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Theoretical Explanation of the Phenomena of Joint Ventures in the Indian Commercial Vehicle Industry (1990-2013)

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Abstract

The commercial vehicle industry in India has been one of the major jobs generating and growth driving industries in India. From a modest beginning with three manufacturers in 1945, the industry now has various players fighting for competitive position. Joint ventures have been majorly used throughout the history of this industry in India by firms for achieving their strategic purposes. This study aims to provide insights on the dynamics of this joint venture usage, thereby providing an understanding on this phenomenon which has critical implications for the industry.

Keywords: Automobile Industry, Indian Joint Venture, Joint Ventures, Strategic Alliances

In the recent decades, the Commercial Vehicle (CV) segment of the Indian Automotive Industry has seen a spurt of growth. The metrics of success of this industry can be seen in terms of significant increase in volumes of vehicles manufactured and sold, advancements in vehicle technology and a gradual increase in the number of firms. From only three manufacturers in 1945, over 35 firms operate in India today contributing to over 17 million jobs in direct and indirect employment and also 7% of India's GDP (Kathuria, 1987; Mukherjee & Sastry, 1996, 2002; Ranganathan, 1986; Rao, 1993). Interestingly, the commercial vehicle sector is also one of the areas in the automotive industry in India which has developed right from its embryonic stages till date from collaborative strategies: in the form of contracts, affiliations and technical arrangements, joint ventures and more recently has also seen Indian players acquiring other firms. Thus, the context makes it ideal to study the phenomena of joint ventures and seek explanations.

Based on extant literature (Arbor et al., 1993; Kathuria, 1987; Mukherjee & Sastry, 1996; Raja & Rao, 2008; Rao, 1993) the evolution of the automotive industry in India can be explained in 5 phases: - a) Completely Knocked Down imports (CKD) from 1928 to 1953, marked by a presence of only 3 Indian firms, which were established with the help of foreign collaborations from whom they sourced components and assembled. b) The period from 1953, i.e., when the first Tariff Commission was set up till 1965, under the Protection phase when the Indian Government's aim was to make the country self-reliant, favouring those companies who had a domestic manufacturing program. This in addition to heavy import duty saw the exit of foreign firms and entry of Indian business groups such as Tatas and Mahindras; however, the technical knowhow during the period was still obtained from foreign firms. c) Deregulation, when the government loosened the strict norms of protectionism and shifted the focus to liberal policies intended towards delicensing of output. This period from 1980-1990, saw leading Japanese players like Mitsubishi, Nissan, Toyota, and Mazda form joint ventures with upcoming regional Indian companies like Eicher, Allwyn, DCM and Swaraj respectively. The new

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joint venture firms bought Japanese best practices like JIT, industry clusters, and high levels of supplier integration. d) Liberalization, beginning from 1991 started with the loosening of stringent controls and entry of new foreign firms. e) Globalization, starting from 2004, where the industry structure was determined by a series of alliances and joint ventures (Figure 1) and companies invested heavily in assets. The number of firms was now increasing and contesting for market share[3] earlier held by the two largest players' viz. Tata and Ashok Leyland. Over time we see the industry concentration in terms of numbers of players and customer demand increasing as government restrictions favour towards globalization.

Studies on the evolution of this industry suffered from two dominant problems. First, most studies are quantitative in nature and they do not capture subtle, supra-normal and qualitative aspects of acquisitions and alliances formed by firms in the industry. Second, qualitative studies are rather rare as collecting data for acquisitions and joint ventures proves difficult because most firms treat acquisition and joint venture deals as highly secretive. In order to overcome these problems, 4-5-page cases on all joint ventures in the CV industry were developed. The cases were developed based on data collected from newspapers, magazines, published teaching cases, annual reports, company websites and publically available information like press releases by the company. It is like bootstrapping different sources of data to get an overall picture. Case study-based methodology (Ambrosini, Bowman, & Collier, 2010; Johansson, 2003) helped us overcome both these problems. We could get data which was relatively easy to access and also surveyed literature and trends, both historical and current in the Indian automotive industry (AII, 1957; Arbor, Ramchand, & Andrea, 1993; Bajracharya, 2008; Dasgupta, 1986; Desai, 2011; GOI, 2012; Kathuria, 1987; Mukherjee & Sastry, 2002; Avinandan Mukherjee & Sastry, 1996; Nagraj, 2000; Raja & Rao, 2008; Rao, 1993; Santini & Poyer, 2008) and other policy related studies (National Road Transport Policy, 2005; Ministry of Heavy Industries & Public Enterprises, 2006). The cases contained information regarding the brief history of the companies, joint ventures formed, the intent, whether any new capabilities had been developed, type of assets invested or acquired, new product launches, key financial metrics, and miscellaneous output figures like production and sales, followed by whether the joint venture was a success[1] or a failure. There was also effort expended in trying to bring out relevant information related to how the company was diversifying. Other quantitative figures from 1990[2], such as the segment wise classification of Production, Sales, PAT, and Total Assets etc. were taken from CMIE[3] Prowess & IAS Databases whereas Infrastructure and other Macro-economic data related information was sourced from India Stat[3]. Initially the documented cases were used to identify key patterns. Leaving aside two firms, every Indian commercial vehicle player had entered into a joint venture with a foreign partner. The emphasis then shifted on to the literature on joint ventures for explanations regarding large scale usage of joint ventures in the industry. Thus, the critical questions we aimed to answer were: what explanations could be provided for the selection of joint ventures specifically?

When we searched Strategic Management literature to get answers to these questions (Anand & Khanna, 2000; Contractor & Lorange, 2002; Fornell, Lorange, & Roos, 1990; Grant & Baden-fuller, 2004; Gulati, Nohria, & Zaheer, 2000; Gulati, Ranjay, 2013; Hennart, 1988; Judge & Dooley, 2006; Kogut, 1991; Kogut, 1988; Mowery, Oxley, & Silverman, 1996; Parkhe, 1993; Spekman, Forbes, & Isabella, 1998; Stuart, 2000) three dominant theories were used to explain the phenomena of joint ventures, namely the Transaction Cost, The Resource Based and the Strategic Behaviour. The need of a joint venture according to the Transaction Cost theory (Williamson, 1979) is to essentially minimize the sum of transaction costs such as enforcing contracts, haggling over terms and conditions etc. owing to problems of asset specificity and small numbers bargaining (Anderson & Narus, 1990; Buckley & Casson, 2012; Dyer & Singh, 1998; Hennart, 1988; Judge & Dooley, 2006; Srinivasan & Koza, 1993; Tsang, 2000). Therefore, the rationale behind a joint venture as explained by a TCE lens is that a joint venture

[1]If the joint venture intent is realized we call it a success. If the intent has not been realized and the joint venture breaks apart it is a failure.

[2]After liberalization (1990's) data is available on CMIE Prowess for most Indian Firms.

[3]Center for Monitoring Indian Economy (CMIE) has the Prowess Module for company level data, the IAS Module for Industry level data. India Stat is a database which is used for Macro-Economic Information.

is different from a contract as cooperation is administered within an organizational hierarchy and is different from a vertically integrated activity as two firms claim ownership to the residual value and control rights. Other advantages of a joint venture as explained by a TCE lens include partaking in advantages of economies of scale, since sometimes the minimum efficient scales of certain input processes are so high that it renders it impractical for one firm to capture all the value in the downstream activities, overcoming entries into new markets and allaying xenophobic reactions (Reuer, 2004). Srinivasan & Koza (1993) suggested that the problem of valuation and adverse selection too are important reasons as to why a firm will go for a Joint Venture when looked through the TCE Lens.

The Strategic Behaviour theory posits that firms transact by a mode which maximizes profit by improving a firms' competitive position vis-à-vis rivals. Strategic Behaviour focuses more joint ventures as a vehicle for strategic posturing and manoeuvrings where it is seen essentially a vehicle for securing a competitive positioning in a market by either collusion with the alliance partner or through depriving competition of possible allies and also hedging against uncertain environments (Hamel, 1991; Bruce Kogut, 1988; Parkhe, 1993). The resource-based view of an alliance/joint ventures states that they are formed to achieve superior resource combinations that single firms cannot (Barney, 1991; Contractor & Lorange, 2002; Das & Teng, 2000; Grant & Baden-fuller, 2004; Bruce Kogut, 1988). The formation of the alliance is owing to the imperfect mobility, substitutability of resources which partners possess and these partners possessing such resources will have high demand. The structure of the new firm will be dependent on the resource profile of the firm wanting the resources and the resource profile of the target firm. The performance on the other hand will depend on the alignment of resources non alignment of resources may spur in wastefulness and decimation of the venture (Das & Teng, 2000). Another feature with regard to these theories is that scholars have used them as substitutes, mutually exclusive or independent of each other. But a closer look would suggest that the theories answer different levels of questions. Therefore, there arises a possibility that the theories may be complementary to each other rather than substitutes. Our inquiry deepened to see if the question of joint venture formation, joint venture survival and joint venture failure can be answered with these theories? Can all the three questions of formation, success or survival and failure be explained by one theory or whether each theory explains one question in depth? Is a particular theory is more relevant for a particular question and not for others? Were these theories more complementary in nature? While working out on explanations to the above questions the visage was getting clear. It was found out that there was an ordinal nature when a certain theory answered a particular question well although all three theories provided answers. Hence, our next challenge was: how can we be so sure that a particular theory explains a question better. How could one theory be chosen over the other?

The bootstrapping logic was used to answer the questions instead of following the testing of hypotheses. We notched up a few tests followed by certain "signs", which if true, would validate better applicability of a theory over the other for a question: If the joint venture formation is a response to a move from the competition the Strategic Behaviour lens would be befitting to explain, if a joint venture is seen to stem from seller or supplier side, it is Transaction Costs that should be applied to verify theory. Furthermore, if reduction in transaction costs leads to capability development, transaction costs would still befit. Whereas if capability development comes first then it leads to lowering of transaction costs, it is then the Resource Based explanation which we will seek to look into. Similarly, there were other such tests to choose or drop a particular theory.

With this understanding, we analyzed the cases[4] by identifying pivotal points. The phenomena of sudden spikes in terms of the number of joint ventures followed from 2005 onwards with Tata Motors acquiring Daewoo Trucks. One way of looking at it is definitely the expansion plans of the company, with it gaining access to the Korean markets. However, on closer analysis of the markets it can also be looked at the increase in demand of vehicles with advanced features and more robust products that were attracting more capable players from the foreign markets, namely Volvo, Mercedes, Kamaz, ISUZU etc. In the

[4]Owing to paucity on the limit we have only covered the major essence of the cases and not covered in depth. Since this is a Proposal.

[5]Charts were created from the CMIE Data. They were later plotted on Motion Charts to analyze trends.

period of 2004-2006 most other prominent players were now beginning to provide stiff competition to Tata Motors which was perhaps not the case earlier. As a response to Tata Motors acquiring Daewoo Trucks and forming joint ventures with foreign partners like Marco-Polo which provided it access to capabilities in advanced bus body building, other companies formed joint ventures. Force entered into a joint venture with MAN of Germany in 2005, Ashok Leyland with Nissan formed a joint venture in 2007, Swaraj entered into a technical collaboration with ISUZU in 2006, Navistar entered into a joint venture with Mahindra in 2005, followed by Eicher Motors and Volvo's joint venture in 2011. It can be inferred that the competition was attracted to the growing markets and joint ventures were formed owing to competitive behaviour. This can be seen by identifying lags in the formation of joint ventures and procurement of new assets through the charts[5] (Figure 2) therefore suggesting strategic behaviour or response to competitors' moves. When seen from the customers' perspectives e.g., the new state transport bus requirements involved stringent constraints[6] and were required to be within certain dimension and capacity, detailed internal layout, door and aisle width, low floor clearance, choice of fuels, GPS, aesthetics etc. (CEPT University Ahmedabad, 2005) it would have been difficult for the Indian firms to manufacture such products on their own. Similarly, Indian companies ventured into related areas with the help of Joint Ventures: Ashok Leyland entered into a joint venture with John Deere closely on the lines of Tata Motors launching new products in the construction vehicle segment. Since the phenomena of joint ventures are seen as a response to the competition, we can say that it is strategic behaviour over the other two theories. The international CV players too entered India in a staggered manner following each other: as a response to decline in sales in their home countries, increase in competition & opening of the Indian market to global players.

However when we see, albeit all the joint ventures are being formed almost at the same period (i.e., 2005-2011), there is high variation when it comes to the performance shown by the joint ventures' if we take into account capabilities developed, new products launched, time taken from the letter of intent to actual execution etc. In the joint venture cases that were studied Tata-Marco Polo, Ashok Leyland- Nissan, Volvo-Eicher can be seen as successful joint ventures, (meaning intent achieved) and cases like Mahindra-Navistar, Force-Man can be termed as unsuccessful joint ventures (joint venture breaking up before realization of intent). For example, in 2008[7], both Eicher Motors and Volvo Trucks India had lower sales prior to the joint venture compared to the momentum that was generated after the joint venture (Figure 3). But the question to be probed here is how they were successful?: it comes out that it was the capabilities possessed by each, resource alignment and complementarity (Das & Teng, 2000 and Resource Based Theory) which provides suitable explanations. This particular joint venture's performance has been positive. New investments for example: the VE powertrain project, a first of its kind investment which is a facility which will manufacture Medium Duty Automotive Engines for not only the Indian joint venture trucks but also source engines for one the parent company Volvo for its global requirement, The engines manufactured in this facility are capable of meeting the Euro 6 norms which are ahead of its time for the Indian Markets. Other initiatives[8] like the CSI-1, which is a set of best practices incorporated to improve the current products by the joint expertize of both the company's parent firms which illustrate how the companies are learning from each other. The frugal value-based engineering of Eicher and the technical expertise of Volvo have churned out competitive products. The final question probed was on failure, of the companies whose joint ventures did not fare well. In the cases studied a well thought of surmise at this point of time can be made, owing to limited information: that they failed essentially because of high costs of transaction: In the study amongst the joint ventures which were terminated ahead of the realization of the intent statement., Force-Man, Mahindra-Navistar etc. were called off because of

[6]http://www.ahmedabadbrts.com/web/images/01.Vehicle%20Technology.pdf the document by Center for Environment Planning and Technology (CEPT) Ahmedabad. A detailed account of the requirement by Ahmedabad State Transport Unit is given. Such concerns are voiced by other state governments. Failure to comply with such norms would forfeit sales and opportunity to bank on the infrastructure growth of the country post 2005. Link active as on Tuesday, September 03, 2013.

[7]Only few cases are discussed here owing to paucity of space.

[8]Extracted form Company Annual Reports 2009, 2010, 2011, 2012 and newspaper reports: http://www.indianexpress.com/news/eichervolvo-to-invest--331-mn-in-india-jv/1028245/ and company website http://www.vecv.in/aboutus-overview.aspx all links active as on Tuesday, September 03, 2013.

differing goals, and perhaps blatant acceptance of some element of opportunistic behaviour which led to the non-commensurability in mutual commitments.

Therefore, in this study amongst the arguments that are posited is: In the Indian context from 1990-2013, the Strategic Behaviour theory best explains the formation, Resource Based arguments explains the success or survival and premature termination or failure may be given by TCE Lens. In addition, it is also proposed that it is it is best if the three theories are viewed complementary to each other rather than holistically viewing the phenomena of alliances or a particular joint venture through one particular lens or considering them to be mutually exclusive of each other. They are like legs of a tripod, when one goes missing it is impossible to maintain balance with the other two. Similarly, our argument can be extended to other theories within Strategic Management literature seeing the outcome of this work. When it comes to joint ventures there are a series of multi-level questions that need to be asked to understand the phenomenon fruitfully. Moreover, each question can be best explained by one theory among all theories that seek to provide an answer, however all other theories are complementary to it to understand other questions which are equally important.

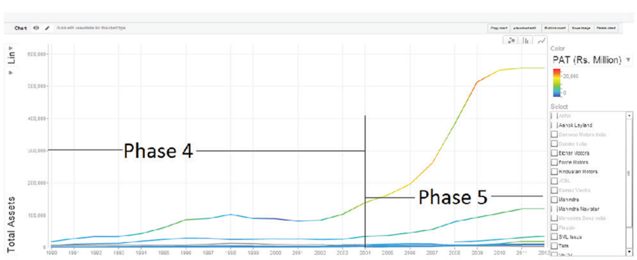

Figure 1. Shows demarcation of the fourth and fifth phase.

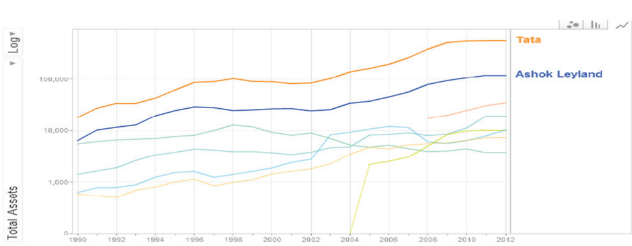

Figure 2. The increase in total assets of companies was a response to competitive moves.

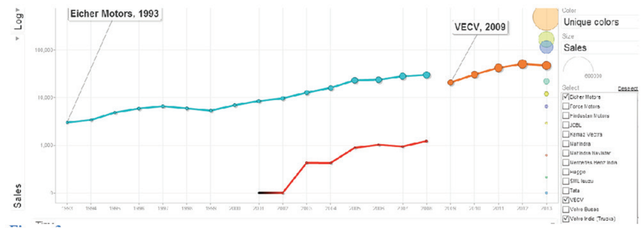

Figure 3. Enhanced capabilities after the Volvo-Eicher deal led to increased sales for the new company vis-à-vis individual attempts by the parent firms. Data was extracted from CMIE and plotted on Motion Charts.

References

1. Ambrosini V., Bowman C., & Collier N. (2010). Using teaching case studies for management research. *Strategic Organization*, *8*(3), 206–229.
2. Anand B. N., & Khanna T. (2000). Do firms learn to create value? The case of alliances. *Strategic Management Journal*, *21*(3), 295–315.
3. Anderson J. C., & Narus J. A. (1990). Model of Distributor Firm and Manufacturer Firm Working Partnerships. *Journal of Marketing*, *54*(1), 42–58.
4. Arbor A., Ramchand K., & Andrea D. J. (1993). A primer describing its evolution and current state. p. 57.
5. Automobile Industry in India. (1957). In the Economic Weekly. p. 308–310.
6. Bajracharya A. (2008). The impact of modal shift on the transport ecological footprint: a case study of the proposed bus rapid transit system in Ahmedabad, India. *International Institute for Geo-Information Science and Earth Observation.*
7. Barney J. (1991). Firm resources and sustained competitive advantage. (Anonymous, Ed.) *Journal of Management*, *17*(1), 99–120.
8. Buckley P. J., & Casson M. (2012). An economic model of international joint venture strategy. *Journal of International Business Studies*, *27*(5), 849–876.
9. CEPT University Ahmedabad. (2005). Ahmedabad Bus rapid transit system (ART). *CN Patent102,002,900.*
10. Contractor F., & Lorange, P. (2002). The growth of alliances in the knowledge-based economy. *International Business Review*, *11*(4), 485–502.
11. Das T., & Teng B. (2000). A resource-based theory of strategic alliances. *Journal of Management*, *26*(1), 31–61.
12. Dasgupta R. (1986). Liberalisation of automobile industry policy and demand for commercial vehicles. *Economic and Political Weekly*, *21*(8).
13. Dyer J. H., & Singh H. (1998). The relational view: cooperative strategy and sources of interorganizational competitive

advantage. *The Academy of Management Review*, *23*(4), 660–679.

14. Fornell C., Lorange P., & Roos J. (1990). The cooperative venture formation process: a latent variable structural modeling approach. *Management Science VO - 36*(10), 1246.
15. GOI: Government of India (2012). Basic road statistics in India. *Annual*, (August).
16. Grant R.M., & Baden-fuller C. (2004). A knowledge accessing theory of strategic alliances. *Journalof Management Studies*, *41*(January), 61–84.
17. Gulati R., Nohria N., & Zaheer A. (2000). Strategic networks. *Strategic Management Journal*, *21*(3), 203–215.
18. Gulati R.H. S. (2013). The architecture of cooperation: managing costs and coordination concerns appropriation in strategic alliances. *Administrative Science Quarterly*, *43*(4), 781–814.
19. Hamel G. (1991). Competition for competence and interpartner learning within international strategic alliances. *Strategic Management Journal*, *12*(Special Issue), 83–103.
20. Hennart J.-F. (1988). A transaction cost theory of equity joint ventures. *Strategic Management Journal*, *9*(4), 361–374.
21. Johansson R. (2003). Case study methodology. *International Conference Methodologies* (September), 22–24.
22. Judge W. Q., & Dooley, R. (2006). Strategic alliance outcomes: a transaction-cost economics perspective. *British Journal of Management*, *17*(1), 23–37.
23. Kathuria S. (1987). Commercial vehicles industry in India: A case history, 1928-1987. *Economic and Political Weekly*, *22*(42), 1809–1813.
24. Kogut, B. (1991). Joint ventures and the option to expand and acquire. *Management Science*, *37*(1), 19–32.
25. Kogut B. (1988). Joint ventures: theoretical and empirical perspectives. *Strategic Management Journal*, *9*(4), 319–332.
26. Ministry of Heavy Industries & Public Enterprises, Govt. of India (2006). *Automotive Mission Plan 2006-2016*.
27. Mowery D.C., Oxley J. E., & Silverman B.S. (1996). Strategic alliances and interfirm knowledge transfer. *Strategic Management Journal*, *17*(Special Issue), 77–91.
28. Mukherjee A., & Sastry T. (1996). Automotive industry in emerging economies: A comparison of South Korea, Brazil, China and India. *Economic and Political Weekly*, *31*(48).
29. Mukherjee A., & Sastry T. (2002). Recent developments and future prospects in the Indian automotive industry.
30. Nagraj R. (2000). Indian economy since virtuous growth 1980 or polarisation? *Economic and Political Weekly*, *35*(32), 2831–2839.
31. *National Road Transport Policy*. (2005) (pp. 1–34).
32. Nisith Desai Associates. (2011). *Joint Ventures in India* (pp. 1–53).
33. Parkhe A. (1993). Strategic alliance structuring: a game theoretic and transaction cost examination of interfirm cooperation. *Academy of Management Journal*, *36*(4), 794–829.
34. Raja K.K., & Rao D.P.R. (2008). *Indian Automobile Industry* (pp. 3–10).
35. Ranganathan K.V.K. (1987). Indian Joint Ventures Abroad. *Indian Institute of Public Administration, Corporate Studies Group, 1987*, *Working Paper*, 46.
36. Rao C.B. (1993). Configuration and investments strategic Indian automobile industry. *Economic & Political Weekly*, *28*(8), 20–27.
37. Reuer J. (2004). *Strategic Alliances: Theory and Evidence*.
38. Santini D., & Poyer D. (2008). Motor vehicle output and GDP, 1968–2007. *Atlantic Economic Journal*, *36*, 483–491.
39. Spekman R.E., Forbes T.M., & Isabella L. A. (1998). Alliance management: A view from the past and a look to the future. *Journal of Management Studies*, *35*(6), 747–772.
40. Srinivasan B., & Koza M. (1993). Information Asymmetry, Market Failure and Joint-Ventures. *Journal of Economic Behavior and Organization*, *20*(1), 99–117.
41. Stuart T. E. (2000). Interorganizational alliances and the performance of firms: a study of growth and innovation rates in a high-technology industry. *Strategic Management Journal VO - 21*(8), 791.
42. Tsang E.W.K. (2000). Transaction cost and resource-based explanations of joint ventures: A comparison and synthesis. *Organization Studies*, *21*(1), 215–242.
43. Williamson O. (1979). Transaction-cost economics: The governance of contractual relations. *Journal of Law and Economics*.