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Research paper

A Model forSuccess of an International Joint Venture in India: Validated through Analytic Hierarchy Process

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Abstract

Worldwide business pattern has opened innovative ways of agreements for those who want to take advantage of the fruits of free flow of resources beyond national boundaries. International joint venture (IJV) is one of several such strategic moves. This research targets at discovering various factors of international joint ventures as a strategic alliance, the requirement for such alliance and the consequences. Success of an IJV is driven by IJV partners' ability to make collaboration by joining integral strengths. To examine the synergy created from various complementary strengths in the context of IJVs formed between established market firms and Indian firms in India. This is a conceptual paper where a universal model is proposed to show, how synergy can be created through complementary strengths of Indian company and foreign company in success of an IJV. This paper exhibits the use of analytic hierarchy process (AHP) and ranks the synergy. Further, it has been depicted that various strategies like increased competitiveness, deterring the global competitors, risks diversification, technology transfer, leveraging the financial regulations and customer value proposition can be adopted to derive high to low synergy.

Keywords: *Strategic alliance, International Joint Ventures, Synergy, Analytic Hierarchy Process*

1. Introduction

With the fastest growth rate in last three decades, India has become one of the largest markets for international business. Hundreds of international companies have been competing for business opportunity in India in the form of international joint venture (IJV)or direct investment- since the Government of India has opened its market in the 1990s. As its economic reforms continue, India's recurrent economy expansion scale and vast market potential have been continuously appealing the attention of international business giants. An IJV is created in a country outside the home country of at least one of the partners [1]. Research on IJVs has continued receiving a lot of consideration from international business researchers [2][3]. One important stream of research on IJVs is to identify how parent strategies influence performance of IJVs [2]. There are several key factors influencing IJV performance, such as the motives for IJV formation, trust and commitment, learning/experience andcontrol [4][2] in IJVs. Mattsson and Salmi [5] found that trust is very important for IJV partners to commit their resources in business relationship in transition economies.

At the end of June 2013, it was accounted for that more than 9 ,000 business joint ventures has been enlisted in India, with an aggregate total foreign investment of US$ 12 billion [6]. The World Bank [7] indicate that among the world's four biggest developing nations – Brazil, Russia, India and China (BRIC), India has the most potential for development and getting to be one of the biggest market for worldwide business.

The adjustment of Indian government policy also played a vital role in the recent increase of foreign investment in India; it is also visible that IJVs are coming into being owing to investments by foreign partner in joint venture mainly due to Indian government policies, economic conditions and favorable investment conditions in the country.

Foreign investment add an extraordinary arrangement to Indian economy. The constant inflow of FDI, over a few ventures and demonstrated the confidence that foreign investors have in the nation's economy. FDI inflows to India expanded 17 percent in 2013 to reach US$ 28 billion, according to a United Nations (UN) [8].

The Indian government's policy regime and a strong business environment have safeguarded that foreign capital keep flowing into the country. The government has taken many action in recent years such as soothing FDI norms in 2013, in sectors such as defense, PSU oil refineries, telecom, power exchanges, stock exchanges and FDI automatic root has promoted 100% investment in several sectors such as Automobile sector, Software and Infrastructure etc. 100% FDI in railway infrastructure, excluding operations. In spite of the fact that the move does not enable outside firms to work trains, it enables them to do different things, for example, make the system and supply trains for bullet trains and so forth.

FDI inflows into India in the period April 2000– December 2014 reached US$ 341 billion and aggregate FDI inflows into India amid the period April 2014 to August 2014 was US$ 175 billion. The administrations part (US$ 2,336 million) pulled in the most astounding FDI value inflows in the period April 2014 to August 2014, trailed by the administration segment (US$ 1,086 million) and medications and pharmaceuticals (US$ 903 million) areas

(World Bank Report, 2014). Mauritius drove the offer of best putting nations by FDI value inflows into India with US$ 3,934 million amid April 2014 to August 2014, trailed by Singapore (US$ 1,892 million), the Netherlands (US$ 1,562 million) and Japan (US$ 897 million) [7].

1.1. Influential factors for International Joint Ventures in India

Large multi-national (MN) corporations are the major source of international capital investment. One recent trend for those MN corporations is to globalize their processes. In order to be

economical in the international market, those MN corporations have implemented more destructive operations strategies which can often be considered as “to bring the highest quality products with the lowest price to enter new markets” [9] [10]. Two major reasons used by those MN corporations in selecting new target market are:

1. Insideasset, including operational capability, technology advancement, competitive edge, and potential profitability;
2. External conditions and openings - for example, the strength of political and monetary frameworks of the country under thought, and additionally its specialized (technical) condition, work accessibility and quality, and potential market measure [11].

Other MN corporations arrived Indian market and operate their businesses within Indian economic system, their successes and failures have attracted research interests in recent publications [12] [13] [14] [15]. The mainstream of previous readings of the location factors of globalization admit that being part of a territorial network expressively improves the size of a firm to globalize [16][17][18] [19]and by providing means, interaction opportunities and legitimacy to assist them to touch global markets [20]. The foreign investors (from the Singapore, Netherlands, Japan USA, and UK) invested in five major Indian cities - Mumbai, Delhi, Bangalore, Gurgaon and Chennai. Taking edge of being a national capital area, Delhi appeared [21]as most sought after IJVs destination. The national capital area ensured the presence of all vital ingredients required for joint ventures at entry phase of the operations.Besides, its geographical suitability and compatibility to industrial needs of IJVs, the availability of the transportation, effective manpower, proximity to industrial areas, Special Economic zones and above all presence of top brass of government machinery made Delhi-an IJV hub of India securing more than one third (34.87%) of total IJVs taking place during 2008-2013. The other destinations like Mumbai (16.27%), Bangalore (2.96%), Gurgaon (2.50%), and Chennai (1.95%) appeared as promising place for IJVs. Bangalore has amassed US$2.17 billion as foreign equity through IJV routes which is highest among all the five top places [6]. Location is one of the most important determinants of new venture internationalization [22][23] [24] [19].

A survey of 56- Indo-British IJVs in India indicated that Good partner relations and high degree of control are Subjective indicators of IJVs performance [14] whereas a case study of an IJV in after sales services in India seen as IJV is used as a vehicle to reap the benefits of opportunities [13].All survey were hopeful about the potential of future investment opportunities [25]. In this study, all investment environment forces were first gathered into six groups, and then each was further stated in some sub factors such as elementary infrastructure situations (local transportation system, telecommunication capacity, safety and social work system), labour and quality of life (prevailing wage rates, labour availability, labour skill levels, community attitude and ambiance/ cost of living), Government ruleelasticity (stability of government polity, efficiency of local government and cooperation of local governmental agency), market Potential (location of competitors and local market potential), economic regulation and legal structure (community attitude, local environmental regulations and State/ local governmental legal protection), supportive service facility (local communications channels, local information processing centers, supportive living facilities or foreigners, Church and schools for foreigners and entertainment facilities for foreigners).

One more researcher studiedfactors which determine JVs’ performance, Larimo [15]selected 14 variables which wereincorporated in at least 6 previous studies out of the 77 empirical research on this topic: cultural distance, age of the IJV, dominant partner ownership, size of the IJV, foreign parent control, related business IJV, inter-partner conflict, commitment to the IJV, relatedness of partners’ industries, size of the foreign partner, dominant parent control, existence of R&D operations, earlier collaboration between partners, and size asymmetry.

Julian and Cass [26] have examined the determinants of IJV marketing performance in Thailand with a survey of 1,047 Thai-foreign IJVs in Thailand and identified as market characteristics, conflict, commitment, marketing orientation, and organizational control.

IJVs in emerging markets, in which foreign firms often posses superior technologies and advanced marketing skills and local companies tend to imitate their foreign counterparts and offer products with lower prices (Lee and Zhou 2012).As a result, although IJVs can achieve success by taking a cost leadership position, they are more likely to succeed in emerging markets when offering high-quality and unique products or services [27][28]. Chen [29] examines the confluence of strategic orientation and foreign parent control on IJVs’ differentiation capability through a survey of 156 IJVs in China and show that both customer and technology orientations are beneficial to IJV differentiation capability building.

The IJV has become a prevalent foreign entry mode amongst international firms [30]. The rich body of literature on IJVs [31][32][33] [34][35] [36] suggest that the IJV has reasonablerewards over further entry modes such as a wholly owned venture or licensing.This is on the grounds that a local accomplice in the objective market better comprehends the nearby culture, political issues and consumer leanings while global corporations have superior brand power, technological advantages and operational skills [37][35].

The main benefits of an IJV include a firm’s strategic behavior, organizational knowledge, and know-how [38]. What's more, analysts contend that the accomplishment of an IJV relies upon how proficiently a joint endeavor firm use the accomplice's assets and center abilities, which thus can diminish the expense of items and innovative work. Thus, an IJV has been supported as a remote section mode over procurement among global firms when they create universal markets where there is a noteworthy social distinction between the outside parent organization and the nearby organization. This is because an international joint venture can help an investing organizationto expand their market with minimum risk and can leverage the foreign firm’s local knowledge and know-how of the target market [39] [40].

Beamish and Banks [41] contrast success of an IJV cases with unsuccessful ones. The consequences of their investigation uncover that fruitful joint venture associations have set up strong shared trust among MNEs and joint ventures, which limits the advantage of a joint venture. Moreover, the aftereffects of their investigation propose that in accomplishment of an IJVs, MNEs see local partner as strategic partner. MNEs give various operational and administrative duties to their local partner and offer and trade basic learning related with their activities. Then again, in unsuccess of an IJVs, the operational and administrative obligations of neighborhood accomplices are exceptionally constrained and MNEs will in general spotlight on acquiring data and know-what about nearby government's strategies and directions from their nearby accomplices.

Each accomplice in the IJV could use its assets to give focused support of that of the IJV. Nearby accomplices are in charge of dealing with the neighborhood outlets. Accordingly, it is fundamental that the parent firm in the IJV analyze the capacities and assets of its neighborhood accomplice painstakingly before propelling the IJV. Shinsegae Corporation has a solid notoriety and brand control as a main retail firm in Korea. The IJV firm has ceaselessly put resources into center assets, for example, HR and innovation, which have made the firm focused in the Korean retail industry. Starbucks Korea has deliberately utilized Shinsegae's center capabilities and assets in Starbucks Korea's tasks, which thus have turned out to be maintainable aggressive administration favorable circumstances for Starbucks Korea. Therefore, Starbucks Korea gets a portion of its center assets from Shinsegae Corporation, which has created critical synergistic operational productivity and helped the two firms accomplish economies of scale[42].

The impact of local knowledge-related resources on JV performance increased with the level of technology-related resources, and the impact of technology-related resources on JV performance increased with the level of local knowledge-related resources. Technology- and local knowledge-related resources are thus not simply additive; mutually enhancing synergies exist between the two resources[43].

The basis of IJVs is for sharing expected future benefits as distinct from current benefits. The Indian houses often opt for financial collaboration with the foreign firms with a view to get a regular flow of new technologies from the parent company and synergy is created due to process and operations through IJV [44]. However, technologies transferred in future are not available as free lunch; it requires certain additional payments [45].

Table I: Different expectations between foreign investors and Indian partners

Expectations	Foreign investors	Indian partners	Study
1	Open Indian's market for its product	Adopt advanced production technology	Aulakh, Kotable, and Teegen 2000; Ju et al, 2013; Choi & Beamish, 2013
2	Overcome trade barriers	Improved R & D capability	Chen X., Chen A., and Zhou K, 2014; Beamish & Bank, 1987
3	Take benefit of low cost of labor and materials	Open more information networks	Yuan, 1997; Lee & Zhou, 2012; Jiaqin & Lee, 2002
4	Develop existing techniques from home facility	Observingpartners for international competition	Libaers and Meyer, 2011; Andersson et al; 2013
5	Reduce financial risks	Add new financing source	Yuan, 1997; Javalgi & Marin; 2007; Harrigan, 1988; Li et, al., 2006
6	Safeguard copyright for intellectual products	Increasing firm status from famous brand	Larimo, 2003; Ranjan, 2004;
7	Decrease capital input in investment	Employ current and accessible resources	Mittal & Arora, 2006; Jiaqin & Lee, 2002
8	Access natural resource	Reduce operational risks	Steensma & Lyles, 2000; Lu & Hebert, 2005; Zucchella et al, 2007; AI-Laham and Souitaris, 2008

A study, concentrating on IJVs, studied 75 joint ventures, which were situated in India. To investigate the different expectations form the joint ventures between foreign investors and their Indian partners. The survey results revealed that those different expectations could be compensatory to both sides and have a positive effect on the success of the joint venture (as illustrated in Tables I and II). For example, While the primary objective for MN corporations to invest in India is to "overcome potential trade barriers" with local production plants so as" to open India's huge market" their Indian partners are seeking foreign investment for a joint venture business so that their MN corporation partners will bring in the production technologies which normally are in relative more advanced stages" and thus to "improve the local plants' R&D capability" thorough system installation, maintenance, and employee training programs. These expectations from the two sides of a joint venture business are evidently compensatory to both sides, as illustrated in Table I (expectations 1 and 2).

Another recognized motivation for those MN corporations to "expand their current production techniques" into their newly-built Indian local facilities is to prolong the competiveness of their existing production technology, while "reducing the financial risks" through diversifying their production facilities over worldwide locations.

Table 2: Compensatory factors between foreign investors and Indian partners

Factors	Foreign investors' needs	Indian partners' need	Study
Advanced technology	• Encourage its technology • Safeguard copyright	• Presenting new technology • Advancementof current equipment	Kogut & Singh, 1988; Agarwal, 1994; Steensma & Lyles, 2000; Larimo, 2003; Ranjan, 2004; Lu & Hebert, 2005; Choi & Beamish, 2013
India's market	• Overcome market barricade • Increase market share	Increased demand from ongoing growth	Sundaram & Black, 1995; Rhinesmith, 1996; Yuan, 1997; Lee & Zhou, 2012; Lee, Madanoglu and Ko, 2013
Labor resource	High skillful labor with low cost and moral ethics	Further employment and job openings	Kogut, 1988; Agarwal, 1994; Yuan, 1997
Capital resource	Investment variety and high return possibilities	More capital for facility and technology advancement	Nippa, Beechler and Klossek, 2007; Ju et al. 2013
Informal channels	Have recognized global information networks	Basic connection with worldwide business information network	Jiaqin & Lee, 2002; Larimo, 2003; Colovic & Lamotte, 2014
Global alliance	New associates to expand international linkage	Preparefor globalization	Mattsson, 1988; Ranjan, 2004; Johanson and Zain and Ng, 2006; Prashantham and Young, 2011; Andersson et al, 2013
Incentive policy	Avail tax and all additional governmental incentives	Support from governmental incentive policies	Yuan, 1997; Jiaqin & Lee, 2002
Global market	Develop new market and expand competitiveness	Move inglobal market and contribute in competition	Julian and Cass, 2002; Colovic & Lamotte, 2014
Reduce risk	Diversify investment and share potential risk	Advance management system and regulate investment threat	Steensma & Lyles, 2000; Yan & Child, 2004

Increase profit	Invest in fast growing area for high yields	Go through fast growth and want capital investment	Hamel, 1991; Boersma et al., 2003; Mittal & Arora, 2006

Such hard work are just what their Indian partners "considering for global partners (who have 'adequate monetary sources') in the globalrace" (expectations 4 and 5 in Table I).Likewise, some compensative factors between overseas investors and their Indian associates are quite striking, as discovered in Table II. The suitable example is "labor resource" (the third factor in Table II). Throughout the last two decades, India's ample labor resources have delivered a great extent of high skilled labors at a comparatively very low cost to these MN corporations and their Indian local locations. Instead, those chances of employment have been extremelyanticipated during the present ongoing Indian economic restructuring process; in general, they are erratic high-pay employments competitively sought by the Indiancommunity. Additionalilluminatingillustration is in relation to "information channels" (the fifth factor in Table II). Later being inaccessible from the external for above 20 years, Indian corporations, big or small, are all muscularly in need of connection with the worldwidecommercial world and global business information system. In a win-win statecontest, strong global business networks and established global information systems are the distinguishing strengths of maximum MN corporations and exactly what those companies have utilized in their joint venture transactions in India.

1.2. Complementary strengths of Indian company and foreign company for success of an IJV in India

On the basis of the factors identified from previous researches, the Indian company and foreign company have several needs and expectations to each other and at the same time both the companies (Indian and foreign) having its own strengths such as:

1.3. Indian Company Strengths (A)

Set of critical factors that are rich and well agreed. The strengths of Indian corporationas well as knowledge of Indian market (A1), profound understanding of Government official and mechanism (A2), pool of workers (A3) and accessible information about presentarrangement (A4).

1.4. Knowledge of Indian Market (A1)

It denotes knowledge about various domestic demand and supply factors. In a competitive market like India, one of the biggest challenges faced by foreign companies is to understand the fast changing landscape of market and design, development and manufacturing processes to create products for the local customer. In order to maintain their market position, companies are relying on insights from the local market for manufacturing of products. Foreign companies have undertaken the challenge to develop low cost products in India to meet the Indian customer needs[10][9][13][46].

1.5. Understanding of Government functionary and mechanism (A2)

It represents the rules and regulations under the democratic system, specifically. Reviewing transactional & litigation documents; drafting contracts; research memoranda & due diligence reports; prosecuting patents; negotiations and they required set of skills such as deep understanding of Indian laws; adept in legal application; ability to reason & research and many more[47][15][20].

1.6. Pool of workforce (A3)

It represents the ample labor supply sides of India. India's labor resources have provided a great volume of high skilled labors at a comparatively very low rate to these MN corporations and their Indian local locations. The Indian corporationidentifies the pulse of workforce and overseascorporation takes the benefits of huge pool of skillful labor[11][25][47].

1.7. Available information about existing infrastructure (A4)

Important databases are available to provide all essential information. Indian partners having deep understanding and information about existing resource and infrastructure such as employee turnover, variety of employees, transportation, land, and technology[25][47].

1.8. Foreign Company Strengths (B)

Set of factors that are being primarily sought by Indian companies. The strengths of foreign company includes financial engineering flexibility (B1), effective work culture (B2), expertise of global market and control on vast pool of resources (B3), and equipped with advanced process and product technologies (B4).

1.9. Financial engineering flexibility (B1)

Foreign companies are working across different continents and having better understanding of risk and return profile under varying exchange rate. Financial engineering is helpful to creating the contracts and ensuring that the company did not expose itself to excessive risks. It Provide an opportunity for more focused risk management strategy by enabling a close match to existing risk exposures and Enables clients to more precisely express a "view" on future market conditions. The flexibility has a "cost".Require much more detailed analysis of risks. Therefore financial engineering flexibilitycreates the potential for the speculative view taking that may not be appropriate for a situation and demands continual vigilance to the interaction of products and markets[35][36][30][44].

1.10. Effective work culture (B2)

It represents the areas of a business organization that are deemed to be better in a foreign company. Human resource management is the asset of an organization. Therefore HR issues (policies and strategies) affect success and performance of IJV. The features of administrative work culture which are significant in the Indian setting are as follows: self-control, teamwork and assistance, message and meeting, allocation of authority, initiation levels of individuals and groups identity, a sense of be in the right placeand the reaction of individuals and groups to tasks of accountability, elasticity and work revolution, role of unions and associations[41][42].

1.11. Expertise of global market and control on pool of resources (B3)

Being on a larger platform of operations and effective research & development, foreign companies are commanding vast amount of resources & better expertise. The foreign companies get into the global arena by identifying an international market for their products and become exporters and hence create international diversification. The foreign companies have good capital resource and invest in various sectors in India as per the guidelines of Government of India[16][17][18][19][20].

1.12. Advanced process and product technologies (B4)

Most of the developed nations are well advanced in technology and techniques. The establishment of IJV between a multinational corporation (MNC) and a domestic firm (or the host administration) in anemerging economy which is considered by having comparativelyoutdated technologies and excess of regulatory controls [45]. The use of latest technology and research & development for manufacturing the product, improved process and operations, product design, plant layout design, and by uses the latest technology and automation processing time can be reduced[35][37][46][29].

The research directed to identify the complementary strengths of Indian and foreign investors in India. On basis of the factors identified from previous researches synergy is created through flexibility in operations & processes in an IJV [48] and merging complementary properties in which each firm has a relativebenefit to value chain management [45][42][43]. Creation of synergy as presented in this study - will make shrewd contributions to the professional and the connectedstudy[47][49][43].

The strengths of Indian business including information of Indian market (A1), understanding of Government official and mechanism (A2), pool of workers (A3) and accessibleinfo about present infrastructure (A4), when interactions with strengths of overseasbusiness with strong financial engineering elasticity (B1), effective work culture (B2), expertise of global market and control on pool of resources (B3) and equipped with advanced process and product technologies (B1), it produces synergy[42][43][44].

In previous studies, some researchers found that synergy is created by adding the complementary factors of partners but no study was found that in what ways synergy is created. The objective of our study is to propose a conceptual model shown in figure 1, which elaborates the synergy (C) due to IJV. Further, these synergies are ranked with the application of AHP.

(i) Understanding Indian monetarydirective and leveraging financial benefit of huge number of conventional investors in their IJV (C1).
(ii) Prevent the internationalparticipants through shared capability of processes and expertise and become a important player in an improved market system (C2)
(iii) Technology relocation and understanding of method and techniques so as to improve value chain (C3).
(iv) Customer value proposition and getting customer feed back (C4).
(v) Diversification of risks (C5).
(vi) Enhanced competitiveness (C6)

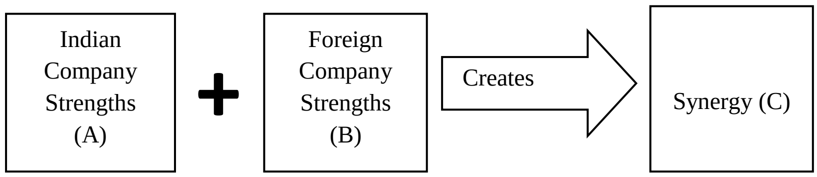

Fig.1: Synergy from success of an IJV

Numerous factors are collaborative with complex connections. In fact, such a problem should be viewed as a distinctive multi-criteria multi-attribute decision-making problem. In the presentworks, one of the most chosenmethods to such multi-criteria multi-attribute problems is the analytic hierarchy process (AHP) [50] [51] [52].

1.13. An AHP Approach

The AHP has been anticipated in recent works as a solution approach to great and multifaceted real-world multi-criteria multi-attribute problems [53][54][55]. The AHP has been applied in a extensive variety of multifaceted decision-making problems, as in Dyer [56], Gass [57], Korhonen and Wallenius [58], Perez [59], Satty [60], Sun [61], Tversky and Simonson [62], and Yang and Lee [63]. An earlier investigative studydelivered over 200 known submissions of the AHP [64].

Identifying key success complementary factors for international joint ventures in India is a typical multi-attributes multi-criteria problem. The proposed AHP model for identifying key success complementary factors is depicted in Figure 2. The AHP model starts with recognizingrelevant factors. Recognized factors are then organized into order descending fromcomplete objective to severalsignificant criteria and sub criteria in sequentialstages. In the AHP, organizing factors in a hierarchy helps in two ways:

1. It provides acompletesight of the complex association inherent in the situation; and
2. It helps decision makers assess whether the issues in each level are of the same order of magnitude, so homogeneity in comparisons is preserved.

The AHP method is thus selected in this study to examine the multi-criteria, multi-attribute, problem-identifying success JVs and their partner’s strengths in Indian environment. The strengths of Indian company and foreign company is further subgroup into eight factors argued above are used in the suggested AHP model in this study. Individual factor is dis-aggregated into six sub factors - which are further defined in thoroughfeatures that spread over to each one. These eight factors and 6 sub-factors (in three levels) are then arranged, as shown in Figure 2, into a judgement hierarchy. On the first (or top) level is the creation of synergy through success IJV. On the second level there are eight factors that contribute to the goal and on the third (or bottom) level are the eight sub factors that are to be assessed in relations of the factors on the second level. (Note: The point of detail and the number of levels can surelydiffer with a difficulty of the condition, the amount of accessible resources, and the wish of administrator). Dual set of information are required for the proposed AHP model:

1. Particularinformation of each factor and sub factor;
2. Projectedrankings about relative importance among factors and sub factors

A survey was directed for this reason over a six monthduring survey 75 international joint ventures were designated from five major Indian local economic hubs- Mumbai, Delhi, Bangalore, Gurgaon and Chennai. Those organizations were selected from a variety of sectors: electronics, automobile, food processing, chemicals, software and the like. The comparative importance between two criteria (balancing strengths of Indian and foreign company) is measured according to a statistical scale from 1 to 9, as presented in Table III, where it is anticipated that the i^{th} criterion is likewise or more significant than the j^{th} criterion. The expressions in the “Interpretation” column of Table III are only indicative, and used to qualitative assessments of the comparativesignificance between two criteria into numbers.

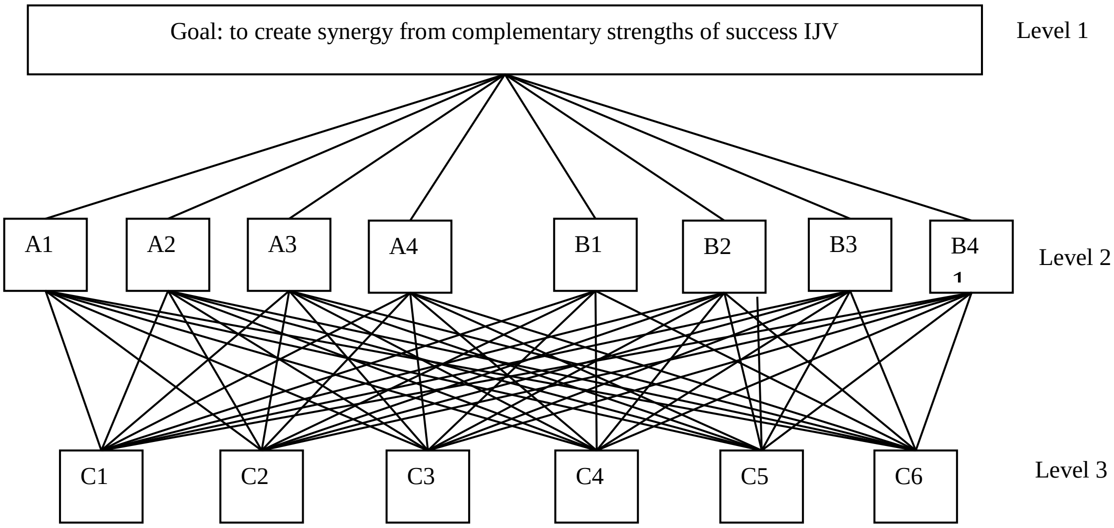

Figure 2: Hierarchical structure of synergy from complementary strengths of success IJV *

Table 3: Scale for pair-wise comparisons

Value of a^{ij}	**Interpretation**
1	i and j are evenlysignificant
3	i is somewhat more significant than j
5	i is more significant than j
7	i is strongly more significant than j
9	i is absolutely more significant than j
2,4,6,8	Intermediary values among the two adjacent judgment
Reciprocal	If the significant rate of factor i to j is R_{xy}, then the important rate of factor j to i is $R_{yx} = 1/R_{xy}$

In view of the information gathered from the survey, the priority weights considered and sub factors were resolved utilizing pair shrewd examination between each factor at a specific dimension. After making all pair-wise comparisons get a matrix. Divide each element of the matrix with the sum of its column followed by averaging across the rows get priority vector (λ). To check the consistency index (CI) find the Principal Eigen value (λmax), this is obtained from the summation of products between each element of Eigen vector and the sum of columns of the reciprocal matrix. The consistency index (CI) measures the entire consistency judgment for each comparison matrix and the hierarchy structure. Saaty (1990) utilized the CI and consistency ratio (CR) to assess the consistency of the comparison matrix. The CI and CR are defined as CI = $\frac{\lambda max - n}{n-1}$ and CR = $\frac{CI}{RI}$ respectively, where n is the matrix size.

Table 4: Average random consistency

Size of matrix	1	2	3	4	5	6	7	8	9	10
Random Consistency (RI)	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49

Judgment consistency checked by taking the CR of CI with the appropriate vales (table IV). The CR is acceptable if it does not exceed 0.10. If the CR is greater than 0.10, the judgment matrix is said to be inconsistent.

Table 5: Pairwise comparison matrix for (with respect to goal) level1

	A1	A2	A3	A4	B1	B2	B3	B4	Priority vector
A1	1	5	3	7	6	6	1/3	1/4	0.175
A2	1/5	1	1/3	5	3	3	1/5	1/7	0.062
A3	1/3	3	1	6	3	4	1/2	1/5	0.103
A4	1/7	1/5	1/6	1	1/3	1/4	1/7	1/8	0.019
B1	1/6	1/3	1/3	3	1	1/2	1/5	1/6	0.034
B2	1/6	1/3	1/4	4	2	1	1/5	1/6	0.041
B3	3	5	2	7	5	5	1	1/2	0.221
B4	4	7	5	8	6	6	2	1	0.345

λ_{max} = 8.811, C.I. = 0.115, C.R. = 0.083

To acquire a consistent matrix, judgments should be reviewed and improved. Combined weights of factors were decided by multiplying the weight of the sub factor by the weight of the factor directly above in the hierarchy. The matrix of Pairwise assessments of the corresponding factors given by the respondents in this case is shown in table V, along with the resultant vector of primacies. These vectors give the relative priority of the factors measured on a ratio scale. In this case an advanced process and product technology (B4) has the highest priority, with 34.5% of the influence.

Table 5: Synthesis

	A1 (0.175)	A2 (0.062)	A3 (0.103)	A4 (0.019)	B1 (0.034)	B2 (0.041)	B3 (0.221)	B4 (0.345)	Composite weight
C1	0.095	0.182	0.158	0.120	0.172	0.124	0.019	0.163	0.117
C2	0.312	0.078	0.013	0.231	0.145	0.172	0.198	0.236	0.202
C3	0.012	0.513	0.264	0.216	0.091	0.201	0.135	0.168	0.164
C4	0.032	0.055	0.065	0.102	0.078	0.032	0.011	0.089	0.055
C5	0.218	0.098	0.055	0.016	0.315	0.320	0.123	0.234	0.182
C6	0.065	0.713	0.181	0.333	0.226	0.193	0.400	0.278	0.280

Further, the Pairwise comparison of the synergy on the bottom level, comparing them Pairwise with respect to how much better one is than the other in success IJV each criterion on the second level. Thus there are eight 6 × 6 matrices (from C1 to C6) of judgments obtained with respect to each criterion (from A1 to B4). Synthesize the priorities by establishing the composite priorities of the synergy lay out in a matrix (Table VI) the priorities of the synergy with respect to each criterion and multiply each column of vectors by the priority of the corresponding criterion and add across each row, the results of their composite priority vector are shown in Table VI.

1.14. Analysis and Discussion

Synergy is created through adding the complementary strengths of Indian company and foreign company in success of an IJV. Synergy ranked by the overall composite priority weights in Table VI. “An enhanced competitiveness” (C6) ranked-I, as anticipated, playedimportantpart in the success of IJV (specified by the uppermostcompletecombined priority of 0.280). Knowledge is the instrument by which IJV technical and managerial competencies are globalized through the support of overseas parent. Such competencesempower the IJV to beoperative against other IJVs or subsidiaries that are competing for market stake and a situation in the developing economy. Thus “Deter the global competitors through shared expertise of procedures and technologies and become a significant player in an increased market network” (C2) ranked –II, an overall composite priority of 0.202. “Diversification of risks” (C5) indicated by the composite priority of 0.182 as rank-III, prevent other participants from entering as the IJV becomes a biggercompetitor. Higher customer base, that is, enlarged market control results in improvedproductivity and hence faster growth. “Expertiserelocation and understanding of procedure and processes so as to improve value chain” (C3) the composite priority of 0.182, ranked-IV, to announce the utmostsuitable technology (from a technologically advanced nation into a emerging nation) was here protected by its importance of global business institutions (form a technologically advanced nation) - to transfer the technology which fits the domestic partners’ requirement, financial capability, expertise level of workers, and the development route - when they develop their processes into emerging countries.

Additionally, Table VI reveals that “understanding Indian financial guideline and leveraging financial benefits of huge number of conventional investors in their IJV” (C1) and “Customer value proposition and getting customer feedback” (C4) were also supposed to contribute significantly to synergies the success IJV (next two uppermost priority weights of 0.117 and 0.055) and ranked V and VI respectively. The synergy is ranked along with composite priority weights shown in Figure 3.
As a result of our study a theoretical model is projected which explains the synergy due to IJV as discussed.Including the qualities of Indian organization and overseas organization make synergy on different records as is outlined in Figure 4. The proposed model as appeared in figure 4, discusses synergy created because of the qualities of Indian and overseas organization, congregating under the umbrella.

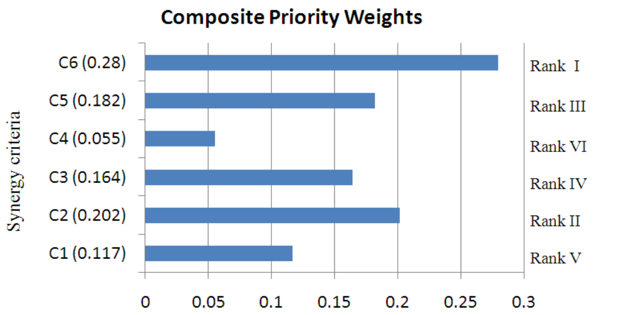

Figure 3 .Composite Priority weights and their Ranks for the major Synergy Criteria*

It is witnessed that relative strengths of the two associates of IJV work as the two supports of growth accomplishedvia synergy. The synergistic development will start with Customer value proposition and receiving customer comment and understanding national financial guideline and leveraging financial benefit of huge number of conventional investors in their IJV and touching through expertiserelocation, diversification of risks, Increase market stake, will lastlystretchimproved competitiveness. The Figure 4, clearly demonstrate that IJV causes economy of scale, because oftrimming oforganization &decrease in duplicity of effort. This synergy makes upper hand to IJV. Cost viability and enhancement of dangers stop different contenders from entering the market as the IJV turns into a bigger player. Bigger client base, that is, expanded market control results in improved productivity and consequently quickened development.

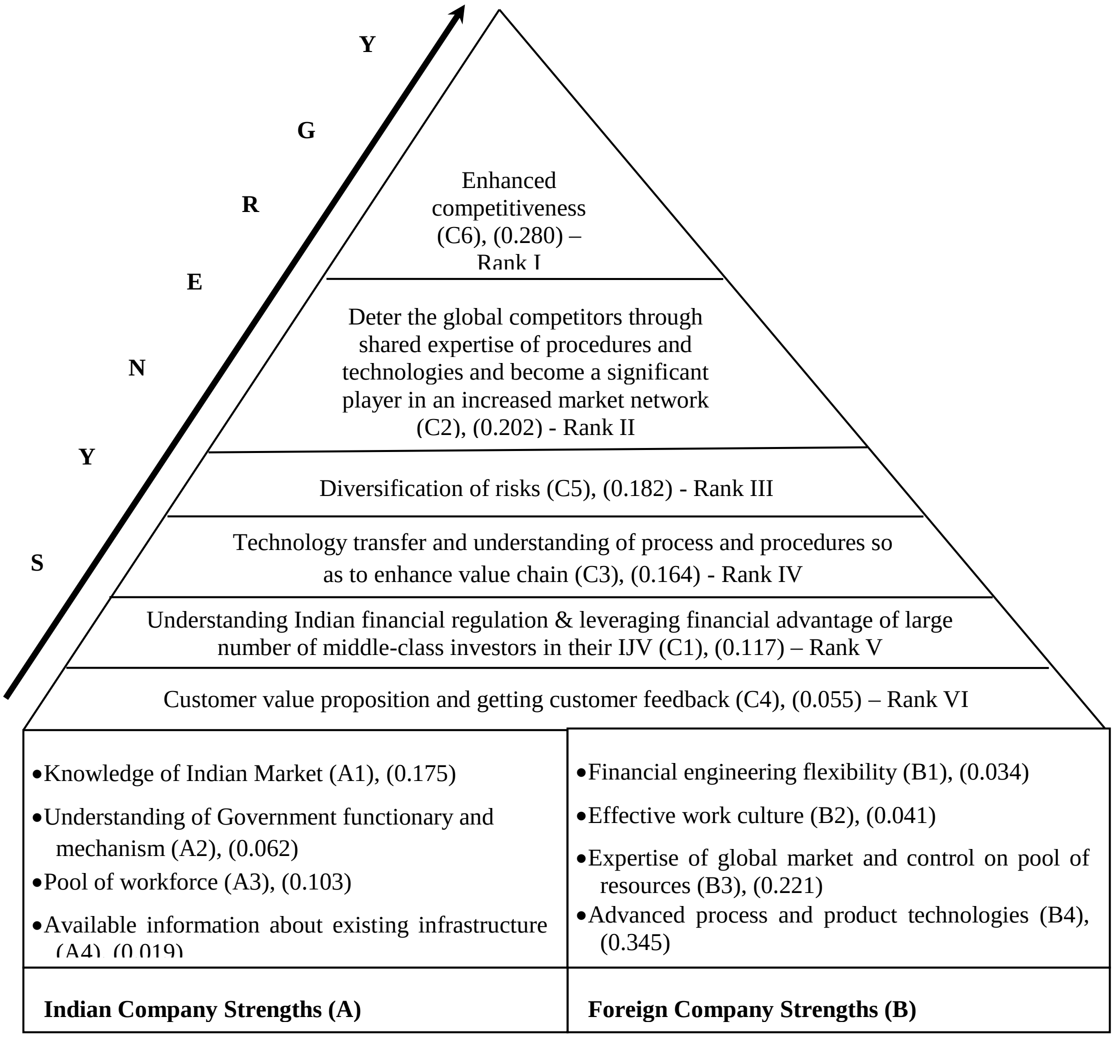

Figure 4: Synergy from complementary strengths through success IJV

2. Conclusion

The success ofIJVs starts with a comprehensivestrategy, well documented and all-inclusive legal contracts. Expertiserelocation is one of the greatestchallenging issues confronting joint venture administration. For either side, the probability of joining with other business in the new project lesser capital requirements comparative to going it alone. IJV provide benefitsto both the players and results in a distinct kind of synergy which may not be twistedelse. The correspondingmeans of accomplishment of an IJV are clubbed together and take rewards of one to other. The IJV Corporation can demand superior quality of raw materials in large quantities and thus obtain some reduction from sellers as well as shrink some conveyancecharge of raw material. So they can save some amount of cost, use modernequipment, machinery and take on research & development for production, and due to economies of scale the product price will be reasonable. The result shall be bigger market share and greaterattractivenesshenceforth a synergy is created. It is to conclude here that the model is conceptual and validated through the AHP method. The AHP has been useful in various complex decision-making process which is supportive for an IJV partners to take suitable decision for attainment of an IJVs goal. Further, there is scope to validate this model imperially.

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