

Strategic Partnerships Drive Technology Adoption in Indian Industry

Dr. Satyabrata Dash

Professor in Marketing (MBA)

S.M. Institute of Technology, P.G. Centre for Management Studies, Brahmapur, Odisha

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Key Words: Indian industry, strategic partnership, corporate partnership, Commercial Alliance, manufacturing sector

1. INTRODUCTION

The existence of a business organization is contingent upon keen observation of the marketing environment, accurate evaluation of the available opportunities and threats, execution of measures to exploit the opportunities offered by the environment, mitigation of the threats and finally effective implementation of the contemplated plan. Companies undertake Joint Venture or form a Strategic Alliance as a means for sustenance through capitalization of emerging avenues or minimization of risk due to symbiotic relationship and synergistic resources. The symbiosis of relationship or the synergy in resources, however, cannot be determined unless the company has a strategic architecture – a blue print for exploiting new functionalities, acquiring new competencies and approaching new customers. Though strategic architecture enables a firm to identify broad competencies to be built, in addition it is essential that every available and possible opportunity be exploited profoundly. Strategic leverage has assumed greater significance and precedence in view of scarcity of resources, increasing capital requirement, attached cost and rapid rate of technological change. The need to undertake continuous search for new and less resource intensive means of achieving strategic objectives encourages companies to look towards Strategic Alliances and Joint Ventures. The motive behind utilization of this means of growth is not very different from the other tools of growth – to supplement and complement the endemic competencies with those that lie outside the formally recognized parameters of the firm. However, Strategic alliance and Joint venture is more efficient since the company can zero in on the competencies it wants and pay for those critical competencies only while simultaneously reducing the trouble of socio-cultural assimilation and policy harmonization. In addition, Strategic

Alliance and Joint Venture can augment resources at any stage of the value chain. In fact, it creates a competitive situation between the upstream and the downstream partner to imbibe the unique skills of each other so as to either escape the relationship or exploit the partner instead of exploiting the partnership.

Since value chain is a compilation of strategically significant activities, coordinating or sharing value chains through Strategic Alliance and Joint Ventures broadens the potential source of competitive advantage. A firm gains competitive advantage by undertaking the value chain constituents at a lesser cost or in a better manner. Alliances play a critical role in firm survival, providing the access to critical resources that allow gaining and maintaining competitive advantages in today turbulent economic environment. They become a trend in global markets; more and more firms adopt cooperative strategies because the external market conditions show a lack of internal resources that they need for preserving their own competitive position in the marketplace. Competition is no more between individual firms but between alliance networks. Collaborative agreements allow firms to bridge internal weaknesses and cope the complexity of business environment. Companies, in order to strengthen their resources endowment, enhance their competitiveness and manage environmental uncertainty, increasingly depend on external partners. For firms, strategic alliances represent an important instrument to ensure the knowledge advancement and the availability of complementary resources.

2. REVIEW OF LITERATURE

However, as Gary Hamel and C.K. Prahalad [1] have rightly pointed out, “Success is a function of resourcefulness and not resource and it stems from a deeply felt sense of purpose, a broadly shared dream and a truly seductive view of tomorrow’s opportunity.” All the resources at the disposal of the partners will not contribute towards a single step ahead if all it generates is Brownian motion – a total of efforts made by direction less entities in the coalition which is less than the empirical summation of individual efforts. If the entities negate each other’s contribution and priorities are set in a specious manner, it ensures that individual effort is non-cumulative. Secondly, a firm’s ability to absorb the unique skills of its partner is as important to the success of strategic relationship as its capacity to invent and disseminate its uniqueness. In other words, it is advisable to approach the Strategic Alliance and Joint Venture more like a sincere student full of humility and hunger for knowledge rather than with arrogance or negligence.

A Strategic Alliance and Joint Venture effort is worth it only if it generates positive leverage for the contributing entities. The ways and means of achieving it is highly case

specific but it would be pertinent to add here that resource scarcity is indeed the genesis of tactical creativity.

Hence, in a nutshell we can say that the advantages of forming Joint Ventures and Strategic Alliances, as mentioned by Michael E. Porter [2], is that it brings together resources and skills of firms in ways that may allow reconfiguration, redefinition or pure spending. On the other hand the disadvantage is that coordination among the partners may prove troublesome. Here it is worth mentioning that when we talk of Strategic Alliances it includes technology licenses, supply agreements, marketing agreements, outsourcing, information sharing, joint research and development or any other consortium for the purpose of capitalizing on some emerging opportunity.

Strategic Alliances and Joint Ventures are meant to result in improvement of communication and networking, globalization of operations and minimization of risks. But Nikhil Hutheesing [3] has found out that 30 % of all Strategic Alliances and Joint Ventures are outright failures while another 17 % have limited success and then dissipate due to problems. Objectively the figures may not be highly encouraging, then what is it that motivates companies to undertake a Joint Venture or form a Strategic Alliance? A firm can be conceived of as a portfolio of resources and we believe that procurement of technology or availing of finance to augment these resources act as a catalyst towards formation of Joint Venture or Strategic Alliance.

Technology is a principal driver of competition and a great equalizer [4]. It determines the competitive scenario since it influences the industry structure due to its impact on relative competitive advantages of the participants and on the value chain. Technology determines the cost incurred by the firm as well as the differentiation offered to the customer and therefore leads to competitive advantage or disadvantage depending upon its relevance, reliability and sustainability. The value chain is an amalgamation of strategically significant activities. The effectiveness of each one of these activities, both primary and secondary, is contingent upon the technology used to carry it out.

The availability of finance is a measure of a firm's competitive position and overall effectiveness to investors [5] since it reduces the financial risk associated with a project. Strategic Alliances and Joint Ventures allow financial flexibility to partners who may share equally in contributing financial resources to the project or one partner may contribute financing while the other may provide special expertise.

It is pertinent to add here that technology or finance, as the motive for forming Strategic Alliance or Joint Venture cannot be viewed in isolation of each other as both these motives contribute towards an endeavour. However, the degree of relative relevance and influence of each of these motives is project specific and is a function of various parameters such as the participating companies, industry structure, market etc. Therefore, motives cannot be only technology or only finance. However, in some cases of Strategic Alliance and Joint Ventures technology may be the major motivator while in other cases, the situation may be diametrically opposite – financial benefit may be the major motivator while technology may be the minor motivator.

Alfred Tennyson had written that, "Those who forget the past are condemned to repeat it." It is a stark reality and a look at business history tells us that change is the only thing that is constant and growth is the best way to simultaneously manage change and avoid stagnation. Strategic Alliance and Joint Venture, as a method of development, offers growth opportunities in three directions – Intensive, Integrative and Diversification.

The choice of direction of growth is contingent not only upon the objectives and resources of the company but also on the structural entry barriers, the likely reciprocate gestures of the existing firms in the industry and finally on the degree of equilibrium, or rather the lack of it, in the industry.

Planning for growth in the future through Strategic Alliance and Joint Venture is like crossing a river on two boats – competence and commitment, with one foot on each one of them. A fall is imminent if the partners move too far ahead on any one of them while the other lags behind. Technology enhances competence while finance represents commitment.

2.1 Indian Policy Support

A company cannot go for strategically significant decisions to create competitive advantages while ignoring the opportunities and threats in the environment. Again, the opportunities and threats on offer are a product of prevailing economic, politico-legal, socio-cultural, technological and natural factors.

The business environment prior to 1991 was significantly tilted towards development of indigenous technology. The bias in favour of small businesses and reservation of products exclusively for small sector were the highlights of Industrial Policy Resolutions of 1948 and 1956. Large firms (having assets, including those of interconnected undertakings, of Rs. 100 crore or more) had to obtain clearance under Monopolies and Restrictive Trade Practices Act (MRTP), in addition to Industrial Licence, prior to implementing any kind of growth – Intensive, Integrative or Diversification- such as establishing new undertakings, carrying out substantial expansion or manufacturing new items.

The 1999 Global Competitiveness Report of the World Economic Forum considers technology to be one of the eight factors to evaluate competitiveness [6]. However, in India foreign collaboration through Joint Venture or Strategic Alliance was permitted only in fields of high priority. The annual royalty payments for these technological collaborations were linked to the value of actual production. In addition, the percentage of royalty was dependent upon the nature of technology and limited to a period of 5 years.

Similarly, the scope for utilization of foreign capital was limited to 40 % of total equity in most industries. Repatriation of capital or inward remittance was subject to Foreign Exchange Regulation Act (FERA), 1973 even as corporate taxation was high. The FERA, 1973 also empowered RBI to regulate or exercise direct control over the activities of the companies not incorporated in India or having non-resident interest of more than 40 %.

This kind of lackadaisical and regressive policy towards foreign capital and technology not only effected Strategic Alliance and Joint Venture efforts but also had a long-term

impact on the outlook of Indian industry towards cutting edge technology. Even as late as the 21st century, India's R&D expenditure stood at a dismal 0.86% of GDP compared to USA's 2.79% and Japan's 2.83% of GDP.

However, the scenario has improved since the new economic policy, as foreign investment in most industries is eligible for automatic approval route with permission to bring in 100% Foreign Direct Investment in certain industries.

Technological collaborations are also subject to automatic approval for any proposal with lump sum payment not exceeding US \$ 2 million and royalty of up to 5% on domestic sales and 8% on exports. In both the cases, proposals that do not conform to the guidelines for automatic approval are referred to Foreign Investment Promotion Board (FIPB) and Project Approval Board (PAB), which considers the proposal in totality and make recommendation to the government.

The present FDI limits as a percentage of total equity in various industries is as follows [7]:

Table 1: FDI limits as a percentage of total equity

Serial No.	Industrial Sector	Permissible Percentage of FDI
1.	Hotel and Tourism	100 %
2.	NBFC	49 %
3.	Insurance	26 %
4.	Telecom	49 %
5.	Power	100 %
6.	Infrastructure	100 %
7.	Drugs and Pharmaceuticals	100 %
8.	Call Centers	100 %

Though aided by supportive economic policy, Indian business leaders still feel that inadequate infrastructure, lack of access to capital and excessive regulation are detrimental to the growth of Indian industry [8]. Therefore, as far as creating an environment conducive to Strategic Alliances and Joint Ventures is concerned, metaphorically speaking, as yet the glass is only half full.

3. RESEARCH METHODOLOGY AND ANALYSIS

A company's choice of any particular means of growth is contingent upon many variables such as organizational objective, available and acquirable resources, generation of organizational synergy etc. This research paper makes an effort to determine if the kind of goods a company manufactures – consumer or industrial, also affects the choice of strategy for growth. Consumer and Industrial goods vary in terms of their relative emphasis on marketing mix elements, buyer behaviour dynamics, decision process and nature of demand – elastic or inelastic, derived or independent – for products. We have made an effort towards finding out if these differences in variables effecting consumer and industrial goods translate themselves into making the industrial units choose different means of growth – Intensive, Integrative or Diversification – through Joint Venture and Strategic Alliance. Indian companies have exploited all the three strategic options to further their growth. We have used the Chi-square test [9] to determine whether the attributes – direction of growth (intensive, integrative or diversification) and type of goods (consumer or industrial) being produced, are independent of each other or not.

3.1. Direction of Growth:

1. **Null Hypothesis (H1):** There is no association between the attributes Direction of Growth through joint venture and strategic alliance and Type of Goods being produced by the company.

A sample size of 64 was selected through Simple Random Sampling method. The Sampling Frame consisted of all Indian companies who have been engaged in some form of strategic alliance and joint venture since Indian independence.

The information regarding the direction of growth through and motivation for joint venture and strategic alliance of these 64 companies with their partners has been obtained through extensive literature survey.

On subjecting the data obtained through the survey to Chi-square test, as a test of independence, it is found that Null Hypothesis (H1) is accepted (Table 2, 3, &4).

Table 2: The Observed Frequency Table

		Type of Goods		Total
		Consumer Goods	Industrial Goods	
Direction of Growth	Intensive	16	12	28
	Integrative	10	15	25
	Diversification	6	5	11
Total		32	32	64

Table 3: The Expected Frequency Table

		Type of Goods		Total
		Consumer Goods	Industrial Goods	
Direction of Growth	Intensive	14	14	28
	Integrative	12.5	12.5	25
	Diversification	5.5	5.5	11
Total		32	32	64

Table 4: Calculated Value of Chi-square

Observed Frequency (O)	Expected Frequency (E)	(O-E) ²	(O-E) ² /E
16	14	4	0.286
10	12.5	6.25	0.500
6	5.5	2.25	0.410
12	14	4	0.286
15	12.5	6.25	0.500
5	5.5	2.25	0.410
$\sum [(O-E)^2 / E]$			2.392

χ^2 Calculated = **2.392**

Tabulated Value of Chi-square

Degrees of freedom (DOF) = (r-1) (c-1) = 2 and

Level of significance, α = 5 %

For (DOF) = 2, $\chi^2 @ 0.05 = 5.99$

Hence, χ^2 Tabulated = **5.99**

Analysis: χ^2 Calculated < χ^2 Tabulated

Hence, **Null Hypothesis (H1) is accepted.**

In other words, within the Indian manufacturing industry, the type of goods that a company makes – consumer or industrial is independent of the growth – intensive, integrative or diversification, attained through Joint Venture and Strategic Alliance.

3.2. Motive towards Technology and Finance:

Technological revolution and its impact on the bottom line make it mandatory for a company to keep itself technologically ahead of the competition. Indian firms have looked towards European, United States and Japanese players to maintain this edge. Financial resource constraints have also pushed Indian companies towards a Joint Venture or Strategic Alliance so that paucity of funds does not hamper the growth of the company. We believe that the most significant motives to go for Joint Ventures or Strategic Alliances are to acquire sophisticated technology or to procure financial benefits. In this section, we intend to determine the relationship, if any, between the motive to go for joint venture or strategic alliances and the type of goods – consumer or industrial, which a company produces.

2. **Null Hypothesis (H2):** There is no association between the attributes Motive – Technology or Financial Benefit, for Joint Venture or Strategic Alliance and the Type of Goods - Consumer or Industrial, being produced by the company.

A sample size of 64 is selected through Simple Random Sampling method. Information regarding the motive is obtained through extensive literature survey on each individual sampling unit. The data obtained is subjected to Chi-square test, as a test of independence (Table 2, 3, &4).

Table 5: The Observed Frequency Table

		Type of Goods		Total
		Consumer Goods	Industrial Goods	
Motive	Technology	20	24	44
	Finance	12	8	20
Total		32	32	64

Table 5: The Expected Frequency Table

		Type of Goods		Total
		Consumer Goods	Industrial Goods	
Motive	Technology	22	22	44
	Finance	10	10	20
Total		32	32	64

Table 4: Calculated Value of Chi-square

Observed Frequency (O)	Expected Frequency (E)	(O-E) ²	(O-E) ² /E
20	22	4	0.182
12	10	4	0.400
24	22	4	0.182
8	10	4	0.400
$\sum[(O-E)^2/E]$			1.164

χ^2 Calculated = **1.164**

Tabulated Value of Chi-square

Degrees of freedom (DOF) = (r-1) (c-1) = 1 and

Level of significance, $\alpha = 5\%$

For (DOF) = 2, $\chi^2 @ 0.05 = 3.84$

Hence, χ^2 Tabulated = **3.84**

Analysis: χ^2 Calculated < χ^2 Tabulated

Hence, **Null Hypothesis (H1) is accepted.**

In other words, the Chi-square test reveals that Null Hypothesis (H2) is accepted. In other words, within the Indian manufacturing industry, the type of goods that a company makes – consumer or industrial, is independent of the Motive – Technology or Finance, for undertaking Joint venture of Strategic alliance.

4. CONCLUSION

The Bombay Stock Exchange Sensex, which reflects the strength of Indian economy, has touched a peak of 10182.77 points with positive contributions from the capital goods index, auto index, healthcare index, PSU index, FMCG index, consumer durables index and technological index [10]. It elucidates the inherent strength of Indian manufacturing industry. According to the Central Statistical Organization, during the period April 2005 – December 2005, the manufacturing industry has grown at the rate of 8.9 % [11]. Manufacturing accounts for 80 % of the weight on the Index for Industrial Production (IPP) and therefore any expansion or contraction of output of this sector has an impact on the IPP and eventually on the GDP, which is poised for 8.1 % growth. In other words, the manufacturing industry is a kaleidoscope of Indian economy and a healthy manufacturing industry has brought a paradigm shift in the Indian economy. The emergence of India as a potential hub for manufacturing owes it to the success of Strategic Alliance and Joint Venture in India, in consonance with other relevant parameters.

However, the pattern of Joint Venture and Strategic Alliances between Indian and partner companies, on analysis, have revealed that the direction of growth attained – Intensive, Integrative or Diversification is independent of the type of goods – Consumer or Industrial, that a company produces.

Further, the motive behind going for joint venture or strategic alliance – Technology or Finance, is also independent of the type of goods – Consumer or Industrial, which a company produces.

Hence, we conclude that direction of growth and motive behind undertaking a Joint Venture or forming a Strategic Alliance is independent of whether the company produces consumer goods or industrial goods.

5. REFERENCES

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