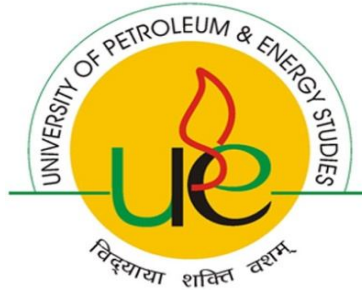


Dissertation

A Study on “SRM Practices in Automotive Component Industry”



Submitted under the guidance of:

Dr. Saurabh Tiwari

Assistant professor,

College of Management Studies

University of Petroleum & Energy Studies

Dehradun – Uttarakhand (India)

Submitted in partial fulfillment of

Masters of Business Administration Degree

Submitted By:

Ratnadeep Soalnki

SAP ID: 500026809 / Roll no: R600213037

MBA LOGISTICS AND SUPPLY CHAIN MANAGEMENT

COLLEGE OF MANAGEMENT STUDIES

UNIVERSITY OF PETROLEUM & ENERGY STUDIES

DEHRADUN – UTTARAKHAND (INDIA)

APRIL 2015

ACKNOWLEDGMENT

This project report could never have completed without the guidance and support of many individuals and organizations. I would like to extend my honest gratitude to all of them.

This project was impossible without the support of Mr. Mukesh Agrawal (Sr Buyer at HVCSIL) and Mr. Mayank Chauhan (JBM Group) who has given vital time to give their views to help me in collecting the necessary data for the study.

I would also like to specially express my sincere thanks to my faculty guide Dr. Saurabh Tiwari for his continuous direction as well as supervision all through the project. I would also like to thank the distinguished faculty members of University of Petroleum and Energy Studies who have imparted me the knowledge and theory that formed the foundation of the work undertaken in completing this project.

Ratnadeep Solanki

Declaration

This is to declare that the report entitles “**A Study on SRM in Automotive Component Industry**” is prepared for the partial fulfillment of Dissertation course in Semester IV of the Master of Business Administration by me under the guidance of Dr. Sarabh Tiwari.

I confirm that this dissertation truly represents my work. This work is not a replication of work done previously by any other person. I also confirm that the contents of the report and the views contained therein have been discussed and deliberated with my faculty Guide.

Ratnadeep Solanki

Certificate

This is to certify that Mr. Ratnadeep Solanki has completed the dissertation titled “**A Study on SRM Practices in Automotive Component Industry**” under my guidance for the partial fulfillment of the Dissertation course in semester IV of the Master of Business Administration.

Signature of Faculty Guide

Name of the Faculty: Dr. Saurabh Tiwari

Index

Sr No.	Topic	Page No.
1	Executive Summary	6-7
2	Introduction: Supplier Relationship Management	8-9
3	Introduction: Automotive Industry	10
4	Introduction: Automotive Component Industry	11-16
5	Background Of the Problem	17
6	Review Of Literature	18-19
7	Business Problem, Research Problem, Research Gap, Research Objective, Research Design, Type of Data, Research Methodology, Limitations of the Study.	20-21
8	Findings: SRM Practices in Automotive Component Industry	22-28
9	Findings Primary Data: SRM Practices in Halla Visteon Climate System India Ltd, Bhiwadi (Rajasthan).	29-35
10	Findings Primary Data: SRM Practices in Jay Bharat Maruti Ltd (JBM),Manesar, Gurgaon.	36-40
11	Conclusion	41
12	References	42
13	Annexure	43

Executive Summary

Supplier Relationship Management is a set of principles, tools and procedures that provide assistance to optimize the relationship value with the vendors and reduce risk and management of overheads through the complete supplier relationship life cycle.

Supplier Relationship Management has two aspects, which are:

- The buyer and the supplier have an unblemished commitment, and
- Understanding, agreeing, and whenever possible, codifying the interactions between the two parties.

If we look towards the supplier relationship management of the automotive component industry, it plays a pivotal role in making strong first end of the supply chain which leads to more efficient supply chain.

The major objectives of this research to find out the several SRM activities which are been followed by the automotive component manufacturing companies like:

- To find out the Vendor Identification and Selection method
- To find out Vendor Rating practices
- To explore Vendor Development practices

Firstly I had gone through the secondary data and found several aspects about the SRM practices followed in the automotive component industry which gives the clear view about how the vendors are identified and selected, how the vendor rating is done, what are development programs led by the companies in the automotive component industries. The major concern is that the secondary data is not enough, so then I majorly focused on to collect primary data to have true picture of the findings. I collected primary data from the two automotive component companies which are giants in their component manufacturing field. The companies and their SRM Practices in brief are:

1) Halla Visteon Climate System India Ltd, Bhiwadi (Rajasthan)

• Vendor Identification and Selection Criteria at HVCSIL:-

Vendors are identified in different ways which are by doing market study, through google search etc. After identifying the potential vendors, then the team selects the vendor on the basis of checklist which constitutes of various criteria's and parameters, which helps in rating the vendors and comparing a particular vendor with the bundle of potential vendors. After identifying the potential suppliers, then the purchase team asks for quotation from the vendors and taking the checklist criteria into consideration, they just negotiate and select the best possible vendor.

• **Vendor Rating at HVCSIL:-**

In HVCSIL Vendor Rating is done based on several parameters which are Delivery, Communication, Packaging, Quality, Systems, Technology (Up gradation & Up to Date), Man power Skills, Cost, Right Quantity and Number of Times line stops due to a particular Supplier.

• **Vendor Development at HVCSIL:-**

Vendor development at HVCSIL is been done in numerous ways which are Training & Development, Early Supplier Involvement, collaborate with the vendor to improve the material and also enhancement of fresh material, plant visit to suppliers, vendor rewards and recognition, and intensive information exchange with suppliers.

2) Jay Bharat Maruti Ltd (JBM), Manesar, GURGAON

• **Vendor Identification and Selection Criteria at JBM:-**

According to the purchase team of JBM, the team identifies their potential vendors by doing market study and google search, after identifying the vendor they reach out to them and then they ask for quotations from the vendors. They focus mainly on cost, Better Quality and on time delivery while selecting the supplier. After considering all the major three factors the purchase team starts negotiating with the vendors, the vendor which is having better quality with lowest affordable cost and promising the timely delivery is been selected.

• **Vendor Rating at JBM:-**

Vendor rating at JBM is done on the basis of various parameters which are:

1. Cost
2. Quality
3. Timely Delivery

• **Vendor Development at JBM:-**

For vendor development JBM, conducts mainly two things Training and development Programmes and regular periodic meeting with the vendors team. It seems they have less focus on supplier development with having only two types of development activities which will further lead them towards a lesser developed supplier base and company will face issues from different area like technological capability of the supplier with having degrading quality product.

Supplier Relationship Management

Supplier relationship management focuses on creating more collaborative and closer relationships with the main suppliers in order to recognize new value and reduce the possible risks. It is the discipline of planning and managing all interactions with the third party organizations involved in supply of goods to the organization in order to get the most out of the value of those interactions.

Normally in an organization SRM includes various aspects like:

- Vendor Identification and Selection
- Vendor Rating
- Vendor Development

Vendor Identification and Selection

Vendor identification and selection is amongst the most important and crucial procedures performed by the firms. Companies have laid down standard measures to facilitate the assessment. Effective selection can inhibit later supplier-related issues i.e. a sound supplier selection decision today can reduce or check a host of problems in the future.

Choice of suppliers and evaluation has become a significant aspect in today's automotive component industry undergoing a very competitive environment. The rise in cost of input materials, the procurement costs constitute major share of the total value of the final automobile. O.E.Ms and Tier-I companies are required to get the best and steady deal from their vendors. Thus, vendors play a vital role in achieving the goals of supply chain management in automobile industry.

In general companies follow a process for identifying and selecting the appropriate supplier which is mentioned below:

1. Identify the needs of supplier selection
2. Identify key sourcing necessities
3. Define sourcing strategies
4. Recognize potential supply sources
5. Limit in numbers the suppliers in the pool
6. Regulate method of supplier selection and evaluation
7. Select supplier and reach agreement

Vendor Rating

Vendor rating is the outcome of a strict vendor/supplier assessment system. Suppliers are assigned position grade as per their attainment of some particular level in performance like lead time, quality, delivery, cost, etc. Mostly the supplier rating is done as hierarchal ranking.

Criteria of Vendor Rating System

1. Quality Performance of vendor
2. Delivery Performance of Vendor
3. Service and System Performance of Vendor

Vendor Development

Vendor Development is the process of collaborating with the vendors to improve their processes and product manufacturing capabilities. Development of vendor will make vendor more able and proficient and give a further competitive edge to the buyer.

It is one of the most well-known techniques of strategic sourcing that improves the value coming from the supplier. Supplier development is an activity under taken by the buyer to enhance its vendor's performance and abilities to meet the needs of the buys.

To enhance the performance of the vendor the buying firm performs a variety of activities

- Developing a competition between suppliers
- Working directly with suppliers i.e. through training and other activities
- Evaluating supplier's operations
- Incentives to improve performance

Handfield et al. (2000) in their article of "Avoid the Pitfalls in Supplier Development" suggested a course map for supplier development. They stated 7 step for supplier development, they are;

1. Classify critical commodities
2. Identify significant suppliers
3. Create a cross functional team
4. Interact with supplier's top management
5. Define key projects
6. Specify details of project
7. Regulate status and strategies

Automotive Industry

The Automotive industry of India is amongst the largest automotive markets globally. It was one of the fastest growing markets in the world, but recently it is facing flat or deleterious growth rates. India has now evolved as Asia's fourth largest exporter of passenger automobiles. Chennai has the 35-40% of India's total automobile sector. It is on its way to become world's largest auto hub by the end of 2016.

The automobile sector accounts for 22% of the country's manufacturing GDP. India is expected to become an automobile manufacturing giant and third largest market place for automobile by the end of 2020.

There are numerous suppliers and many spare part units in this industry. As a result of globalization, the automotive supply chain has undergone major variations and the industry has always been looking for newer ways to limit operating costs, inventory and lead time to maintain their place in the industry. Due to the increase in sourcing patterns, streamlining customer demands, inventory organization, forecast accuracy, better supplier relationships, coordination and co-operation across supply chain, improved transparency and regulation of the process and decrease in lead time is being achieved by the organizations. As compared to the world markets the Indian auto industry is small in size (\$ 6,73 billion in front of \$737 billion of the global market), still it has witnessed a good growth rate of 20-25% in the recent years. Despite the increased input costs, hiked energy cost and lacking infrastructure, various OEMs have entered Indian market and have manufactured automobiles that have a good fraction of local parts and are tagged at competitive retail prices, largely because of the well-organized supply chain.

Recent years have witnessed large assimilation of the Indian automobile industry with its global counterparts. One of the most important challenges faced by the automotive manufacturers in India is integrating the entire supply chain and running it as a single incorporated system. Management of inbound logistics is yet another significant problem for OEMs, driven more by issues related to consistency of statistics, lead time and nonexistence of quality logistics units on the upstream side

The coming of major auto firms has stimulated the domestic sector into embracing Supply Chain best practices. This has enhanced competitiveness which leads to a considerable growth in exports. However, the Indian automotive industry has to function in a distinctive environment further posing challenges to the highly complex supply chain.

Automotive Component Industry

Automotive component industry consists of various companies that supplies automobile parts to OEMs. Mckinsey and Automotive Component Manufacturer Association of India estimates automotive component industry will become a US\$ 100 billion industry by 2020, compared to US\$ 35.1 billion as of now.

The ranking of India is 22 amongst all the global component exporting countries, India will jump up to 9th spot by 2020 in terms of export according to Mckinsey report.

The industry has outgrown the competence of producing all parts required to manufacture motor vehicles, which shows the localization accomplished in the automobile sector as well as the components developed for the entirely Indian made vehicles. The component industry has currently complete proficiency to manufacture the entire variety of auto components.

The automotive components of India are now a day's serving many key market places of Europe and North America. About 70 percent of these auto components that are exported are purchased by universal giants like Ford Motors, General Motors, and Daimler. India's auto component base is solid for many mechanical, electrical and electronic components. Several auto component corporations are home-based developed and have an impact full background. When Maruti Udyog started operations, various Japanese firms joint ventures in India and also set up world class manufacturing units in India. Numerous Indian companies progressed in productivity, quality, and delivery systems in their businesses through their association with Maruti. Entering of various multi-national automobile producers from Korea, Europe and US in Indian markets from 1995 onwards encouraged component suppliers worldwide to come into Indian markets in a immense way.

Division Of Auto Ancillary Industry into six main segments

Electrical Parts - The key components in this group is comprised of Spark Plugs, Generators, and Starter Motors etc.

Engine Parts- Engine assembly, has three broad categories: Fuel Delivery System, Core Engine Parts and others.

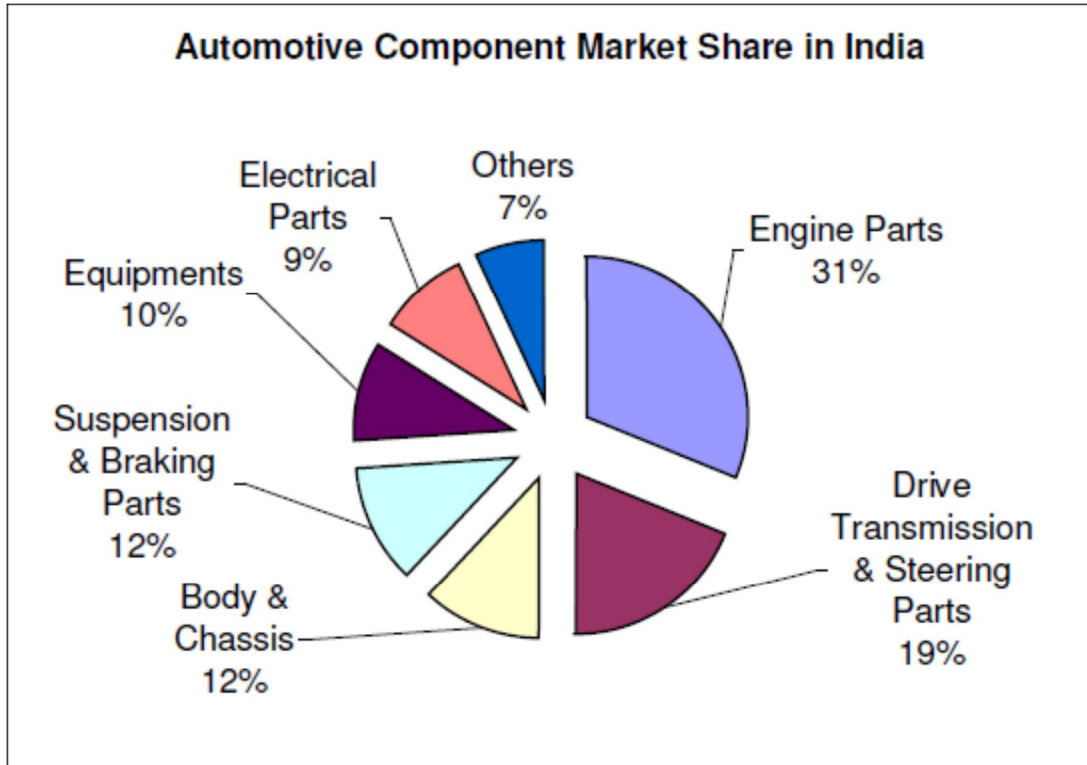
Suspension and Braking Parts – These comprise Shock Absorbers Leaf Springs, Brakes etc.

Drive Transmission and Steering Parts–The major products in this group are Steering System, Clutches and Axles, Wheels, Gears are the main components in this category.

Equipment – They includes Dashboard Instruments, Headlights etc.

Others–There are two major components in this category which are Sheet metals and plastic molded parts.

Drive transmission and Engine parts collectively contribute nearly 50% of the auto component industry production. Engine parts contribute about 31% of the production, mostly including engine valves, cooling systems, pistons, fuel injection systems, etc. Drive Transmission parts are about 19% of the production, which contains steering parts, clutch assembly, axle, etc.



Source: ACMA

The local auto component industry consists mostly of disorganized players, who are largely small and medium enterprises, however it's the organized segment which contributes about 72% of the industry's total revenue.

CharactersticsOf Indian Automtive Component Industry

- **Low Volume and Fragmented Industry**

In the organized sector there are more than 500 small, medium, large players in the auto component industry along with 600 ancillary units. These companies are mostly owned by families. The sector mostly caters to the aftermarket in an organized manner. In this industry the manufacturers operate on their own with the limited assets, on a small scale.

- **Indian Thrust Sector**

In India the automotive component industry is a thrust sector. The amount of employment provided by the large and medium companies in the organized sector is about 2,50,000 man years.

- **Less Dependence on Import**

Components needed by the Indian automobile industry are mostly produced domestically. The required was calculated to almost 13.5% of the local demand 2007. The automotive parts which are imported are mostly high precision engineering parts, like gear boxes and special steel and materials.

- **Spread of the Industry (Geographical)**

In respect to the location, more than 70 % of the automobile components firms are based in either the north or the west parts. Traditionally Pune, Chennai-Bangalore, NCR/New Delhi are major areas for the automotive components sector in India. Eastern Region is likely to emerge as equivalent with Tata about to set up its production firm in Singur, West Bengal and its current production base in Jharkhand.

Competitive Structure

The manufacturing leaders all around the globe have initiated procedures for developing a supplier base in India by inviting their vendors to establish manufacturing companies here. Major automotive parts companies such as Delphi, Visteon, Lear Corporation, Mando, ZF Stering, and Denso have a solid presence in India and cater to the OEMs. The significant domestic automobile component producing groups in India consists of TVS, Rane, Kalyani, Sona Rico, Minda, Amtek, and etc. The automotive component companies in the two-wheeler segment have well developed technology and quality systems in place, it is the largest volume segment in India. Various auto component companies along with catering to the domestic demand also have strong export operations. Estimates depict that 15 to 25 percent of the total turnover of various giant-sized Indian auto component manufacturers is accounted for exports. Trend noticed in the last 2-3 years is the interest shown by vehicle manufacturers and global tier-I firms in procuring components from India.

In the automotive sector, the SME players are officially organized under the auto component manufacturers association (ACMA). Various companies in India, as in-house suppliers of vehicle manufacturers, are not a member of ACMA, which are estimated around 125 in number. Many auto component companies are unorganized in nature and these are estimated around 375, these cater primarily to the aftermarkets. The steering and transmission components account for 50 percent of the component output in India, out of which 31 percent accounts for engine components and 19 percent for the transmission and steering components of the production output. The transmission and engine components like piston, camshaft, engine block, valves, casings and gears are manufactured locally. In India firms possess well-established foundations for cast and forged components and are competitive globally.

The consciousness for quality of the industry levels the global standards. It is a fact that 11 companies o Indian Origin have received the Deming Prize which is the most number outside Japan. The vendors in auto component industry are also adopting modern shop floor practices like Kaizen, Total Quality Management, 5-S, 7-W, 6-Sigma, and Lean Manufacturing as they progress to match with world-class industry. Many firms in this industry have also received quality certificates like ISO-9000, TS-16949, QS-9000, ISO-14001, and OHSAS-18001

Indian Automotive Component Supply Chain Structure

The Supply Chain of the automobile industry has drastically changed over the years. There is an increasing focus of OEMs on basic design and assembly operations as well as servicing the after-sales market and they also prefer to deal with a smaller number of efficient suppliers.

Subsequently, the supply chain is transforming into sub-system integrators, commodity players, and component makers. The segregation is defined by “Risk Sharing”, earlier which was defined by only cost pressure.

The segregation is increasingly defined by “risk sharing,” which was earlier defined by only cost pressure. From major players Tier-1 vendors (Concentrating on module assembly, sub-supplier management and system supply), Shifting the pressure of cost to Tier-2 vendors who concentrate only on the sub-components production.

The growth of the component manufacturers has taken a different route in the Asia-Pacific region. A tight relationship is followed by most of the Japanese producers with their vendors. The presence of the business affiliation system (Keiretsu system) in Japan greatly facilitates such an arrangement. But the other manufacturers like China, Korea and India gives a lot of significance to quality and price, while purchasing from numerous trusted vendors. As a consequence of this, the auto-component sectors are thriving in various Asian countries.

Figure: Indian Automotive Component Supply Chain Structure

	Past	Present
OEM	R&D Purchasing Assembly	System Integration Testing Assembly Supplier Management
Tier-I Supplier	Component Manufacturing	System Supply R&D on system Module Assembly Sub Supplier Management
Tier-II Supplier		Sub Component Manufacturing

Source: SIAM

Export Scenerio in the Automotive Component Market

An enormous range of automotive components and chassis are exported by India. The categories of major components that have shown a healthy growth in exports are vehicle accessories and components, starter motors & generators, bumpers, transmission shaft & cranks, drive axles etc.

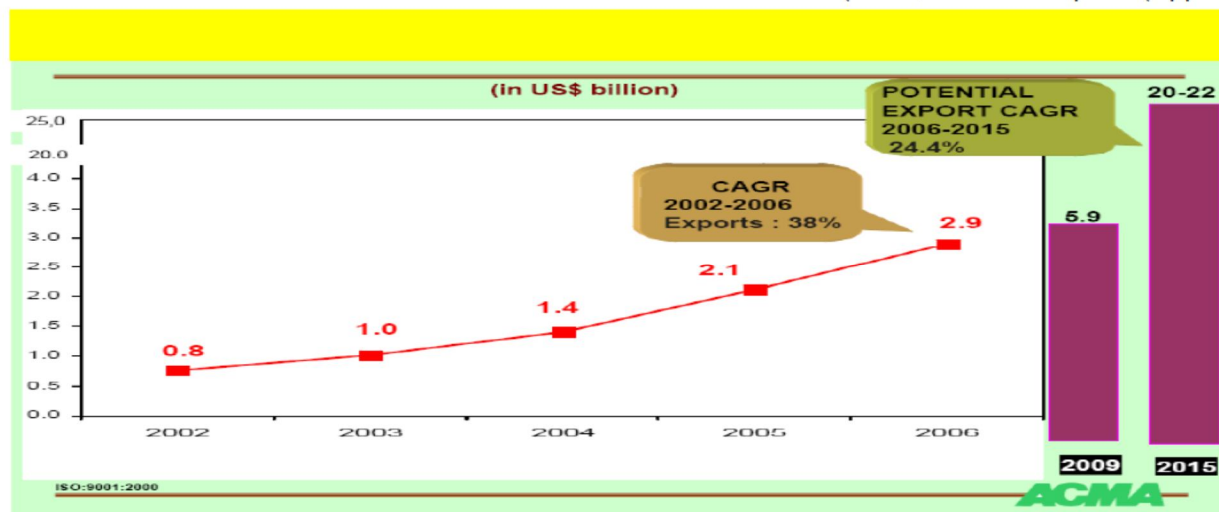
The motivating power behind growing automotive component industry in India has been greater exports by the Indian subsidiaries of universal tier-1 manufacturers and OEMs. In India Ford is prominent amongst them, which has led India to its global hub for manufacturing of Ikon Kits. It has also started purchasing components and assemblies from China.

In the same way, In India Hyundai Motor has made the decision to make India as its procurement hub for its small car Santro. With this development, exports of service and replacement components have increased.

Initially, major exports of components were to South Korea but with the growing exports of Santro, the component exports share to Sri Lanka, Turkey and Indonesia have also increased, with company started exporting its cars already to Sri Lanka, Indonesia and Algeria. Tier-1 companies like Delphi Automotive India, keihin File, Timken India, Visteon Automotive Systems, Meritor HVS India and FAG Bearings have all grown their export revenues from their operations of India.

The growth of export has outperformed the production growth over the last 5 years. The export is grown by a CAGR of 38 % over the period of 2002-2006 and it is estimated to grow at CAGR of 24.4 % during the period of 2006-2015. Out of the whole production of INR 48000 Crores in 2005, approx. INR 6000 crores worth of parts were embedded in vehicles which have been exported, showing the true potential of exports . It is expected that the emerging trend of global companies purchasing from India will drive the growth of exports over the long term.

(1US \$=INR 40 Rupees (Approx))



Source: ACMA

Background of the problem

- **Lack of Collaboration**

There is lack of collaboration between the automotive component industry and its suppliers; solid competition in the industry has headed automakers to emphasis on efficiency of the whole supply chain rather than on enhancement of specific functional area. To improve the collaboration between the buyer and the vendor, the entities in the supply chain of the automobile sector should focus on deploying collaborative practices widely along with high visibility. Integration of supply chain practices should also extend to the product development.

- **Supplier Importance (Cost)**

The selection of right supplier with optimum cost and good quality material plays a vital role for the buyer to have lower final goods cost, Supplier plays a vital role in reducing the cost incurred in the overall manufacturing with providing good quality low cost material.

Review Of Literature

Vendor Selection:

According to Panos et al. (2004) the importance of selecting the right supplier has grown over the time both in literature and the business practice. It has been stated that the significance of the supplier has matured from being just the producer to among those coordinating the supply chain entities. Because of which the dependence of the buyer on the vendor increases, in turn increases the necessity of effective vendor choice (Chooye et al, 2003). Liu and Hi (2005) in their work mentioned that selection of the appropriate supplier has always been a difficult task for the designated purchase managers. According to Narasimha et al. (2001) the procedure of selection of supplier involves consideration on various criteria on which the supplier is assessed. Many researchers agreed that the most important aspect in selection of supplier are the selection criteria. Vendor selection studies are founded in the years 1960s. Dickson gave 23 criteria for vendor selection, which greatly impacted the future researches in the field. Dickson did a survey, in which a questionnaire was sent to 273 manufacturing organizations through mails. The purchase managers of these organizations were asked to state the factors important for selecting the suppliers. The answers he got were divided into two categories i.e. vendor selection by individuals and vendor selection by organizations. He concluded that the most significant factor was quality the delivery and performance history. Weber et al (1991) reviewed the work of Dickson and assessed the articles that were published since the study of Dickson till 1990, which counted 74 in number. Then they classified these articles based on the 23 parameters stated by Dickson for vendor selection. They also highlighted that these criteria must be considered. They also recognized the difference in the relative significance of these criteria, e.g. repairing services and location. Zhang et al (2004) also published similar work. They reviewed works from 1992 to 2003, total 49 articles and made an assessment based on Weber et al. stud and Dickson's 23 parameters, and stated some new criteria and performed their comparison with the existing selection criteria. In the early 1980s cost was one of the significant factors. Customer responsiveness and management were then added to cost in early 1990. With the end of 1990 and start of 2000, flexibility was recognized as the most significant factor by the researchers and business people (Beamon. 1999). According to Vonderembse et al. (1999) managers have to emphasis on the selection of supplier factors in a manner that they are able to examine various aspects like quality performance and delivery. Chan (2003) stated that factors like innovation and flexibility should be given equal importance along with cost quality etc.

Vendor Development

After the advent of globalization, Indian market was open to the global industry and was a chosen market, especially in the automobile and its component manufacturing industry. There was a scope for new vendors and new markets. To meet the challenge of technology transfer, collaborations and JV's occurred which were capital focused. It caused a greater scope for the sprouting of new vendors. For the purpose of supplier assessment MNC's made certain standard criteria. In order to find appropriate suppliers which were able to meet the requirements of the buyer in terms of quality of products and services that too at right price, quantity and time, the vendor selection and ranking was chosen. An essence of the various discount schemes based on what quantity or incremental quantity may be offered by the supplier was established by Mandal and Deshmukh (1994), Ramzi et al (2009).

Hahn and Watts (1993) called vendor development as "A long-term cooperative effort between a buying firm and its suppliers to upgrade the supplier's technical, quality, delivery and cost capabilities and to foster ongoing improvements"

CMuralidharan et al. (2002) stated that in automotive industry the most important factors are quality, price, and timely delivery. The stress on the regulation and control over project schedule and integration, resources, communication, risks etc by the project manager has been laid by some researchers. If there is a failure to manage any of these by the manager then it has a negative effect on all other aspects. It is well realized that the selection of vendor is a crucial decision which has an effect on the whole organization in future (Thompson, 1990). It has also been stated that a company can perform better if it integrates its vendor development programme with the new product development (NPD). Kadir et al. suggested that the programs aimed at vendor development are supported by the buyer. Another study by Sanders et al. (2011) says that sharing of information by the buyer to the supplier such as supplier feedback and investment by buyer in information technology enable open communication between the buyer and the vendor.

Business Problem:

Ineffective and Inefficient Buyer-Supplier relationship management practices in the automotive component Industry.

Research Problem:

How can we make supply chain of Automotive Component industry more efficient?

Research Gap:

Not much emphasis is been given by the researchers in the Automotive component industry in respect to supplier relationship management practices.

Research Objectives:

- To study and Analyze the various SRM practices in the automotive component Industry.
- To find out the feasibility of Vendor Identification and Selection method in the Automotive Component companies like HVCSIL, Maruti etc. and recommend solutions.
- To find out the Vendor Development method.
- To discover the Vendor Rating practices performed by these companies.

Type of Research Design:

Exploratory Research

According to my topic “SRM Practices in Automotive Component Industry” Exploratory research design is to be done because the research problem has not yet been clearly defined by any researcher. It is a hidden area which is not been explored(less explored) though the researchers have emphasized on Automobile Industry but not on the Component Industry , so to explore the unexplored area the exploratory research design is best to implement. Exploratory research draws perfect conclusion only with extreme caution. The research design is flexible, Versatile etc.

Type of Data:

The data used in this research comprises of both primary and secondary data. The major data which is collected is Primary data; the main emphasis was to collect original data. The information was gathered mainly from phone interviews. The secondary data is also collected to provide more insight towards the topic.

Methods of Data Collection:

- **For Primary Data**

I choose to use Telephonic Interview and Expert opinion as these are the methods which are best suitable for the research.

Expert Opinion:-

Expert opinion can be defined as the statement from a specialist on a specific Subject. It is the most important research instrument which is been used most widely by me in collecting the reliable data because this research topic is not general, a deep knowledge about it is necessary. I have interviewed experts of the automotive component industry.

Telephonic Interview:-

Due to time constraint on the part of respondents, I have used telephonic interview as major method for collecting the primary data.

- **For Secondary Data**

The Secondary data is also collected to provide more insight towards the topic. The major sources were Research Journals, Magazines, and Books etc.

Limitations of the Study

- Respondents had the limited availability of time to respond to the telephonic interview.
- Problems in finding the authentic secondary data and it took most of the time of the total time taken in the completion of the project.

Findings

“SRM Practices in Automotive Component Industry”

- **Supplier Identification and Selection in Automotive Component Industry:**

One of the most important problems is to determine appropriate decision making criteria for choosing the correct vendor in the vendor selection process. One of the major goals of this research is to identify the most vital criteria to be used as a base for the selection process of a vendor of automotive component sector in India. The outcomes of this research are based on the valuable feedback from the respondents of the automobile sector in India. The outcomes can be used as a basis for an organisation to make stronger supplier selection activities and to have better understanding with its supplier.

The major challenge of the automobile component industry is the change of mindset of the traditional business and purchasing approach. Selection of vendor begins with setting of the strategic objective, the company has to make decision on numerous selection criteria based on the companies requirement. For the criteria of the supplier selection, combining supplier selection and supply chain performance measurement seems to be a significant area.

Though some articles are on supply chain management environment, has paid little attention on the influences on the total supply chain if a certain vendor is selected. There should be some new selection criteria is to be developed to reflect the total supply chain performance in the process of vendor selection. New methodology to simulate the procedures of the human decision making like neural network, appears to be promising and for supplier selection the computer programming should be developed.

Supplier Selection Criteria's:

S.No	Supplier Selection Criteria	S.No	Supplier Selection Criteria
a1	Quality	a44	Product Volume Changes
a2	Delivery	a45	Certificates Of Compliance
a3	Performance History	a46	Housing And Facilities
a4	Warrantees and Claim Policies	a47	Manufacturing Capabilities
a5	Production Facilities and Capacity	a48	Supply Lots
a6	Price	a49	Capacity to Meet The Demand
a7	Technical Capability	a50	Problem Solving Capability.
a8	Financial Position	a51	R&D And Engineering Capabilities
a9	Procedural Compliance	a52	Production Capacity
a10	Communication System	a53	Technological Capability
a11	Reputation and Position In Industry	a54	Response To Customer Request
a12	Desire For Business	a55	E-Commerce Capability
a13	Management and Organisation	a56	Ease-Of-Use
a14	Operating Controls	a57	Environmentally Friendly Products
a15	Repair Service	a58	Product Appearance
a16	Attitude	a59	Catalog Technology
a17	Impression	a60	Freight Terms
a18	Packaging Ability	a61	Trade Restrictions
a19	Labour Relations Record	a62	Information Sharing
a20	Geographical Location	a63	Negotiability
a21	Amount Of Past Business	a64	Customization
a22	Training Aids	a65	Certifications
a23	Reciprocal Arrangement	a66	Country's Political Situation
a24	Maintainability	a67	Currency Exchange Situation
a25	Reliability	a68	Trust
a26	Flexibility	a69	Responsiveness
a27	Consistency	a70	Discipline
a28	Long-Term Relationship	a71	ISO 9000 / ISO 14000 certified
a29	Product Development (Ability to Innovation and Co-Design)	a72	Waste management
a30	Logistic Cost	a73	Product range
a31	Inventory Management (Inventory Costs)	a74	Infrastructure
a32	Willingness to Disclose Cost/Other Information	a75	Layout
a33	JIT	a76	Product line
a34	Quality Standards	a77	Management skills
a35	Quality System Adequate	a78	Calibration control
a36	Professionalism	a79	Non-conforming material control system
a37	Physical Proximity	a80	Corrective and preventive action system
a38	Legal/Contractual Terms	a81	Audit mechanism

a39	Superior Customer Service	a82	Patent
a40	Social Policies	a83	Management Commitment
a41	Organizational Culture	a84	Number of Employees
a42	Supplier Purchasing Strategies, Policies, And Techniques	a85	Number of Technical Staff
a43	Cost Reduction Activities		

- **Vendor Rating Practices in Automotive Component Industry**

Criteria for Vendor Rating System:

The Vendor Rating is proposed to be done majorly based on three criteria:

1. Quality performance of vendor: Based on Quality of Products produced during period under consideration
2. Delivery Performance of Vendor: Based on supply performance of vendor against orders within delivery Period
3. Service & System performance of vendor: Based on General Performance Such as reassessment, Updating infrastructure etc. and maintenance of Quality control systems.

- **Vendor Development in Automotive Component Industry**

Vendor development is defined as “A longstanding cooperative plan started by a purchasing organization to improve a supplier’s outcome and abilities such that a vendor is capable of catering the buying organizations supply requirements in a way which is more reliable and effective, giving competitive advantage to the purchasing company.”

As a result of demand and support from the parent company the automotive vendors have been developing continuously. Although in the past one and a half decades, the costs of all commodities, wages, and salaries have gone up to a large extent yet the total final cost of the automobile manufacture has been under control. Many supplier enhancement activities during this period have supported the parent firms in pushing its suppliers more towards improvement, development and cost efficiency. Use of information technology and automation has added more responsibilities to the supplier’s scope. Owing to the developments in the core technology in the automobile sector along with the information technology’s advancement day by day, more efforts are required in the area of vendor development.

Major Drivers for Vendor Development

- **Manufacturing Process and Facility**

It is one of the major driver for the parent company to develop their vendor whose manufacturing process and facility are not efficient and meeting the expectations of the parent company.

- **Inspection and Tests**

Parent companies have duly inspected the vendor and certified by T.C. (Test Certificate), which has made the vendor to produce components which are of assured quality. The earlier Q.C. (Quality Control) departments meant for inspecting the incoming goods have been replaced by the rejection allowance in ppm (parts per million), not in percentage. Vendors have to face penalization and warnings if their ppm rises above a certain level. If it further goes up the vendor might get deregistered by the parent company.

- **Financial Soundness**

It has been observed that vendors with sound financial status are more capable to meet the increased demand by the purchase company. Along with time Credit facility demand by the parent company has dropped. The interest cost incurring from long credits adds to the cost of the product, thereby longer credit materials have been discouraged by the customer companies.

- **Other drivers**

Parent companies prefer vendors which are technically qualified and who are able to adopt and adapt to the technological changes in the business processes. Companies are pushing its suppliers to go for Enterprise Resource Planning (ERP) for accuracy in bill of material, control of inventory and JIT (Just in Time) system supplies for reducing cost of input component.

Supplier Development Programme in Automotive Component Industry

The primary goals of the vendor development for any industry are as follows.

- Making immediate change in supplier's operations to reduce the supplier's problems.
- To enable supplier to become capable in a manner such that supplier is able to make its own improvements.

Vendor development programs are result oriented and focused on solving supplier specific problems. Result oriented supplier development enhances the vendor's quality and cost and improves the performance of the vendors but cannot help vendor for continual improvement.

Advantages of result oriented programme are quick identification of issues and a faster solution, fast implementation of proven processes. This gives buying organization's team an improved experience to resolve upcoming challenges of the supplier. But the disadvantage involved are lesser commitments from vendor, reduced capability for problem solving, and limited input of continuous process knowledge to vendor.

Vendor Development Activities

Supplier development activities in automotive component industry based on the buyer's resource involvement parameters like personal, capital and time is categorized into 3 parts.

Basic vendor development- This deals with the evaluation of supplier and providing it feedback. Supplier qualification has higher significance over certification. Vendor base will be lesser in number with uniform parts and more volume of business with limited number of suppliers.

Moderate vendor development- In this the involvement of the buyer is limited. The underlying activities include recognizing supplier's performance, solving vendor's problems by visiting it, in issues relating to materials making the vendor efficient and issues relating to certification.

Advanced vendor development- In terms of the parameters stated above, the role that the buyer plays is more. It involves proper training to the vendor in are like design and development of new products, sharing of information on cost, quality and finance.

Basic Supplier Development	Moderate Supplier Development	Advanced Supplier Development
Evaluation of supplier's performance and feedback to suppliers. Sourcing from a limited number of suppliers. Parts standardization. Supplier qualification.	Visiting suppliers' plants. Awards and approval of supplier's performance improvements. Collaboration with suppliers in materials improvement. Supplier certification.	Training to suppliers. Collaboration with supplier. Involvement of suppliers in the buyer's new product development process. Intensive information exchange with suppliers.

Vendor Development Programmes

- Plant visits to Vendors
- Supplier Performance Evaluation and Feedback
- Training to the Vendor
- Rigorous information exchange with suppliers
- Collaborating with suppliers in improvement and development of the new materials
- Parts Standardization
- Combined investment in new capabilities
- Joint process improvement and mapping
- Intellectual capital sharing
- Purchasing from a limited number of vendors
- Vendor certification
- Vendor reward and recognition

Factors Contributing for Development of Supplier

- **Supplier Evaluation**

Supplier evaluation is the first step of developing the suppliers because after this the buying organization can determine the areas of vendor where improvement is required. It helps in pointing out the exact cause of an issue that is whether the issue is in the process, design, or in material. The evaluation of the vendors is evaluated on the basis of several parameters like cost, delivery, quality, managerial capabilities, technical capabilities etc. Based on these parameters vendors are categorized into groups. Thus vendor evaluation is an integral part of vendor development that serves as a podium for launching a development programme for the vendors.

- **Early Supplier Involvement**

The most important stage of vendor involvement is the design stage. Earlier buyers were supposed to design and vendors to follow those designs. It caused the vendor to face challenges in design complexity, also during designing the buyer won't take into consideration the technical

capacity of the vendor. It leads to difficulties for the vendor to control process and quality. All this caused evolution of the concept of early involvement of the vendor. It gives an additional advantage of supplier's innovativeness to buyer. Qualification in terms of product quality, delivery capability, and compatibility of production process, technical capability and financial strength can be kept in consideration which will have a positive effect in supplier's performance. Early involvement of vendor also reduces the cycle time of product and can result in a long term relationship.

- **Supplier Training Programmes**

Supplier training programme in automotive component industry intended for vendor development is the assistance that vendors can receive from buyers which can be regarded as buyer supported training. The right type of training can lead to an improvement in performance for the vendor. This would in turn encourage the buyer supported training. Buyer appoints his employees or team to train vendor, it may also invite other vendors facing similar problems for training of its own company. Although local suppliers do continuously receive assistance from their buyers but it still remains inadequate to improve vendor capabilities. Analyzing environments that provide buyer supported training could help to identify factors that vendor identifies as important for the development of their capabilities.

- **Communication**

It is unarguable that the openness in buyer to supplier communication plays a vital role in achieving major performance enhancement. It acts as a key reason for the supplier improvement as the vendor will move into the direction that buyer wants.

“SRM Practices

In

Halla Visteon Climate Systems India Ltd. (Bhiwadi)”



Company Introduction

Visteon Corporation: Leader in Automotive Supplier Globally

It is the leading global automotive vendor delivering the value for vehicle manufacturers and its stakeholders through a household of businesses including:

- Halla Visteon Climate System, majorly owned by Visteon and it is the world's largest global vendor of climate component and systems in the automotive industry.
- Visteon Electronic, a leader in supplying audio and infotainment, centre stack electronics, feature control modules and driver information
- Visteon Interior, a universal provider of cockpit modules, consoles, instrument panels, door trim modules etc.
- Yanfeng Visteon Automotive Trim Systems, it is based in china with partnership between Visteon and Shanghai Automotive Industry Corporations, Huayu Automotive Systems.

From these above families of organizations, Visteons engineers, designs and manufactures innovative parts and systems majorly for almost every vehicle manufacturer around the globe and these enterprises generated \$ 7.44 billion in sales in 2013.

Corporate Offices:

- Asia pacific: Shanghai (China)
 - Europe: Chelmsford (UK)
 - North America: Van buren Township (US)
-
- CEO and President: Mr. Timothy D. Leuliette
 - Ranking: Fortune 500 – 359
 - Number of Employees: Approx. 24,000
 - Facilities: Manufacturing, Technical, sales, and service facilities located in 29 countries
 - Markets Served: Original Equipment Manufacturers

Indian Operations:

In India Visteon has 4 manufacturing plants, 3 centres of engineering, and more than 3,200 employees. Major operations of Visteon in India are electronics, interior products and climate control. It has a presence since 1993 in India. Its Subsidiaries are Halla Visteon Climate Systems India Limited (Bhiwadi), Visteon Engineering Centre India (Pune), Visteon Automotive Systems India Ltd (Chennai & Pune). Interiors Product includes (Instrument Panels, Consoles, Cockpit modules, door trim), Climate Products includes (HVAC Systems, Compressors, Power train cooling, Engine induction & Fluid Transport), Electronic Products includes (Audio and Infotainment, Automatic Climate Control Panels, Multi Function Displays, Instrumentations and Displays).

Halla Visteon Climate System India Limited:

HVCSIL is collaboration between Halla Visteon Climate Systems (61%) and Maruti Suzuki (39%). It is the market leader in the segment of passenger car in India for engine cooling module and radiators. It is located in Bhiwadi (Rajasthan) on the land area of about 10,000 sq. meters with TS 16949 and ISO 140001 plant designs, manufactures and develops engine cooling modules, radiators, fuel delivery modules, Charge Air Coolers and Exhaust Gas Recirculation.

HVCSIL also have Engineering Centre where it works on application engineering for its products. It has won many awards for performance, quality and safety from Maruti Suzuki and the industry associations.

In the industry currently it is one of only full line suppliers of climate systems having 4 universal technical centres along with 35 manufacturing units. It has plants in 19 nations across North America, Asia, Europe and South America.

“SRM Practices in Halla Visteon Climate Systems India Ltd. (Bhiwadi)”

• Vendor Identification and Selection Criteria

According to the purchase team of HVCSIL, Vendors are identified in different ways which are by doing market study, through google search etc. After identifying the potential vendors, then the team selects the vendor on the basis of checklist which constitutes of various criteria's and parameters, which helps in rating the vendors and comparing a particular vendor with the bundle of potential vendors.

The checklist includes various criteria's and parameters which are:

1. Capacity of the Vendor
2. Machines of the Vendor
3. Management of the Vendor
4. Cost structure
5. Delivery performance
6. Economic Capability and Stability
7. Information Systems Ability
8. Quality systems and performance
9. Supplier flexibility
10. Vendor's Supply Chain Management Competence
11. Process proficiency
12. Environmental Compliances
13. Production scheduling and control systems
14. Long-term relationship potential
15. Technological Abilities

After identifying the potential suppliers, then the purchase team asks for quotation from the vendors and taking the checklist criteria into consideration, they just negotiate and select the best possible vendor.

Suggestions:

HVCSIL can improve their vendor identification capabilities by focusing on strong competitive intelligence of the competitors, though they have intelligence about their competitors Supplier base but it is not strong, competitive intelligence can lead to have vital and accurate information about the potential suppliers through which the best and smaller supplier base can be formed with having appropriate long term suppliers. Strong Competitive intelligence will be more feasible and effective then market study and google search.

Their Vendor Selection Criteria is best in the automotive component industry covering all the potential factors and parameters.

- **Vendor Rating at HVCSIL**

In HVCSIL Vendor rating is on the basis of several parameters which are:

1. Delivery
 - ✓ On Time Delivery Of Goods
 - ✓ Damage free goods
 - ✓ Supplier should maintain inventory of FG as per norms
 - ✓ Less lead time
 - ✓ Safe handling of our cargo
2. Communication
 - ✓ Proper Information Flow
 - ✓ On time response from supplier
 - ✓ Specific data should be provided by suppliers
 - ✓ Proactiveness (Zero follow-up)
 - ✓ Maintain proper transparency of the process
3. Packaging
 - ✓ Material Packaging (according to 1121 form)
 - ✓ Dust free goods
4. Quality
 - ✓ Standardized Quality of Product
 - ✓ Quality system certification (TS-16949)
5. Systems
6. Technology (Up gradation & Up to Date)
7. Man power Skills
8. Cost
9. Right Quantity
10. Number of Times line stops due to a particular Supplier

- **Vendor Development at HVCSIL**

Vendor development at HVCSIL is been done in numerous ways which are:

- ✓ **Training and Development**

Training and development is been done in the following 4 steps:

- 1. Identifying the Supplier for Development**

First HVCSIL cross functional department team identify the suppliers who need the development at their end.

- 2. Studying Current System of the Vendor**

Then HVCSIL cross functional department team study the current system and practices which are been followed by the vendor

- 3. Identification of Gap**

After studying the current system of the vendor, the team identifies the gap by comparing the current system followed and the standardized system which should be followed by the vendor

- 4. Preparing Training Plan and Suggestion**

After identifying the gap, training plan is been prepared with appropriate and effective Suggestions.

- 5. Providing Training and feedback**

When the well-structured training plan is been made, then the training is been provided by the team and feedbacks are given to the vendor that how to improve the system.

The Training and development is done to help the supplier to upgrade the technology at their end, to resolve the technical issues, to have instant and proper flow of communication, for packaging purpose, for improving the quality and the manufacturing processes, to enhance the man power skills.

- ✓ **Early Supplier Involvement**

HVCSIL develops their supplier by involving them at the early stage of product development that is at the product design stage, by involving vendors early gives an extra advantage of vendors innovativeness to buyer. It also decreases the total time of the development of the product. Involvement will develop the vendor's abilities and can result in a long term relationship.

✓ **Supplier reward and recognition**

To motivate the Supplier towards more development, they reward and recognize the potential suppliers

✓ **Plant visits to suppliers**

HVCSIL cross functional department team visits the supplier periodically to check the system and practices which are followed by the vendor. So to develop the Vendor in the needed area.

✓ **Intensive information exchange with suppliers**

They also focus on intensive information exchange with the supplier, which helps in timely development at the suppliers end.

✓ **Team up with Vendors in development of new material and materials improvement**

HVCSIL also helps the suppliers in improvements and development of material by collaborating with them.

**“SRM Practices
In
JAY BHARAT MARUTI LTD (MANESAR)
GURGAON”**



Company Introduction

JBML is the collaboration between JBM group and Maruti Suzuki India Ltd as a joint venture, it is the biggest JV of MSIL for manufacturing of welded assemblies, Fuel fillers, sheet metal components, exhaust systems, suspension and chassis parts at Bawal, Gurgaon and Manesar.

It has the turnover of around US \$ 1.2 billion, the group has widened its horizons by concentrating on delivery, product development processes, quality, solutions approach, contract manufacturing and flexible manufacturing systems.

To automotive OEM industry the group is primarily a tier-1 vendor and provides services to esteemed clients that includes Maruti Suzuki, Tata, Nissan, Ashok Leyland, Ford, Bajaj Auto Ltd, Mahindra, Fiat, General Motors, Hero, Toyota, Honda, TVS, Volkswagen, Volvo-Eicher etc.

Facilities & Operations

JBML have four plants which are located in Delhi NCR and have the production capacity of more than 1, 20,000 parts and assemblies per day.

- Weld Shop- MAG Welding- Spot Welding- PSW, SSW, IT – Manual Robotic
- Tools and Techniques for metal forming products
- Press Shop – 20T TO 2500T Presses- Automated, Transfer Press and Robotic.
- World Class plating and paint shops

Products Range

- Skin Panels, Body in White
- Exhaust Systems
- Axles
- Fuel fillers
- Suspension and Chassis parts and Assemblies
- Jigs & Fixtures, Dies

“SRM Practices in JAY BHARAT MARUTI LTD (MANESAR) GURGAON”

• Vendor Identification and Selection Criteria at “JAY BHARAT MARUTI LTD (MANESAR) GURGAON”

According to the purchase team of JBM, the team identifies their potential vendors by doing market study and google search, after identifying the vendor they reach out to them and then they ask for quotations from the vendors. They focus mainly on cost, Better Quality and on time delivery while selecting the supplier. After considering all the major three factors the purchase team starts negotiating with the vendors, the vendor which is having better quality with lowest affordable cost and promising the timely delivery is been selected.

The factors which they keeps in mind while selecting the supplier are (Supplier Selection Criteria):

1. Cost
2. Better Quality
3. Timely Delivery
4. Capacity and Capability of the Vendor
 - Financial capability and Stability
 - Information Systems capability
 - Vendor’s Supply Chain Management Competence
 - Process related capabilities
 - Technological related capabilities

JBM can improve their vendor identification capabilities by focusing on strong competitive intelligence of the competitors, competitive intelligence can lead to have vital and accurate information about the potential suppliers through which the best and smaller supplier base can be formed with having appropriate long term suppliers. Strong Competitive intelligence will be more feasible and effective then market study and google search.

Vendor Selection Criteria can be strengthen by including Production scheduling and control systems, Longer-term relationship potential of the vendor, product range, and infrastructure at the vendors end.

• **Vendor Rating at “JAY BHARAT MARUTI LTD (MANESAR) GURGAON”**

Vendor rating at JBM is done on the basis of various parameters which are:

1. Cost
2. Quality
3. Timely Delivery

Cost is one of the parameters which is been majorly focused, the rating team compares the cost increment by the supplier from the time of selection to the current date and comparing it with the other vendors supplying the similar material.

While rating the quality of the vendor, the rating team just analyze the number of time the lots is been rejected of the vendor by the quality team, team also compares the standards of the quality which they have set and what the supplier is supplying consistently.

Timely delivery is another parameter on which the rating of the vendor is done, in this the team focuses on the number of times line stops due to a late delivery by a particular Supplier and according to it they rate the supplier.

The rating is given to the vendors out of 3, each parameters is of 1 point, the team just tick the parameter if they think the vendor is providing it, the vendor which is getting 3 ticks i.e. the vendor is fulfilling all the parameters at the best level, so that vendor will be the one of the best vendor with highest rating.

Suggestion:

While rating the company should also focus on:

1. Proper and Instant flow of Communication by the Vendor
2. Packaging
3. Technology (Up gradation & Up to Date)
4. Man power Skills at the Vendor end

By adding these parameters in there rating system JBM will have a good rating system and it will lead to a strong supplier base with long term potential.

• Vendor Development at “JAY BHARAT MARUTI LTD (MANESAR) GURGAON”

For vendor development JBM, conducts mainly two things Training and development Programmes and regular periodic meeting with the vendors team. It seems they have less focus on supplier development with having only two types of development activities which will further lead them towards a lesser developed supplier base and company will face issues from different area like technological capability of the supplier with having degrading quality product.

✓ Training and development Programmes

They conduct training and development programmes but less frequently which would lead to underdeveloped supplier according to the current scenario. They generally give training for improving the quality and the manufacturing processes when needed at the vendors end.

✓ Regular periodic meeting

JBM conducts meeting at a regular interval with a objective of knowing concerns of suppliers which they are facing at their end and helping them in solving those problems, this seems to be a good development activity with giving motivation to the vendors that company is concerned about them.

Suggestions:

Vendor development is essential for any parent company, so that parent company can get the technologically updated, improved quality of the material and the manufacturing processes, enhanced man power skills. But it seems JBM is not focusing on it, they should act on it seriously and introduce new and effective Supplier development activities such as:

- Early Supplier Involvement at the design stage of the new product development
- Rigorous Information exchange with the vendors.
- Team up with the vendor in development of new materials

Conclusion

SRM Practices in automobile component industry plays vital role by improving the first end of the supply chain and making it more efficient. SRM Practices implemented in the automobile component industry is quite similar to the other industry.

After Studying and analyzing the secondary data and primary data, I reach up to the final conclusion that the SRM practices which are implemented in the automobile component industry are quite feasible and effective. The crux of the SRM practices of this industry is that:

Vendor Identification is majorly done through market study and google search, after identifying the potential vendors, the vendor selection is done by analyzing those vendors through the checklist which have several parameters and criteria's some of are:

Capacity of the Vendor, Machines of the Vendor, Management of the Vendor, Cost structure, Delivery performance, Economical Soundness, Information system abilities, Quality systems & performance, Supplier flexibility, Vendor's Supply chain management competence, Production scheduling & control systems, Long-term relationship potential etc.

After analyzing these criteria's, negotiation is been done from the selected vendor out of the potential vendors and then they are finally selected based on the negotiation.

Majorly companies in the automotive component industry rates their vendors on the basis of several parameters which are Delivery, Communication, Packaging, Quality, Systems, Technology (Up gradation & Up to Date), Man power Skills, Cost, Right Quantity and Number of Times line stops due to a particular Supplier etc.

And Vendor Development is been done in numerous ways which are Training & Development, Early Supplier Involvement, Plant visits to vendors, rigorous information exchange with the vendors, Parts standardization, combined investment in new capabilities, collaborating with the vendors in improvement and development of the new materials, Vendor Certification, Vendor reward and recognition etc.

If the company in the automotive component industry performs all these SRM activities consistently, it will lead to have best supplier base, with making more efficient supply chain.

References

- Trent and Handfield, A Book on Purchasing and Supply Chain Management(Third Edition).
- Dr. Sangeeta Sharma (2003), Research Paper on “Vendor Development Process in Automobile Industry in India: A Comparative Study”.
- ShujiUchikawa and Satyaki Roy, Research Paper on “The Development of Auto Component Industry in India”.
- T A S Vijayaraghavan and S B Raju, Research Paper on “A Supply Management Orientation and its Effect on Buyer/Supplier Performance: Some Insights from Automobile Industry in India”.
- RajendraChavhan, Dr.S.K.Mahajan and Joshi Sarang, Research Paper on “Supplier Developmet: Theories and Practices”.
- MICHAEL J. ENRIGHT, Research Article on “Buyer-Supplier Relationships”.
- IDC (India) Limited CYBER HOUSE, Article on “Defining the Role of the Government in the Transnationalisation Efforts of the Indian SMEs in the Auto Components Sector”Prepared for: Department of Scientific & Industrial Research (DSIR), Ministry of Science & Technology, New Delhi.
- Souresh Bhattacharya, Dr. D. Mukhopadhyay and Dr. Sunil Giri, Research Paper on “SUPPLY CHAIN MANAGEMENT IN INDIAN AUTOMOTIVE INDUSTRY : COMPLEXITIES, CHALLENGES AND WAY AHEAD”
- Avinandan Mukherjee, Research Paper on “THE INDIAN AUTOMOBILE INDUSTRY : SPEEDING INTO THE FUTURE ?”.
- Manish Kumar Sagar and Deepali Singh, Research Paper on “Supplier Selection Criteria: Study of Automobile Sector in India”.
- PROF. KVSJN JAWAHAR BABU, Research Paper on “A STUDY ON SUPPLY CHAIN PRACTICES WITH REFERENCE TO AUTOMOBILE INDUSTRY”

Annexure

I have collected primary data through telephonic interview with sending questionnaire on the respondent's mail. Open ended Questionnaire is used to collect the primary data.

Open Ended Questionnaire

Q1. What is the Vendor Identification and Selection method followed by the company?

Q2. How the company Develop its Vendors and what are the development programs organized?

Q3. How Vendor rating is been done by the Company?

Q4. How much effective are the SRM Practices implemented currently in the company?
