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### Abstract

Strategic Alliance is a growth vehicle to boost competitiveness. Both Inter industry and Intra industry alliance have become a common strategy at the game field of business. This study aims to understand the motive of a Small and Medium Scale Enterprise (SME) behind alliance. The paper tries to capture intra-industry similarities and differences of factors that affect these motives. Through a study of four different Pharmaceutical clusters, the paper empirically explores motives of alliance in SMEs and suggests that not all motives remain the same within an industry and also identifies organizational factors that affect differences in choice of motive.

**Key words:** Alliances; Inter organizational; SMEs; Motives; Clusters



### Introduction

Formation of strategic alliance is not a new phenomenon (Mowery et al, 1996), rather they have been important for businesses world over (Harrigan, 1986). The rate of formation of alliances has increased rapidly over the last three decades along with a shift in the motives of alliance.

Strategic alliance has been defined differently by different researchers. A relatively precise definition was given by Sporeleder (1993), who defined strategic alliances as interorganizational cooperative arrangements to accomplish a mutually beneficial objective. Alliances form the base of an organization's technological strategy (Duysters et al., 1999).

Moreover, alliances become very relevant for SMEs. The flexibility of SMEs over relatively larger firms allows them to utilize external networks more efficiently. Largely, most of the categories of barriers faced by SMEs are overcome by the incisive use of coalitions (Ahern 1993). SMEs benefit from alliances because usually, the larger organizations aim to leverage flexibility of SMEs and hence are open to forming alliances with SMEs. Mytelka (1991) also indicated that a firm's competitiveness can be enhanced by its external network.

The extant literature of alliances is well documented. But a significant part of literature encompasses issues related to alliances formed by large scale corporations. The research on alliance from SMEs perspective and their motives for alliance is limited. While motives of SMEs for alliance may vary across different industries, there is scanty research on motives of SMEs within Pharmaceutical industry.

In the present paper, the authors report the motives of alliance for SMEs from the Indian Pharmaceutical industry. Drawn upon empirical data from 174 SMEs in Gujarat, India, the paper also investigates whether SMEs in a geographically concentrated areas exhibit similarities or differences in motives based on

organization characteristics.

## **Literature review**

### **Alliances**

In her seminal work on inter-organizational alliances, Gray (1985) defines alliance as the agglomeration of resources by two or more organizations in order to solve issues which neither organization can solve individually.

Selin and Chavez (1995) defined alliance as “An approach to problem resolution by sharing of power, and where collective responsibility is taken by stakeholders for their actions and results of those actions.”

### **Benefits of Alliance**

Gray (1989) identified various situations where alliance can help organizations achieve more advantages over the traditional decision-making approaches. These include ill-defined problems, insufficient current processes and systems for addressing the problems, when stakeholders possess different levels of skills and expertise; presence of technical complexity and uncertainty associated with problem at hand, etc.

### **Alliance Motives**

Organizations may have several motives of forming an alliance. Townsend (2003) presented several motives associated with international alliances. Financial motives have a broad perspective and include monetary performance and economic stability (Ellram and Cooper, 1990). The primary financial motive is that of cost reduction (Rackham et al., 1996). Brouthers et al. (1995) argue about the primary motive of alliance formation which is to overcome resource inadequacy. Due to such inherent lack of resources, organizations are unable to gain competitive advantages. Hence, they prefer to form alliance with partners from whom they can get access to new knowhows (Vyas et al., 1995). Moreover, as businesses rely on instantaneous exchange of information, it is difficult for individual organizations to remain updated on technological advancements. Hence, a common motive for many organizations is to partner with a firm that is at the forefront of advancements in information knowhow (McFarlan and Nolan, 1995). Additionally, some organizations have an objective to generate knowhow by partnering with a firm which has expertise in research and development (Ellram and Cooper, 1990; Morgan and Monczka, 1995).

Scmitz Whipple and Gentry (2000) discuss about gaining competitive advantage as a motive of collaboration. Competitive advantage is achieved when partners are able to create synergies and use each partner's unique capabilities (Frazier et al., 1988).

Inter organization alliances have become a common vehicle to improve organizational competitiveness. According to Hoffmann and Schlosser (2001), alliance helps to reduce the difference between the organization's current resources and its long term objectives.

Hence, this discussion on motives of collaboration creates an opportunity to scientifically investigate the key motives from SMEs perspective, especially in India.

## **Research Question and Hypotheses**

The following research questions have been derived for this study:

RQ1: What are the motives of alliance for SMEs of the Pharmaceutical industry?

RQ2: Is there a similarity or difference in SME's motives of alliance based on organizational characteristics?

Here, firmographics such as Age of Organization, Type of Organization, Number of Decision Makers, etc. have been considered.

### Sampling and Instrument

Data for this study was taken from SMEs of pharmaceutical industry situated in clusters in the state of Gujarat, India. Majority of pharmaceutical SMEs are located in the four city-based clusters of Gujarat and hence SMEs that fall under one of these clusters are only part of this study. The motive variables for the study were taken from extensive literature review. In order to assess whether there are pharmaceutical industry specific motives of collaboration, the authors also collected qualitative data from 8 pharmaceutical companies in Ahmedabad. The companies were first approached with an email, followed by a telephonic appointment soliciting an interview for the research purpose. Subsequently, an interview date was fixed at their respective offices at the time of their convenience. The time of each interview lasted between 45 minutes to 60 minutes on an average. An open ended discussion guideline was prepared with assisting probing questions. All interviews were conducted in quiet rooms in the office premises of the companies. Based on these inputs and from literature, the different motives of alliance formation were drawn out and a structured questionnaire was designed. This instrument was used to gather data from members of the senior management of the SME's of Pharmaceutical companies in four Pharmaceutical city based clusters in Gujarat, namely, Ahmedabad, Vadodara, Ankleshwar and Vapi.

The survey was administered in person as well as through email. Due diligence was observed to avoid duplication. The questionnaire enlisted different objectives of alliance as generated from qualitative inputs and that available in literature. Responses were recorded on a 7-point Likert scale with a range from 1 = 'Not at all important' to 7 – 'Extremely important'. Table 1 provides the dimensions of motives of alliance to which senior management personnel of Pharmaceutical SMEs responded.

**Table 1. Survey Items Used to Identify Motives of Alliance**

Motive	Source
For joint procurement	Wang et al. (2005)
For joint production	Poocharoen et al. (2015)
For joint marketing	Franco (2003)
To overcome lack of resources	Franco (2003)
For sharing business risk	Franco (2003)
To grow sales in existing market	Developed by researcher*
To gain entry in new therapeutic segment	Developed by researcher*
To gain entry in new geographic market	Franco (2003)
To exercise power or control over a relatively smaller organization	Cimon (2004)
To enhance reputation	Franco (2003)
For lobbying	Kishna et al. (2017)
For knowledge sharing and learning	Franco (2003)
For developing a new product / technology	Hyder and Abraha (2004)
To fight competition or compete with bigger companies	Lohrke et al. (2006)

According to the number of organizations registered with Indian Drug Manufacturer's Association (IDMA), there are a total of about 999 units in Ahmedabad, Ankleshwar, Vadodara and Vapi districts of Gujarat. Hoffman and Schlosser (2001), from a database of 8,000 Austrian companies, narrowed down to 1,000 randomly chosen SMEs in Austria. With a response rate of 16.4 per cent (164 usable questionnaires), the authors carried out their investigation.

Similarly, based on available database from IDMA, 500 SMEs were randomly selected from across the four clusters. Email was sent to 114 small- and medium sized SMEs. Due to a low response rate of appointment on email, the researcher directly called a total of 90 SMEs for an appointment out of which 77 companies responded positively for an interview. The interviews were conducted in person as well as via telephone.

Following compilation of data and data cleaning, out of a total of 177 respondents, 3 respondents were eliminated due to incomplete responses. The data was cleaned and 3 unique questionnaires with missing responses were recorded as missing data

Hence, the final sample size for the study is 174 companies.

### Data Analysis

Exploratory factor analysis was conducted to identify motives of alliance. Initially, the factorability of 14 items of objectives for alliance was examined. The Kaiser-Meyer-Olkin measure of sampling adequacy was .83 above the common the commonly recommended value of .6 and Bartlett's test of sphericity was significant ( $\chi^2 = 799.85, p < .05$ )

Principal components analysis (PCA) was used as method of extraction because the primary purpose was to identify and compute composite scores for the factors underlying the objective of alliance. The rotation method was examined using varimax and Kaiser normalization rotations of the factor loading matrix. The four factor solution, which explained 61% of the variance, was preferred.

Internal consistencies for the scale was examined using Cronbach's alpha. The alpha was 0.857 for 14 items. Elimination of items did not result in any significant increases in alpha for the scale.

**Table 2. Rotated Component Matrixa**

	Component			
	1	2	3	4
For joint procurement	.478	.420	.034	.105
For joint production	.469	.322	-.140	.205
For joint marketing	.251	.686	.286	-.102
To overcome lack of resources	.585	.304	.258	.046
For sharing business risk	.165	.698	.102	.316
To grow sales in the existing Market	.239	.699	.265	-.125
To gain entry in a new therapeutic segment	.027	.192	.833	.112
To gain entry in a new geographic market	.247	.137	.828	.049
To exercise power or control over a relatively smaller firm	.085	.535	-.015	.655

	<b>Component</b>			
	1	2	3	4
To enhance reputation by collaborating with a prominent Pharmaceutical company	.599	.230	.274	.275
For lobbying	.246	-.141	.189	.826
For knowledge sharing and learning	.804	.096	-.014	.085
For developing a new technology or product	.781	.070	.250	.041
To withstand competition	.503	.302	.385	.152

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.a

Rotation converged in 8 iterations.

The four factors formed as follows:

Items 4 (resources), 10 (reputation), 12 (learning), 13 (new product or tech), 14 (competition): Innovation and Strategy

Items 3, 5, 6: Cost Reduction

Items 7,8: Market Entry

Items 9, 11: Power and Lobbying

**Table 3. Motives of Alliance**

<b>Factor No.</b>	<b>Name</b>
1.	Innovation and Strategy
2.	Cost Reduction
3.	Market Entry
4.	Power and Lobbying

Further, most of the studies on motives of alliance have been generic, i.e. non-industry specific. The authors aim to assess whether there are intra industry similarities or differences when it comes to these motives for alliance with demographic and organization specific factors.

Based on a study by Venkatesh, Brown, & Bala (2013), organization characteristics such as cluster, age of organization, type of organization and number of decision makers were taken as independent variable and the four factors generated through Exploratory Factor Analysis were taken as dependent variable. We then compared the means of the groups on each motive as the dependent variable.

One-way ANOVA were conducted to compare the effect of the following on the above defined motives of alliance:

Geographic Cluster

Age of Organization

Type of Organization

Number of Decision Makers

The important results are mentioned below.

Hypothesis 1:

Ho : There is no significant difference between motives of alliance in SMEs across clusters

H1: There is a significant difference between motives of alliance in SMEs across clusters

ANOVA showed the effect of geographic clusters on Power and Lobbying Motive of Alliance was significant,  $F(3, 170) = 4.697, p = 0.004$

**Table 4. ANOVA table on Clusters and Power and Lobbying**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Between Groups	134.104	3	44.701	4.697	.004
Within Groups	1618.011	170	9.518		
Total	1752.115	173			

Hence, significant difference exists between the clusters with respect to Power and Lobbying as a motive of alliance.

Hypothesis 2:

Ho : There is no significant difference between motives of alliance in SMEs across age of organizations

H2: There is a significant difference between motives of alliance in SMEs across age of organizations

ANOVA showed the effect of Age of Organizations on Power and Lobbying Motive of Alliance was significant,  $F(4, 169) = 2.632, p = 0.036$

**Table 5. ANOVA table on Age of Organizations and Power and Lobbying**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Between Groups	102.760	4	25.690	2.632	.036
Within Groups	1649.355	169	9.759		
Total	1752.115	173			

Hence, significant difference exists across the different ages of organizations with respect to Power and Lobbying as a motive of alliance

Hypothesis 3:

Ho : There is no significant difference between motives of alliance in SMEs across types of organizations

H3 : There is a significant difference between motives of alliance in SMEs across types of organizations

An analysis of variance showed the effect of Type of Organizations on Cost Reduction Motive of Alliance was significant,  $F(3, 170) = 3.287, p = 0.022$

**Table 6. ANOVA table on Type of Organization and Cost Reduction**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Between Groups	96.610	3	32.203	3.287	.022
Within Groups	1665.367	170	9.796		
Total	1761.977	173			

Hence, significant difference exists across the different types of organizations with respect to Cost Reduction as a motive of alliance

Hypothesis 4:

Ho : There is no significant difference between motives of alliance in SMEs across different numbers of decision makers in SMEs

H4 : There is a significant difference between motives of alliance in SMEs across different numbers of decision makers in SMEs

An analysis of variance showed the effect of Number of Decision Makers on Cost Reduction Motive of Alliance was significant,  $F(4, 169) = 4.45, p = 0.002$

**Table 7. ANOVA table on No. of Decision Makers and Power and Lobbying**

	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
Between Groups	166.961	4	41.740	4.450	.002
Within Groups	1585.154	169	9.380		
Total	1752.115	173			

Hence, a significant difference exists across the different number of decision makers with respect to Power and Lobbying as a motive of alliance

## **Discussion and Conclusion**

Overall, the findings of this study indicate the primary motives of alliance for a particular industry (Pharmaceutical) where the number of organizations are primarily of the scale of Small and Medium Enterprises. Accordingly, Gujarat based pharmaceutical SMEs tend to have four primary motives of alliance, namely, Innovation and Growth; Cost Reduction; Market Entry and Power & Lobbying. This is in line with the motives of alliance that are available in literature (Franco, 2003).

Moreover, within one particular industry itself, it may be possible that significance on alliance motive may vary across clusters. As can be noted from the results, the importance of Power and Lobbying as an alliance motive varies between clusters. One explanation is that number of organizations within a cluster vary and hence it depends on cluster organizations' composition. Another explanation of the difference amongst cluster organizations is perceived risk from competition. If the SMEs perceive a threat then they may be willing to partner with competitors to ward off the threat.

The analysis also reveals that the importance of Power & Lobbying is significantly different and varies

with respect to age of organization. One explanation for this is that younger organizations may be tempted to engage in alliance to ward off competition as discussed earlier.

The authors also found out that the importance of Cost Reduction as a motive of alliance is significantly different and varies with type of organization. It is possible that privately held as well public held companies may be more open to the idea of alliance since organization ownership is relatively more dispersed as compared to sole proprietorship or limited liability companies.

Lastly, the paper also reveals that importance of Power & Lobbying is significantly difference and varies with number of decision makers in an organization. A possible explanation as observed from the means plot is that agreement on decision to collaborate for Power & Lobbying becomes swift in case of few (1 or 2) or slightly higher number (4-5) number of decision makers in a firm.

### **Limitations**

This study's importance is essentially rooted in its purpose: to study alliance from the perspective of SMEs of one industry. However, the snapshot of alliance motives that this study provides does not capture adaptive behavior that organizations may display over time. Another limitation of this study is the selection bias due to a truncated sample. Moreover, the sample organizations have not been filtered or classified into groups such as 'Organizations with alliance experience' and 'Organizations without alliance experience'.

### **Further Research**

As an offshoot of the current paper, the overarching issue of low alliance by SMEs needs to be investigated from the point of view of an individual. Since most of the SMEs are family owned, the decision making authority is usually centralized in one or very few individuals. Hence, the role of the individual's personality and organization's personality may become seamless. This calls for alliance researchers to study the role of individual entrepreneur / family business head and investigate its impact on organizations decision to collaborate.

It is advisable in subsequent empirical research to assess not only the 14 items validated in the present study but also a larger pool of items using multiple scales. It is certainly possible that the 14-items of alliance motive scale may not be the most applicable in a given industrial setting.

Researchers and practitioners alike can benefit from this study. Practitioners could benefit through a clearer understanding of alliance motives.



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