structure where the partners wish to establish and operate a jointly owned business (Kale *et al.*, 2013). Unlike a partnership, a JV has a distinct legal entity and also has a certain time limit. Kolbehdari & Sobhiyah (2014) further highlight that joint venture remains a specific type of long-term alliance among the partners which creates an exceptional opportunity for combining distinct merits and complementary resources. However, according to Hyun & Ahn (2013), the selection of a potential partner determines the configuration of the patented resources and technology to which a firm has access and ominously affects the success of its deliberate investment objectives. Therefore, it becomes crucial to identify the potential selection criteria which pertain to the success of a JV operation.

### **2.1 Complementary technical skills and resources**

The primary selection criterion should be a partner's ability to provide the technical skills and resources which supplement those of a firm seeking the partner (Kottolli, 2002; Minja *et al.*, 2012). Moreover, Hyun & Ahn (2013) suggest that favourable cooperative relations, resource compatibility, as well as, the location of the partner are acute among the factors affecting the joint venture process. Hence, if prospective partners cannot offer these capabilities, then formation of a joint venture is a questionable proposition. Therefore, as argued by Kottolli (2002) and Govindan (1995), technical complementarity should be viewed as a minimum qualification for selecting a partner as it builds a stable relationship based on mutual dependency.

### **2.2 Mutual dependency**

Adnan *et al.* (2011) and Kottolli (2002) made the observation that mutual dependency involves seeking a partner with complementary technical skills and resources which can allow each partner to concentrate their resources in those areas where it possesses the greater relative competence while diversifying into attractive but unfamiliar business areas. Rather than intensifying weaknesses, in that sense, joint ventures can thus be a means of creating strengths. There should be some identifiable mutual need, with each partner delivering exceptional capabilities or resources critical to the joint venture success (Rumpunen, 2011). When one partner is strong in areas where the other is weak and vice versa, mutual respect is nurtured and second guessing as well as conflict are mitigated (Kottolli, 2002; Adnan *et al.*, 2011). Thus, Rumpunen (2011) emphasized that, the apprehension of the potential benefits to a firm from entering into a joint venture (JV) depends on finding a partner who can provide balancing capabilities or resources that match its own in order for the joint venture to meet the firm's considered objectives.

### **2.3 Relative company size**

Joint ventures often have the best chance of long term success if both partners are equal in size, preferably large as well as the reputation of the partner (Kottolli, 2002; Govindan, 1995; Rumpunen, 2011). In fact, according to Kottolli (2002), if a small firm decides to enter into a JV with a similarly sized partner, the firms may expand each other's weakness. It is then expected that two large firms which have similar values and control systems, similar forbearances for losses, and similar appetites for risk will increase those assets. Moreover, crises are less present in large firms, particularly concerning short-term cash flow (Kottolli, 2002). Hyun & Ahn (2013) suggest that the commensurate size of the partner firm is the most important criterion for partner selection in order to secure impartial cooperation between partner firms and this criterion may facilitate complementarity in their cooperation in customized marketing, technology, human resources, and financial resources.

### **2.4 Commitment to joint venture objectives**

According to Kottolli (2002) and Minja *et al.* (2012), having different objectives in forming the joint venture, including the timing and level of profits on their investments, frequently produce conflicts of interests between partners. Moreover, Govindan (1995) suggest that the success of a joint venture primarily depends on compatibility of the partners' objectives. In Govindan's opinion (1995), JVs are primarily formed to maximize the partners' joint objectives, which include and are not limited to, conflict of interest between the joint objectives as well as partners' distinct objectives which often affect the operation of the JV. Thus, as partners' objectives differ, there is an increasing risk of frustration and associated problems. The risk may be heightened when the joint venture's environment is characterized by a high level of uncertainty, since, under the circumstances; changes on a joint venture's operations are most likely (Kottolli, 2002). Although determining a prospective partner's objectives is often difficult task, it is essential as failure to do so may increase the forecasts for later problems.

### **2.5 Compatible management teams**

Management team at the helm of the joint venture plays a major role in its accomplishment. In making this comment, Kottolli (2002) and Govindan (1995) write that personal rapport between main decision makers is habitually important as it helps nurture the level of understanding necessary for a successful joint venture. In other words, Adnan *et al.* (2011) and Minja *et al.* (2012) believed that, managerial compatibility can enhance the partners' ability to attain consensus on critical policy decisions and to overcome roadblocks faced during the operation of the joint venture formation. For instance, Kottolli (2002) highlights that, joint ventures with firms in Mexico, Brazil, other Latin American countries, Japan, China, and Asia establishment of close personal rapport is customarily prerequisite to concluding business negotiations.

### **2.6 Trust and commitment between partners**

According to both Kottolli (2002) and Minja *et al.* (2012), forming and operating a joint venture requires more than cordial relations between partner's management teams. The partner's perceived trustworthiness and commitment are also essential considerations, especially if the proposed JV involves firm's core technologies or other proprietorial skills which are eventually the essence of the firm's competitive advantage (Kottolli, 2002 & Adnan *et al.*, 2011). That is why Hyun & Ahn (2013) examined joint ventures in the construction industry and found that commitment and trust occasioned positive effects in terms of the project efficiency and deliberate benefits. Thus, it must be remembered that today's partners could be tomorrow's competitors and managers have to respond with some initial distrust regarding hidden partners'

motives. As can be expected, Kottolli`s point is that (2002), habitually, a partner will have access to your trade secrets and might attempt to complete a few projects, learn what the other partner does, then exclude that partner from future contracts. Thus, exposing the other`s technological core without proper legal protection can eventually threaten its partnership's competitiveness. Therefore, without essential trust and commitment by each party, there is little hope for a successful joint venture as those precipitate desirable behaviours and this significantly reduce the risks of alliances, according to Hyun & Ahn (2013).

### 3 Research Methodology

According to Creswell (2008), research designs are the detailed procedures involved in the research process: data collection, data analysis, and report writing. As the main aim of this study is to identify selection criteria of joint venture partners, this study is therefore deductive in nature. Moreover, in the attempt to answer the research question, set prior to this study, a quantitative method was preferred in this research because it is often used in a wide range of natural and social sciences, including physics, biology, psychology, sociology and geology.

Therefore, the analytical survey method was preferred for this research since it uses scientific sampling and a questionnaire design to measure features of the population with statistical precision (Sukamolson, 2012). The research work started with a literature review for the compilation of a list of the selection criteria for joint venture partners, and then the questionnaire was developed in order to conduct the survey.

#### 3.1 Sampling method

A non-probability sampling method and more specifically the convenience method was adopted which, according to Mbokane (2009), this sampling method implies that not every element of the population has a chance for being included in the sample. Thus, any participant which happens to cross the researcher`s path, and meets the inclusive criteria set (being involved in joint venture construction project and registered with the SACPCMP juristic body) gets included in a convenience sample.

#### 3.2 Sample size

Determining the sample size can be a strenuous exercise, according to Singh & Masuku, (2013) and Israel`s table (1992) which can provide a useful guide for determining the sample size, one may need to calculate the required sample size for a different combination of levels of precision, confidence, and variability or the degree of freedom (P). However, a simplified formula to calculate sample size with a 95% confidence level and P (level of precision) = 0.5:

$$n = N / (1 + N (e)^2)$$

$$n = 5000 / (1 + 5000 (0.5)^2)$$

$$n = 399.68 \approx 400$$

Where: n = sample size;

N = population size, and

e = level of precision.

### **3.3 Sample selection**

As database concerning professionals involved in joint venture construction projects registered with the SACPCMP was unavailable, the researcher reached out the 400 respondents via email before sending out questionnaires to ensure their involvement into JV construction projects. Even though simple convenience sampling method was applied, it was necessary for the researcher to ensure that those respondents were involved in joint ventures.

### **3.4 Data collection**

After determining the sample size of the study (400), the process of data collection took approximately two months starting in beginning February 2016 to April 2016. 100% of the questionnaires were handed out via emails and on sites for the respondents to fill in on their own time so that they give their true point of views. After intensive efforts were made, by April 2016 a total of 115 responses which were all usable (28.8 %) were received specifically from the provinces of Gauteng (Johannesburg, Pretoria, Sandton), Western Cape (Cape Town) and Limpopo (Polokwane). Based on literature review, the response rates for mailed questionnaires are usually not encouraging and low, thus, a response rate of 15% to 25% is still being considered appropriate and acceptable (Wahab *et al.*, 2010) whilst a response rate of 10% to 15% is still considered appropriate according to Fryrear (2015).

### **3.5 Data analysis**

The data analysis procedure started with data compilation, screening and finally using descriptive statistics to analyse the proposed background information and selection criteria of JV partners where all the statistical techniques in this study was performed using Statistical Package for Social Sciences (SPSS) software version 23.0 and in relation with the current study research objective, the researcher considered the mean item core and standard deviation statistical techniques.

In fact, for all the sections of the questionnaire, the data analysis involved the following steps: coding the responses, screening and cleaning of data to identify any missing values, as well as the selection of appropriate statistical analysis technique whereby the research problem and objective and characteristics of data were considered. Thus, to meet the purpose of this study, descriptive analyses were used. First, Mean Item Scores (MIS) and Standard Deviations (Std) have been calculated in order to identify selection criteria. In order to determine the Mean Item Scores (MIS) and Standard Deviations (Std), the five point Likert- scale was used: 1 = Strongly disagree (SA), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), and 5 = Strongly agree (SA).

## **4 Findings and Discussion**

### **4.1 Respondents' Profile**

Table1 indicates that out of the 115 (100%) respondents, 74.8% of the respondents are male while 25.2% of the respondents are female. Moreover, 35.7% of respondents were between the age of 31 and 40. In terms of professional status construction project manager were 19.1 % while construction managers and civil engineers each accounted for 16.5 %. Moreover, within the provinces of Gauteng, Western Cape and Limpopo in South Africa 33.9% had been involved in JV projects for a period of less than 5 years, and only 32.2% participants had been involved for a period of 5 to 10 years. Moreover, the preferred type of JV in South Africa is combined JV with 39.1% compared to the integrated JV at 36.5% and the non-integrated method at 24.3%.

Table 1. Background information of respondents

Classification	Frequency (No)	Percentage (%)
Male	86	74.8
Female	29	25.2
Younger than 21	1	0.9
21-30	23	20.0
31-40	41	35.7
41-50	29	25.2
51-60	16	13.9
Older than 60	5	4.3
Architect	13	11.3
Chemical engineer	4	3.5
Civil engineer	19	16.5
Construction Manager	19	16.5
Construction Project Manager	22	19.1
Electrical engineer	3	2.6
Quantity surveyor	18	15.7
Mechanical engineer	5	4.3
Other	12	10.4
Less than 5 years	39	33.9
5-10 years	37	32.2
10-15 years	25	21.7
15-20 years	7	6.1
More than 20 years	7	6.1
Integrated	42	36.5
Non-integrated	28	24.3
Combined	45	39.1

Source: Field data 2016

#### 4.2 Factors for selecting a JV partner

Table 2 reveals that in undertaking a JV operation in South Africa, the parameters that one needs to consider the most in selecting a partner in order to be successful in JV operations are commitment between partners ( $\hat{\sigma}=4.27$ ,  $\mu=0.88$ ), complementary technical skills ( $\hat{\sigma}=4.24$ ,  $\mu=0.99$ ), and compatible management teams ( $\hat{\sigma}=4.19$ ,  $\mu=0.94$ ). This result is in line with the work of Hyun & Ahn (2013) who agreed that commitment between partners occasioned positive effects in terms of the project efficiency and also deliberate benefits as it must be remembered that today's partners could be tomorrow's competitors. Moreover, authors such as Kottolli (2002) & Minja *et al.* (2012) supported favourable cooperative relations, resource compatibility (in terms of complementary in technical skills), as well as, the location of the partner are acute among the factors affecting the joint venture process. Similarly, Adnan *et al.* (2011) and Minja *et al.* (2012) agreed on managerial compatibility as being essential because it can enhance the partner's ability to attain consensus on critical policy decisions and to overcome roadblocks faced during the operation of the joint venture formation.

Moreover, complementary resources ( $\hat{\sigma}=4.13$ ,  $\mu=0.97$ ), commitment to joint venture objectives ( $\hat{\sigma}=4.13$ ,  $\mu=0.98$ ) as well as trust between partners ( $\hat{\sigma}=4.10$ ,  $\mu=1.04$ ) play a major role in the selection criteria of JV partners as respondents mutually agreed on them. Indeed, these findings are in line with authors Kottolli (2002); Minja *et al.* (2012) and Hyun & Ahn (2013) who believe that the primary selection criterion should be a partner's ability to provide resources which should supplement those of a firm seeking the partner. Moreover, Kottolli (2002) and Minja *et al.* (2012) agreed on commitment to joint venture objectives as a crucial selection

factor as the opposite including timing and level of profits on their investments, frequently produce conflicts of interests between partners. Kottolli (2002) further agreed that, since, a partner will have access to each other's trade secrets and might attempt to complete a few projects, learn what the other partner does, then exclude that partner from future contracts, it is vital to have trust between partners as a criterion of selection when involved into JVs.

Yet, respondents are neutral on factors such as mutual dependency ( $\bar{\sigma}=3.90$ ,  $\mu=1.12$ ) and relative company size ( $\bar{\sigma}=3.67$ ,  $\mu=1.23$ ) as they seem not to be as relevant as the other factors of the selection criteria of JV. These findings are contested by Rumpunen (2011) who emphasized that, the apprehension of the potential benefits to a firm from entering into a joint venture (JV) depends on finding a partner who can provide balancing capabilities or resources that match its own and this enable the joint venture to meet the firm's considered objectives. Similarly, Kottolli (2002) agreed on these findings as he believes that company sizes aspect is arguable as an important selection criterion since a small firm can decide to enter into a joint venture with a similarly sized partner which may have consequences of expanding firms' weaknesses.

Table 2. Factors for selecting JV Partner

Parameter	Response in Count and Percentages (%)					Mean ( $\bar{\sigma}$ )	Std. Deviation ( $\mu$ )	Rank
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree			
Commitment between partners	4	4	12	48	47	4.27	0.88	1
	3.5	3.5	10.4	41.7	40.9			
Complementary technical skills and resources	5	5	0	52	5	4.24	0.99	2
	4.3	4.3	0.0	45.2	4.3			
Compatible management teams	3	4	11	47	50	4.19	0.94	3
	2.6	3.5	9.6	40.9	43.5			
Complementary resources	3	6	11	47	48	4.14	0.97	4
	2.6	5.2	9.6	40.9	41.7			
Commitment to joint venture objectives	4	4	12	48	47	4.13	0.98	5
	3.5	3.5	10.4	41.7	40.9			
Trust between partners	5	5	11	46	48	4.10	1.04	6
	4.3	4.3	9.6	40.0	41.7			
Mutual dependency	6	7	21	39	42	3.90	1.12	7
	5.2	6.1	18.3	33.9	36.5			
Relative company size	9	11	23	37	35	3.68	1.23	8
	7.8	9.6	20.0	32.2	30.4			

Source: Researcher

## 5 Conclusion and Further Research

The formation of joint ventures between construction organizations has been an important attempt in overcoming problems facing local contractors such as delays and disruptions, poor site management, time and cost variations, skills and competence issues as well as lack of worker participation. These problems can be addressed by forming joint ventures between companies/partners. The common purpose of joint venture is to spread a risk inherent in large projects and to pool resources with the intention to gain more profits and enhance expertise.

Thus the formation of joint venture companies in South Africa needs to take into consideration the selection criteria of partners prior to the execution of the project. In preparation of a joint venture arrangement, it is important to consider all important selection criteria in order to have a project delivered effectively. Selection criteria that guide joint venture partner when entering joint venture formation in South Africa are commitment between partners, complementary technical skills, compatible management teams as well as complementary resources, commitment to joint venture objectives and finally trust between partners.

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