

Impact of Relationship value dimensions on Purchase Enhancement in B-to-B Markets - An Analysis from the Supplier's Perspective in the Automotive Industry

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Abstract

There is considerable talk about India becoming an automotive component-manufacturing hub in the near future. Today, the auto component industry is a very vibrant industry of the Indian economy. It plays a crucial role in the automobile sector. Globally, the auto industry is primarily into outsourcing, and the trend is reflected in India too, which has led to proliferation of ancillary units in India. The prospect of exports from India is bright on account of its cost advantage. However, firms face tough competition from Malaysia, Taiwan and other south Asian countries, which have cost advantages on the basis of labour cost, productivity, larger volumes and after-sales service (Dr KMomaya et al., 2005).

The industry is scale sensitive and hence, larger volumes are needed for cost effectiveness and improving quality. The industry is also capital and labour intensive. The players should set up

capabilities, adopt new technologies and deliver quality standards to meet the global requirements of components or parts.

Enhanced purchases from automotive OEMs (Original Equipment Manufacturers) are an important aspect in which the automotive OE supplier will be interested. Purchase enhancements are dependent on the tangible and intangible value in the form of benefits received from the supplier.

This paper is an attempt to understand the relationship value dimensions, which affect purchase enhancements. The research is based on the buyer's perspective. A survey of automotive manufacturers based in southern India was selected for the study.

Keywords: OEM, OE Supplier, Relationship Value

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Introduction

Automotive Component Manufacturers Association (ACMA 2003) classifies the auto ancillary industry into six major product segments, namely engine parts (32.7%), electrical parts (6.7%), transmission and steering (20.2%), suspension and braking (16.8%), equipment (5.9%) and others (17.7%). Transmission and steering products include gears, steering gears and systems, wheels, clutch plates and discs.

The requirement of the automobile industry is met through domestic auto ancillary units, but some special items are imported. The domestic auto ancillary industry contributes 87% of the automobile sector's needs, while the rest is imported. The demand for ancillaries arises from the OEM market, replacement market and export market. Approximately 80% of the industry output originates from the organized industry leaving a 20% share to the unorganized sectors, which has 10-12 times more players.

The automotive component manufacturing industry is capital intensive. At present, all the major global automotive manufacturers have their base in India either as a wholly owned subsidiary or through joint venture with an Indian partner. For all these OEMs, indigenous sourcing is preferred over imports. Domestic component manufacturers have to upgrade their facilities to meet the international standards. Gone are the days when they were supplying only to a few OEMs such as Hindustan Motors, Premier Automobiles or Maruti Udyog Ltd. The new players in the market such as Toyota or Hyundai expect their OE supplier to meet very high technical standards. To meet these standards, the domestic OE supplier has to invest in R&D and production facilities. The supplier, on the other hand, expects purchase enhancements over a period of time. What makes an OEM enhance purchases is definitely an interesting subject for the OE supplier. The OE supplier can become more

competitive by understanding these dimensions of buyers' expectations and formulate its relationship marketing strategies accordingly.

This research aims to understand the buyer-supplier relationships in the Indian automotive industry in Business-to-Business markets. Given the present scenario in the automotive industry, the suppliers have to become more competitive in terms of quality and technology. The tangible and intangible value created by the supplier plays a dominant role. Most of the research, as is evident from the literature survey, concentrates mainly on the intangible benefits such as trust, cooperation, satisfaction, loyalty, dependence credibility and shared values. Tangible benefits of the relationship such as product benefits, service benefits, know-how benefits, time to market benefits and economic benefits provide a lot of scope for further research in the Indian automotive industry. This research is expected to provide significant insights to an automotive OE supplier in particular and an industrial marketer in general to frame his customer relationship management strategies effectively. The objectives of the research include 'to understand the determinants of relationship value, which affects enhanced purchases from the customers.'

Literature Review

The subject of relationship dynamics has received attention from many scholars and practitioners from time to time. Business marketing and channel management literature has paid attention to understand the benefits of building closer buyer-seller relationships. An overview of relationship dynamics concerned to relationship value dimensions over a time period from 1992 to 2005 is discussed below.

Literature Review on Relationship Value Dimensions

Anderson et al., (1993) define value in business

markets as “the perceived worth in monetary units of the set of economic, technical, service and social benefits received by a customer firm in exchange for the price paid for a product offering, taking into consideration the available alternate supplier's offerings and prices.” Their definition represents one of the first efforts to identify and categorize the relational dimensions of the value construct, namely social and service benefits. Price is considered as the sacrifice dimension. No empirical foundation is observed. Wilson and Jantaria (1995) have examined the creation of value in industrial buyer-supplier relationships. Based on conceptual research, they have developed a three-dimensional categorization of relationship value, economic, strategic and behavioural value. Though they expect substantial difficulties in empirical assessment of the overall value proposition as perceived by the customers in a business relationship, they conclude that relationship value “is a positive concept which cannot be ignored.”

Ravald and Gronroos (1996) have developed a generally applicable framework of value perception in exchange relationships. They point out that the trade-off between benefits and sacrifices in long-term oriented exchange is not restricted to the single episode level. Rather value assessments should take into account both episode and relationship benefits and sacrifices. The major framework of this is to “bring into the picture the costs and benefits associated with the relationship itself as determinants of the overall value perceived by the customer.” Gronroos (1997) distinguish between two benefits and two sacrifice dimensions. “Customer perceived value could be described as core solution plus additional services divided by price and relationship costs.” No empirical foundation was observed.

Gwinner (1998) examined the relationship value dimensions in the context of the consumer service industry. He has identified three categories of

relational benefits from the consumer's perspective. He labels them as confidence, social and special treatment benefits. However, his research focuses on the benefits of service relationships, ignoring any sacrifice dimensions. Moreover, in an attempt to conceptualize those benefits that can be attributed to the relationship itself, he excludes the value of the core service from his benefits categorization.

Lapierre (2000) assessed data collected among purchasing executives in the IT and finance industry. He identifies 13 drivers of relationship value and groups them into three benefit dimensions (product, service and relationship benefits) as well as two sacrifice dimensions (price and relationship benefits). As data collection was restricted to two particular industries, the generalisability of the findings remains an unresolved issue. Besides Lapierre includes a number of marketing variables (for example, trust and solidarity) in his conceptualization of relationship value that are typically treated as distinct constructs. This may lead to a conceptual overload and jeopardize the discriminate validity of the relationship value construct.

Joseph. P Canon and Christian Homburg (2001) have examined buyer-supplier relationships and customer firm costs in industrial markets. A model was developed to test the factors affecting the buyer's firm costs and intention to expand the supplier's share of business. The factors considered are supplier communications, supplier accommodation of the customer, characteristics of the supplier firm and offering, and customer cost management. The test indicates the factors, which reduce the total cost of purchase to the customer. Total cost of purchase includes direct product cost, acquisition cost and operation cost, and this acts as an economic value to the customer.

Amy L Parson (2002) has examined the “buyer-seller relationship quality”. Interpersonal variables and aspects of relationship variables are analyzed. Interpersonal variables include handled risk, relational selling behaviour, mutual disclosure, communication, customer orientation, domain expertise and similarity /shared value. Aspects of the relationship variables include commitment, mutual goals and relationship benefits. It was observed that handled risks, communication / customer orientation and mutual goals/benefits are significant relationship quality variables.

Wolfgang Ulaga and Andres Eggert (2003) have examined the theoretical foundations of relationship value and identified seven underlying dimensions. First order dimensions of relationship value include product benefits, service benefits and social benefits; know how benefits and time to market benefits. Second order dimensions of relationship value include sacrifices, i.e. process costs and price. It was suggested that relationship value should be conceptualized as a formative, multi-dimensional, higher order construct. This conceptualization was tested using data from a cross-sectional survey among some 200 purchasing managers from manufacturing companies. The scale development process is presented and directions for future research are discussed.

Walter A and Ritter T (2003) have discussed that suppliers not only maintain relationships with customers for the customer's benefits, but also for their own sake. Various important value-creating functions of business relationships with customers have been identified in the past. However, the preconditions of this inter-organization value-creation have not been addressed in depth. Drawing upon a database of over 200 customer-supplier relationships, adaptations, trust and commitment are identified as key drivers for value creation. The results of this study have considerable consequences for the management

of inter-organizational relationships and networks regarding the process of how value could be created in business markets.

Hibbard J.D et al. (2003) have discussed the emerging focus on relationships as strategic assets, which have encouraged scholars to re-examine their potential for creating value for the firm and its shareholders. This article resolves some of the ambiguity regarding the way firms can understand and measure the value of a business relationship as an asset. Using the value based construct to assist in conceptualizing the worth of a business relationship, the article reviews several approaches available to marketers for comprehending value in a business-marketing context and delineates when and why specific value approaches and matrices can be most appropriately applied. Implications for research and practice are discussed with the goal of providing initial guidance to managers on measuring and managing strategic relationships as assets.

Eggert A and Ulaga W (2002) have examined how value interacts with related marketing constructs. Researchers have called for an investigation of the inter-relationship between customer satisfaction and customer value to reduce the ambiguities surrounding both concepts. This research investigates whether customer value and satisfaction represent two theoretically and empirically distinct concepts. It also addresses whether value is a better predictor of behavioural outcomes than satisfaction in business marketing context.

Tao Gao et al. (2005) have examined that perceptions of both relational benefits and relational costs significantly influence organizational buyers' perceived value. It was found that these effects remained significant when compared with those of perceived episodic benefits and costs. This research underscores the need for a relational perspective of customer perceived value, whereby both episodic and

relational antecedents of value should be accounted for and influenced by elements of marketing mix.

Brain Squire et al. (2009) examine the effect of relational factors on knowledge transfer within strategic buyer–supplier exchange. Four important relational properties - cooperation, trust, relationship duration and supplier performance - are analyzed. The study supports the importance of relational factors on knowledge transfer.

Lisa K Scheer et al. (2010) examine whether suppliers' capabilities impact OEM customers' dependence on the supplier and thereby generate customer loyalty. Three supplier capabilities, two dependence dimensions and three aspects of customer loyalty are analyzed. Core offering capability, operations capability and communications capability are analyzed. Their impact on customers benefit based dependence and cost based dependence is analyzed.

Scott B Friend and others (2011) discuss the customer defection model. Buyer's propensity to stop purchasing from a supplier within multi-source buyer-seller relationships is discussed in this research paper.

Anand Nair and others (2011) propose an analytical approach combined with a behavioural experiment for a joint examination of the competitive and cooperative relationship between a buyer and a supplier. The article considers the scenario in which the buyer and supplier, using strategic capabilities, may increase their relative bargaining power.

Steven S. Lui and Hang-yue Ngo (2012) discuss that a buyer may deliberately develop a long term orientation as a governance mechanism to deal with risks arising from exchange hazards and also refuse the opportunistic behaviour of a supplier.

Quiong Wang and others (2013) discuss that fostering

and maintaining buyer-supplier relationships is a fundamental premise of many channel initiatives. Indeed these relationships may culminate in significant performance enhancement and competitive advantage. Yet these relationships may also result in competitively harmful events such as partner opportunism. This research examines via a sample of 400 manufacturing firms in China, how the interplay between drivers (relationship specific investments and behavioural uncertainty) and deterrents of opportunism affect partner opportunism in buyer supplier exchanges.

Elena Revilla and others (2013) develop taxonomy of buyer-supplier relationships based on the supplier's absorptive capacity. Absorptive capacity encompasses three learning processes: exploration, assimilation and exploitation. The aim was to develop taxonomy that can predict a firm's performance with regard to innovation and operational efficiency. The research did not find empirical support for the relationship between absorptive capacity reinforcement and performance.

Kumar Rakesh Ranjan and Stuart Read (2014) discuss the topic of value co-creation (VCC). VCC highlights an equivocal understanding of its conceptual boundaries and empirical constituents. The search of the diverse scholarly literature on VCC identified 149 papers from which authors extract two.

Primary conceptual VCC dimensions of co-production and value-in-use are discussed in this research paper. Though the combination of these two distinct dimensions is theoretically necessary to describe VCC, 79% of the studies in the dataset consider only one or the other. Such underlying theoretical ambiguity may explain conflicting results in earlier studies and motivates the author's effort to offer four contributions to the literature.

Hui Feng, Neil A. Morgan and Lopo L. Rego (2015) empirically investigate marketing department power in U.S. firms throughout 1993–2008 and assess its impact on firm performance. Using a new objective measure of marketing department power and a cross industry sample of 612 public firms in the United States, the results reveal that, in general, marketing department power increased during this time period. Furthermore, the analyses show that a powerful marketing department enhances firms' longer-term future total shareholder returns beyond its positive effect on firms' short-term return on assets (ROA).

Colleen M. Harmeling, Robert W. Palmatier, Mark B. Houston, Mark J. Arnold and Stephen A. Samaha (2015) discuss that exchange events are fundamental building blocks of business relationships and essential to relationship development. However, some events contribute to incremental relationship development, as predicted by life cycle theories, whereas others spark “turning points” with dramatic impacts on the relationship. Such transformational relationship events are encountered between exchange partners that significantly disconfirm relational expectations (positively or negatively); they result in dramatic, discontinuous change to the relationship's trajectory and often reformulate the relationship itself.

Christian Homburg, Martin Schwemmler and Christina Kuehnl (2015) discuss that product design is a source of competitive advantage for companies and is an important driver of company performance. Drawing on extensive literature review and consumer interviews, the authors define product design and its dimensions. Using data from three samples (6,418 U.S. consumers and 1,083 and 583 European consumers), the authors develop and validate a new scale to measure product design along the dimensions of aesthetics, functionality and symbolism. In addition, they investigate the impact of these design dimensions on purchase intention, word-of-mouth and willingness

to pay. The results indicate that the design dimensions positively influence willingness to pay and also have a positive effect on purchase intention and word-of-mouth, both directly and indirectly, through brand attitude.

Jasmin Baumann and Kenneth Le Meunier-FitzHugh (2015) examine how value co-creation is engendered in transactional and relational interaction in a professional business-to-consumer (B2C) service industry through exploratory interviews with six organizations' sales personnel and their customers. A dyadic model and propositions conceptualize the process of value co-creation at the interpersonal level. It was found that the customer and salesperson take on very distinct roles in the co-creative interaction, which is driven by characteristics previously unidentified in the context of value co-creation, such as a commitment to achieving common goals, establishing equitable dialogue and sharing interests.

Pezhman Ghadimi and others (2016) discuss the procurement focused on the buyer-supplier dyad. A systematic content analysis is done in order to protect the state-of-the-art in this domain.

Doreen Pick and Martin Eisend (2016) discuss that relationship marketing effectiveness varies across different markets. The authors develop and test a theoretical framework that explains how culture moderates the relationship between perceived switching costs and key consequences. The findings of a meta-analysis based on 451 effect sizes collected in 25 countries show that similar components that refer to a match between the value essence of Hofstede's cultural dimensions and the motivators that steer particular consequences explain how individualism, power distance, uncertainty avoidance and masculinity moderate the impact of switching costs on word-of-mouth of customers and loyalty types.

Chinho Lin and Watcharee Lekhawipat (2016) examine the moderating effects of the level of online shopping habit on the links between adjusted expectations and their antecedents. The study proposes a theoretical model by integrating the expectancy disconfirmation model and customer value dimensions to compare the factors affecting adjusted expectations between the low and high online shopping habit. The results indicate that the effects of expectancy disconfirmation on adjusted expectations are stronger for the high-habit group than for the low-habit group.

Kristina K. Lindsey Hall, Thomas L. Baker, Martha C. Andrews, Tammy G. Hunt, and Adam A. Rapp (2016), Lindsey Hall, Baker, Andrews, Hunt and Rapp (2016), drawing from a social identity perspective of the organizational identification theory, propose a model in which product and service quality serve as antecedents to frontline employee identification with the organization, which, in turn, is proposed to be positively related to job satisfaction, commitment and customer orientation. The model also proposes leader-member exchange (LMX), which refers to the different types of relationships that leaders (i.e., supervisors) develop with each of their subordinates (i.e., employees), as a boundary condition for the associated outcomes. The model was tested using data collected from 265 employees of a business-to-business service industry firm. The overall model was supported. All hypotheses were supported, except for the moderating effects of LMX on the relationship between organizational identification and job satisfaction.

Stephanie M Mangus and others (2017) discuss the moral effect theory and literature on emotional content to examine the effect of sales person gratitude and customer gratitude on downstream relationship outcomes. The findings of this work suggest that a sales person's pro-social behaviour accounts for positive association between the sales person's

gratitude and customer's gratitude, which is an essential requirement for long term commitments.

Jannik Meyners, Christian Barrot, Jan U. Becker and Jacob Goldenberg (2017) discuss that geographic proximity has become increasingly relevant due to the growing number of marketing services that use consumers' geographic locations, thus increasing the importance of gaining insights from this information. In five studies (both field and experimental), the authors analyze the effect of geographic proximity on social influence and demonstrate that not only social proximity, but also perceived homophily can trigger social influence. They find that this effect holds under alternative representations of geographic distance and is confirmed for a range of different services and even for physical goods.

Yan Liu, Krista J. Li, Haipeng (Allan) Chen, & Subramanian Balachander (2017) discuss that a product's physical appearance is difficult to quantify and the impact of product appearance on demand has rarely been studied using market data. The authors adopt a recently developed morphing technique to measure a product's aesthetic design and investigate its effect on consumer preference. Drawing upon categorization theory, the authors consider the effects of three dimensions of aesthetic design—segment prototypicality (SP), brand consistency (BC) and cross-segment mimicry (CSM)—and their moderating effects on marketing mix effectiveness in a unified framework.

V Kumar (2018) analyzes the economic value of the customer's relationship with the firm. This study approaches the topic of customer value for measuring, managing and maximizing customer contributions by proposing a customer valuation theory (CVT) based on economic principles that conceptualize the generation of value from customers to firms. The author reviews the established economic theories for valuing investor

assets (e.g., stocks) and draws a comparison to valuing customer contributions. Furthermore, the author recognizes the differences in the guiding principles between valuing stocks and valuing customers in proposing CVT.

Research Gaps

Most of the research pertaining to different conceptual models concentrates mainly on the intangible benefits of relationship like trust, co-operation, satisfaction, loyalty, dependence, credibility and shared values. Tangible benefits of relationship like product benefits, service benefits, know-how benefits and time-to-market benefits provide lot of scope for further research in the Indian context. Further, the economic benefits in terms of direct product costs, acquisition costs and operation costs creates enhanced value to the customer along with other benefits. There is little research, which focuses on these dimensions.

Value is created between the customers and the suppliers. As far as the customer is concerned, it is the net benefit derived from the supplier. The supplier, on the other hand, seeks long-term commitments from the customers and also to enhance net purchase value. It is evident from the review of literature that there are few relevant questions, which need further investigation such as,

- What influences purchase enhancements from the buyers?
- What are the significant dimensions of relationship value which influence purchase enhancements?

Theory Development and Definitions

OEM: This refers to original equipment manufacturers. In the context of our study, OEMs refer to automotive vehicle manufactures.

OE Suppliers: This refers to automotive component manufacturers who supply to original equipment

manufacturers only.

Relationship Value

The exchange view of marketing is based on the concept of value. Market exchanges (Hunt, Shelby. D, 1991) take place because all parties involved expect to be better off after the exchange. The higher the net value expected or received, the stronger the motivation to commence and sustain an exchange process respectively. Value has always “been the fundamental basis for all marketing activity”, although it did not attract much explicit attention until it became a watchword recently.

Within the exchange view of marketing, value has been investigated from two complementary perspectives. Research on “value to customers” focuses on the net value a customer receives in a market exchange. Research on “value-of-the customer” captures the seller's perspective of value realized through market exchange with customers. While the literature contains a variety of definitions stressing aspects of the value concept, four recurring characteristics can be identified: (1) Customer value is a subjective concept. (2) It is conceptualized as a trade off between benefits and sacrifices. (3) Benefits and sacrifices can be multifaceted.

The academic roots of the relationship value construct lie in business and service marketing. The perceived worth in monetary units of the set of economic, technical, service, and social benefits received by a customer firm in exchange for the price paid for a product offering, taking into consideration the available alternate supplies define the relationship value created in the exchange process.

Dimensions of Relationship Value

Product Benefits

Above all, manufacturers engage in relationships with

their industrial suppliers to source products for their transformation process. Therefore, the supplier's product offering is at the core of relationship value (Homburg Christian and Bettina Rudolf, 2001). Prior research reflected this basic tenet in different terms such as “technical and economic benefits”, “Economic value” and “Core solutions”. Previous research on customer value in business markets has shown that purchasing managers focus on product performance and reliability when assessing a supplier's offerings. In line with the former research, we regard product benefits as a key dimension in relationship value.

Service Benefits

In most business markets, manufacturers search for complete solutions rather than mere products. For example, a customer of a machine tool acquires not only the equipment, but will also need services such as installation and training, warranties, maintenance and repair contracts. In business markets, suppliers typically provide a blend of tangible products and a range of accompanying service elements. Especially in highly competitive business markets, these service components play a crucial role in differentiating a supplier's offering and significantly influence the customer's perception. Researchers have incorporated the service dimension in their conceptualizations of relationship value; for example, “service benefits” as part of the bundle of benefits a company receives in exchange for the price it pays for a market offering. Similarly “service related benefits” act as a key driver of customer-perceived value in industrial markets. In this research, we conceptualize service quality as a second dimension of relationship value.

Know-How Benefits

In many industries, manufacturers seek to develop supplier relationships that go beyond the exchange of products and services. These companies are turning to

their suppliers to help them achieve a stronger competitive position.

Research (Ganesan & Shanker, 1994) suggests that buyer-supplier relationships represent a source of competitive advantage. This is consistent with a resource-based view of the firm, which emphasizes the role of resources for the attainment of a competitive advantage. Resource is “anything that might be thought of as a strength or weakness of a given firm including those tangible and intangible assets that are tied semi permanently to the firm”. Thus industrial buyer-supplier relationships may be regarded as an inter-organizational type of resource.

What are the critical resources customers seek to access in supplier relationship? The overall goal of establishing business relationship is to secure valued resources and technologies of selected suppliers. Manufacturers search to gain access to the supplier's resources, skills and strength in long-term manufacturer-supplier relationships. Therefore, in this research, we expect know-how benefits to represent a third dimension of relationship value.

Time-to-Market Benefits

Over the past decades, competitive advantage in manufacturing industries has shifted from low labour costs and economies of scale to flexible manufacturing. Today, speed and time to market have become strategic guidelines in the way companies design and manage supply chains. As a result of increasing importance of time-to-market, manufacturers seek closer collaborative relationships with fewer suppliers. Researchers have acknowledged that a supplier's ability to reduce time-to-market for its customers represents a source of competitive advantage in a buyer-supplier relationship. Strategic relationship is considered as an important benefit. Therefore, in this research, we consider time-to-

market as a fourth benefit dimension of relationship value.

Economic Benefits

This refers to the tangible benefits received from the customer. It includes the direct product cost, acquisition costs and operation costs (Joseph P. Canon & Christian Homburg, 2001). Our second hypothesis is --

H₂: There is a positive association between purchase enhancement and (a) Product Benefits (b) Service Benefits (c) Know How Benefits (d) Time-to-Market Benefits and (e) Economic Benefits.

Method

The questionnaire for automotive component manufacturers (OE suppliers) was sent to 108 organizations (108 Marketing Managers).

All the respondents were given a pre-notification using the e-mail addresses (ACMA buyer's guide). All the respondents were informed about the significance of the research and the mutual benefits it would generate, and requested to co-operate. This technique works best with industrial surveys to increase the response rate. We received 22 replies from OE suppliers. The questionnaires were sent to all the 108 OE suppliers through mail with covering letters. Return self-addressed and stamped envelopes were sent along with the questionnaires to increase the response rate.

In the first round, within 30 days, we received 23 completed questionnaires from OE suppliers. We sent a remainder e-mail to all the organizations from which we had not received responses. In the second round, we received 27 completed questionnaires from OE suppliers. 8 OE suppliers requested us to send the questionnaire through e-mail so that they can answer online. In the third round, with help of a software

program, the questionnaire was sent through e-mail to them so that they could answer online. A second remainder was sent to the organizations from which we had still not received the responses. In the fourth round, we received 8 completed questionnaires from OE suppliers. To check with the non-response error, we did a sensitivity analysis. One should ascertain how different the non-respondents would have to be from the respondents in order to alter the decision one would make based on the data supplied by the current respondents. If the most extreme foreseeable answers by the respondents would not alter the decision, no further efforts are required (Pearl & Fearley). We made telephone calls to some of the OE suppliers who had not responded even after two reminders. We checked with them for their answers with respect to few questions and compared their answers with the responses we already received and found that there was no significant difference among the answers. Non-response error in mail surveys is extremely unlikely once the response rate reaches 50-60 percent (Berbie). We received 64 completed questionnaires from OE suppliers (one questionnaire from each organization in the product category which they manufacture). The response rate was around 60% from OE suppliers. Hence, the non-response error was eliminated.

The final analysis was done from 64 completed questionnaires received from 64 marketing managers in 64 OE supplier organizations.

Measures

To ensure their content validity, we developed construct measures (10 items) based on review of the relevant academic literature and tested them among 10 marketing managers in product categories, namely, engine parts, electrical parts, transmission and steering parts, suspension and braking parts, equipment and others. The response scale was a 5-point Likert type scale (1=strongly disagree; 5=strongly

agree).

Item Analysis

Inter-item correlations between all pairs of items are computed using SPSS 11.0 for windows package. Items which have a low correlation with the total were discarded (William M. Ktrochim 2003). For this, first we created a new variable, which is the average of sum of all individual items for each respondent using the SPSS software package. This variable was included as a last

variable in the correlation matrix computation. Those items that have a correlation score of less than 0.6 with respect to the new variable are discarded. This way, we found that 4 items had the correlation score of less than 0.6. Hence, we retained 6 items.

Plan of Analysis for Hypothesis H₁

The backward stepwise multiple regressions were done on the data collected. The results are discussed further in the discussion section.

Table 1: Multiple regression analysis variables for hypothesis H2 (OE Suppliers)

Dependent variable	Code	Independent variable	Code
Purchase enhancement	PURENH	Product benefits	PROBEN
		Service benefits	SERBEN
		Know how benefits	KNOBEN
		Time to market benefits	TMTBEN
		Economic benefits	ECOBEN

Results

Table 2: Correlations: Relationship value dimensions

	PROBEN	SERBEN	KNOBEN	TMTBEN	ECOBEN
PROBEN	1.000	.081	.235	.159	-.067
SERBEN	.081	1.000	.159	-.051	.244
KNOBEN	.235	.159	1.000	.796	.177
TMTBEN	.159	-.051	.796	1.000	.261
ECOBEN	-.067	.244	.177	.261	1.000

Table 3: Summary of backward stepwise regression for hypothesis H2 (Suppliers)
Dependent variable: Purchase Enhancement (PURENH)

Independent variables	Model 1 (sig)	Model 2 (sig)	Model 3 (sig)	Model 4 (sig)	Results
PROBEN H ₂ (a)	.156	.153	.162		Not Supported
SERBEN H ₂ (b)	.216	.133	.099	*. 090(.096)	Supported
KNOBEN H ₂ (c)	.238	.164	.137	*. 067(.062)	Supported
TMTBEN H ₂ (d)	.650				Not supported
ECOBEN H ₂ (e)	.605	.684			Not supported
B values				3.593	
Constant				.165	
SERBEN				.115	
KNOBEN					
ANOVA				*. 027	
F Test (sig)					
R Square	.146	.143	.140	*. 112	

- a) Predictors: (Constant), PROBEN, SERBEN, TMTBEN, KNOBEN, ECOBEN
- b) Predictors: (Constant), PROBEN, SERBEN, TMTBEN, KNOBEN
- c) Predictors: (Constant), PROBEN, SERBEN, KNOBEN
- d) Predictors: (Constant), SERBEN, KNOBEN

It is observed (Table 2) that the time-to-market benefits (TMTBEN) and know-how benefits (KNOBEN) have a correlation of 0.796. However, all other inter-item correlations are observed to be less than 0.5. Hence, multicollinearity is not a problem here.

Backward step-wise regression is performed on the five independent variables. This procedure starts with all the five variables in Model 1 and gradually eliminates those, one after another, which do not explain much of the variation in dependent variable until it ends with an optimal mix of independent variables according to preset criteria for the exit of variables. This results in a model with only two independent variables - service benefits (**SERBEN**)

and know-how benefits (**KNOBEN**), (Table 4). The R square, coefficient of determination for the final model is* **0.112**, (Table 4) which has dropped only slightly. The F test for the final model is highly significant ***.027**, (Table3). Both the independent variables - service benefits and know-how benefits - are significant at 90% confidence level (P levels of ***0.090** and ***0.067**), (Table 4). The values in the parenthesis indicate standard error of estimates.

$$\text{PURENH} = 3.593 + 0.165\text{SERBEN} + 0.115\text{KNOBEN}$$

The hypothesis H₁ is modified as follows depending on the supplier's data analysis. The variables are directly proportional. It is observed that service benefits are more important than know-how benefits. Coefficient of service benefits is greater than know-how benefits.

H₁: The purchase enhancements are positively dependent on the service benefits and the know-how benefits provided by the suppliers.

Discussions

Service Benefits: It is obvious from OE suppliers multiple regression analysis that both the variables - service benefits and know-how benefits - are significant in determining intentions of customers to expand purchases. The pre-sale services include interacting with the customer, preparing detailed drawings of the component parts required by the customer according to its requirements, interacting with the customer and getting the drawings approved by the engineering department of the customer. Once the drawings are approved, the supplier has to manufacture prototypes of the product and submit it to the buyer for approval with test results. The buyer will test the product in the laboratory as well as field setting, if required. If the buyer is satisfied with the prototypes, it will place a trail order. The trail order is to be supplied on time and the same will be used in actual field-testing. On satisfactory completion of technical and commercial negotiations, the regular orders with schedules will be released. The post-sales services include providing correct information regarding the order status, delivering the consignments in time, providing training to the buyer's personnel as to how to adopt the product and any services related to damaged goods, warranty claims, etc.

Know-How Benefits: This refers to the mutual sharing of information during new product development. During new product development stages, the research and development personnel in the buyer's organization would like to interact with the supplier's executives to discuss in detail the procedures, drawings, methods and materials to be used. The suppliers may have to take the buyers' executives to their plant to show and convince the buyers regarding the facilities available for manufacturing and testing in their plant. Sometimes suppliers may have to demonstrate the cost effective process of manufacturing the products without compromising on quality or functions of the product. Sometimes the

buyers also help the supplier organization with their expertise to develop the product as per their requirements.

Implications to the Marketer: The marketer should evolve strategies to prove pre-sales and post-sales capabilities to the vendor. The marketer should closely coordinate with the buyer right from the time of the design stage and should offer assistance at every follow-up stage. If the marketer is already supplying some components to that organization, it will be easier for that supplier to constantly prove its product development capabilities to the buyer. The supplier should arrange plant visits for the buyer's executives. The supplier should prove prototype development capabilities by developing and providing samples as fast as possible. The supplier should send competent marketing and R&D executives to the buyer's organization to discuss about commercial and technical details. Once the orders are received, the schedules should be strictly maintained.

Scope for Future Research

This research involved examining a limited set of relationship benefits. There is scope to examine other benefits such as learning about new technology, or new markets, or accelerating time-to-market for new products and services.

Due to time and funds constraint, the study was limited to southern India automotive manufacturers. Although major southern India automotive manufactures were included in the sample, the sample size did not allow for comparison of sub-samples in each of the product categories, namely engine parts, electrical parts/equipment, suspension parts / braking parts, body parts and other accessories. Further, this research pertains to only the buyer's perspective; it would be useful to conduct research to understand the seller's perspective.

The data is collected from the automotive industry only and there is vast scope to conduct this research in other industries such as machine tool manufacturing and services industries such as banking to evolve a comprehensive theory on switching costs and relationship marketing.

Conclusion

The results of the hypothesis tests provide insights for an automotive component manufacturer primarily interested in OE supplies, to effectively formulate its relationship building strategies to get long-term commitments from the customer and expand the current level of business. Further research can build on this study and others to provide a more complete understanding and eventually an integrated theory that provides better insights into relationship marketing in business-to-business markets.

Multiple regression equation is of the form:

$$\text{PURENH} = a_0 + b_1 \text{PROBEN} + b_2 \text{SERBEN} + b_3 \text{KNOBEN} + b_4 \text{TMTBEN} + b_5 \text{ECOBEN}$$

PURNEH: Purchase Enhancement, PROBEN: Product Benefits SERBEN: Service Benefits, KNOBEN: Know How Benefits, TMTBEN: Time to Market Benefits, ECOBEN: Economic Benefits

Appendix 1: Items used in the multiple regression and reliability measures

Five anchor points are used: 1-Strongly disagree, 2-disagree, 3-Neither disagree nor agree, 4-Agree, 5-Strongly agree.

Items	Reliability (Cronbach's Alpha Measure)
A RELATIONSHIP VALUE DIMENSIONS	0.7020
1 Product benefits in the form of reliability and reduced rejections are an important parameter in relationship value.	
2 Pre and post-sale services offered is an important parameter in relationship value.	
3 Know-how benefits in the form of mutual sharing of information in new product development and mutual co-operation are important dimensions of relationship value.	
4 Mutual sharing of facilities for development and testing is an important dimension of relationship value.	
5 Purchase enhancements are dependent on the benefits received from the suppliers.	
6 Reused total cost of purchase (direct product cost, acquisition cost and operation cost) leads to relationship value.	

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