

GENERALISING THE ISSUES AND HINDRANCES PRESENT IN SCM PRACTICES OF 2 LEADING INDIAN AUTO INDUSTRIES- HERO MOTO CORP. & GKN DRIVELINE INDIA LIMITED

DAVINDER SAINI

Alumni of PEC University of Technology, Chandigarh, India

ABSTRACT

This is a sequential study of the research which has been done to find out the issues/concerns in SCM practices of Hero Moto Corp and GKN Driveline India limited (Saini, 2016). In the earlier, an effort was done to find out the affecting factors, now here in this study an effort is being carried out to analysis the all affecting variables and in the end to generalise the same so that these generalised results can be used in order to find out the same kind of obstacles which are being pulling back the various other automotive industries. In this paper, first Supply Chain Management (SCM) is defined and well presented, followed by the various factors which are being affecting the good SCM practices in Indian automotive scenario. In the end, a hand to hand comparison has been done in order to generalise some topped ranked issues. It is our best hope that these shortlisted concerns will help other automotive firms also to cope up their issues and challenges.

KEYWORDS: SCM Issues and Hindrances, Indian Automotive Industries, Hero Moto Corp, GKN Driveline India Limited

INTRODUCTION

Although Indian Automotive Industry started its journey in 1940's, but a tremendous growth has been recorded since the Economic Liberalization in early 1990's. The Government of India (GOI) encourages foreign investment in the automobile sector and allows 100 per cent Foreign Direct Investment (FDI) under the automatic route as has been shown (<http://www.ibef.org/>). The Indian government has laid out the goals of company in two documents- 'Auto Policy 2002' and Auto Mission Plan 2006-2016 (Automotive mission plan, 2006-2016). Recently Indian Government has initiated a very effective Strategic plan named "MAKE IN INDIA", provokes all global Manufacturers as well as Indian Manufacturers to setup their facility in India. This step of Indian Government showing fruits also that can be felt from the growth in the Automotive Sector. Rushing of various Automotive Giants into Indian market got possible because of large Pool of Cheap labour and other resources. The industry comprises various segments like group assemblers, multinational child parts assemblers and various SMEs (Small and Medium Enterprises) from economic performance of Indian automobile industry (Ray S., 2012)

Future Projection of Indian Automotive Industry

A very brighter and dynamic future is expected to face by Indian Automotive market in coming era. This will be possible as the ground set by Indian Government by taking very positive steps towards making India as the manufacturing hub in coming time era. In the same path, Government of India (GOI) has setup its new policies like,

- GOI has setup a Technology Modernisation Fund to focus on Research and Development (R&D).
- Excise Duty was reduced to 8% from last 12%, to boost MAKE IN INDIA initiative
- 100% FDI under automatic route

Source: *Automotive Mission Plan (2006–2020), Make in India*

The above information regarding the current status and future growth of Indian automotive market reveals that there is a tremendous scope of development in this segment which can aid to the overall development of the economic conditions of the country. Seeing this, an efficient network of supply chain management is required in the coming days in order to avail the opportunity in this segment.

Understanding SCM

1. A network of entities that starts with the suppliers' supply and ends with the customers' custom the production and delivery of goods and services (Lee and Ng, 1997).
2. Supply chain is a network of firms to deliver product or service to the final customer, linking flow from raw material supply to final delivery, as has been shown (Bhardwaj & Jawalkar, 2015)
3. Supply Chain Management can be understood as a network of organisations (Small, medium and OEMs) connected in a hierarchy allowing exchange or flow of materials, information and money (Saini & Jawalkar, 2016)

Automotive SCM

An Automotive SCM network can be better understood by observing the Figure 1 below:

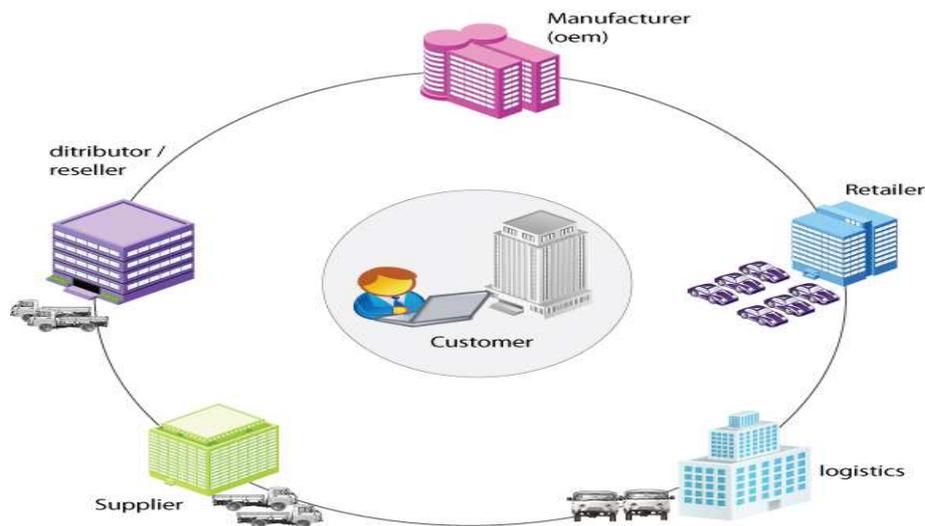


Figure 1: Automotive SCM Network

Source: www.dataquestcorp.com

The network of supply chain management is comparatively more complex as compared to other industries because these days Original Equipment Manufacturers (OEMs) are looking towards a significant resourcing of the processes and child parts. This is happening towards achieving low factory running costs, low manpower, lowering the

plant running energy etc. Thus it calls a number of suppliers on various levels like Tier1, Tier2 and so on. The above figurative layout can be supported by the process/material flow diagram as shown below:

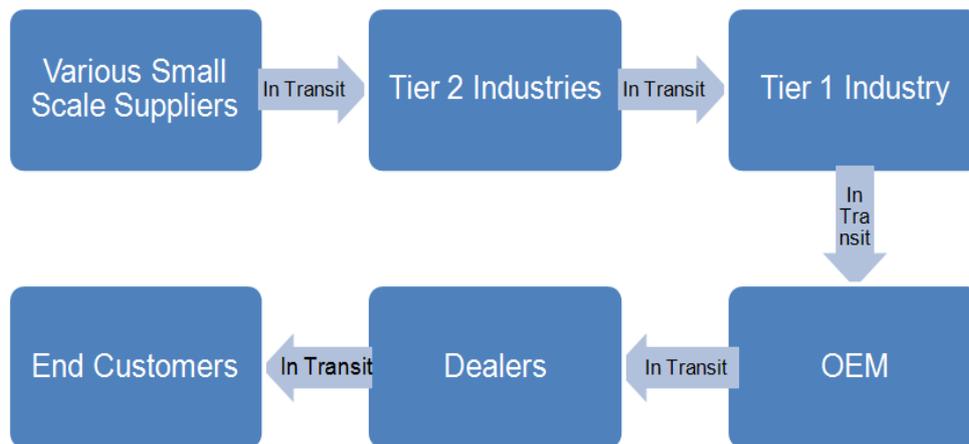


Figure 2: Automotive Complex SCM Network Layout

Source: Saini & Bhardwaj, (2016)

The above explanation and representation must have presented a complex reality of an automotive SCM practices.

LITERATURE SURVEY

Some of important and relevant research study those are somehow related to the subjected study or analysis can be presented as follows:

1. Experts maintain that global supply chains are more difficult to manage than domestic supply chains as has been demonstrated (Mac Carthy & Atthirawong, 2003). Thus it says that Indian market or industry should be ready for the coming challenges in the futuristic global era of time
2. SCM is the collection and interaction of the elements that impact system-level qualities, properties, characteristics, functions, behaviour, and performance (Cloutier et al., 2010).
3. Industry here in India spend approximately 14% of GDP on logistics as compared to 10-11% that in Europe and 9% in United States of America as has been shown (Sunil Giri et al., 2014). Thus it is implied that there is so much left towards betterment for SCM in India.
4. [Supply Chain Management means coordinating, scheduling and controlling procurement, production, inventories and deliveries of products and services to customers. The SCM is the backbone of Ecommerce, a very critical component of E-commerce. Supply Chain Efficiency means having the right product at the right place at the right time, can save money/reduce costs, and can enhance cash utilization.](#) A significant number of companies in the United States have implemented their Internet platform for Supply Chain Efficiency in the past 2 to 3 years, and the large of them will follow in the next few years (Shaojun & Shensheng, 2015)
5. Sumit Guliyani (2001) has performed a case study on MSIL Gurgaon and found that Poor transportation is affecting the implementation of lean, total logistics cost and hence competitiveness of Industries in India.
6. Davinder Saini (2016) conducted a research Hitachi automotive industries of India and pointed out some of

important issues and hindrances which are affecting Indian automotive SCM practices a lot.

7. Davinder Saini (2016) conducted a research work to find out the top level issues and concerns on the way of good SCM practices with the support of GKN Driveline India Limited.
8. Davinder Saini (2016) conducted a sequential research work for India's leading 2-wheeler industry Hero Moto Corp and reflects similar results with those of his earlier results.

Study and Analysis Gap

Observing the various research work and literature that had been done or is being going on (some of which have been tried to present here), it may be clearly understood that there are numerous scholars which are working on SCM and associated various sectors but very few are available which involved with Indian SCM issues and challenges, so in this study we will try to explore Indian automotive SCM issues, challenges, concerning factors, variables and will seek to point out the factors, issues which can be generalise with respect to Indian Automotive industries.

Objective of the Study

Here in this study, the results drawn in the form of top ranked issues with GKN Driveline India Limited and Hero Moto Corp. will be analysed and then a generalisation will be done to find out general (common) factors to both.

METHODOLOGY

In Order to Perform the Study, the Following Steps Undertaken

1. Selection of the Issues factors which may affect /contribute the SCM services. (Davinder, 2016)
2. Preparation of the questionnaire through which the response from the respondents (of GKN Driveline India Limited and Hero Moto Corp) was recorded. (Davinder, 2016)
3. Compilation of the response in Microsoft Excel and hence replicating the same in the graphical form.
4. Highlighting the top contributing factors, Comparison of the results with respect to both industries
5. Generalising/concluding the factors/contributors for consideration in other similar industry as well.

ISSUES AND HINDRANCES FACTORS

Table 1

SCM ISSUES			
Level 1 Hierarchy		Level 2 Hierarchy	
Notation	Category	Notation	Questions
AA	Time Management	AA1	On-time delivery of firm's product to customer end
		AA2	On-time delivery of purchased materials for firm's use
		AA3	Reducing response time with supply chain cycle
		AA4	Timely determine customer's need in future
		AA5	Meeting the prescribed lead times in SCM cycles
AB	Operational Strategy	AB1	To increase Just-In-Time facility of the firm
		AB2	Discussing firm's future needs with the suppliers
		AB3	Requiring suppliers to put their facility closer to our facility
		AB4	Putting self producing facility nearby customer
		AB5	To participate supplier's sourcing decision
		AB6	To get feedback on customer service & performance from customers

Table 1: Contd.,

AC	Future Strategy	AC1	To improve integration among supply chain activities
		AC2	To create an environment of trust among all concerning supply chain members
		AC3	Adopting a Third-party supply chain management services
		AC4	Creating supply chain management teams that include members from different companies
		AC5	Involving all members of own firm's supply chain in own product/service/marketing plans

SURVEY QUESTIONNAIRE



**Department of Production & Industrial Engineering, PEC University of Technology, Chandigarh
Supply Chain Management Issues in Indian Automotive Industries-A Survey**

Dear Sir/Madam,

This survey examines various aspects of supply chain management practices in an organisation. Your participation is critical to the success of the study. All responses will be kept confidential and shall not trace to individual respondents. There are no right or wrong answer to the following questions. We are only interested in your assessment of your organisation's activities.

You will be asked questions concerning the company's current business practice. If you are unable to complete the questionnaire yourself, please entrust the task to another person, who is knowledgeable about supply chain management practices, supply chain integration and performance. The questionnaire should take about 15 minutes to complete. Kindly spare a few minutes from your busy schedule to complete the questionnaire as your participation shall be esteemed & valued in this study.

Please fill the following personal details.

Name- Company Name-

Department- Designation- E-mail-

A-Corporate strategy and supply chain management issues

A Some issues related to Supply chain management are given below. Respondents are requested to give their perception regarding importance of the issues from least importance to most important.

- A.1 On-time delivery of firm's product to customer end
 Very Important Important Neutral Unimportant Very Unimportant
- A.2 On-time delivery of purchased materials for firm's use
 Very Important Important Neutral Unimportant Very Unimportant
- A.3 Timely determine customer's need in future
 Very Important Important Neutral Unimportant Very Unimportant
- A.4 To increase Just-in-Time facility of the firm
 Very Important Important Neutral Unimportant Very Unimportant
- A.5 To improve integration among supply chain activities
 Very Important Important Neutral Unimportant Very Unimportant
- A.6 To get feedback on customer service & performance from customers
 Very Important Important Neutral Unimportant Very Unimportant
- A.7 Reducing response time with supply chain cycle
 Very Important Important Neutral Unimportant Very Unimportant
- A.8 Discussing firm's future needs with the suppliers
 Very Important Important Neutral Unimportant Very Unimportant
- A.9 To create an environment of trust among all concerning supply chain members
 Very Important Important Neutral Unimportant Very Unimportant
- A.10 Requiring suppliers to put their facility closer to our facility
 Very Important Important Neutral Unimportant Very Unimportant
- A.11 Adopting a third party supply chain management services
 Very Important Important Neutral Unimportant Very Unimportant

A.12 Putting self producing facility nearby customer
 Very Important Important Neutral Unimportant Very Unimportant

A.13 Creating supply chain management teams that include members from different companies
 Very Important Important Neutral Unimportant Very Unimportant

A.14 To participate supplier's sourcing decision
 Very Important Important Neutral Unimportant Very Unimportant

A.15 Involving all members of own firm's supply chain in own product/service/marketing plans
 Very Important Important Neutral Unimportant Very Unimportant

A.16 Meeting the prescribed lead times in SCM cycles
 Very Important Important Neutral Unimportant Very Unimportant

Figure 3

Please note for the simplicity Questions here in questionnaire are numbered as A1, A2 and so on for SCM Issues whereas in the graphs and hierarchical table are grouped as AA, AB and AC for SCM issues.

COMPILATION AND RESULTS

Time Management Group

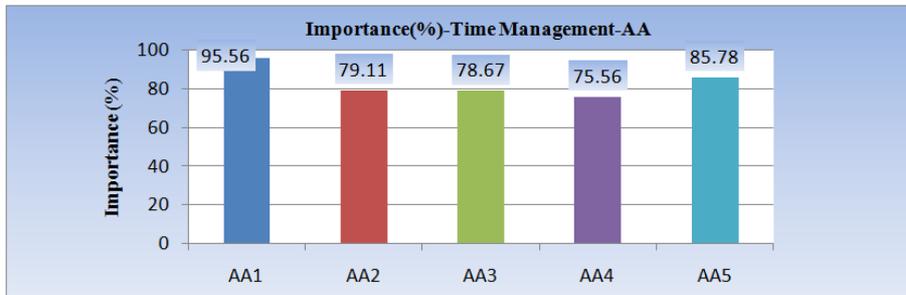


Figure 4: GKN Driveline India Results

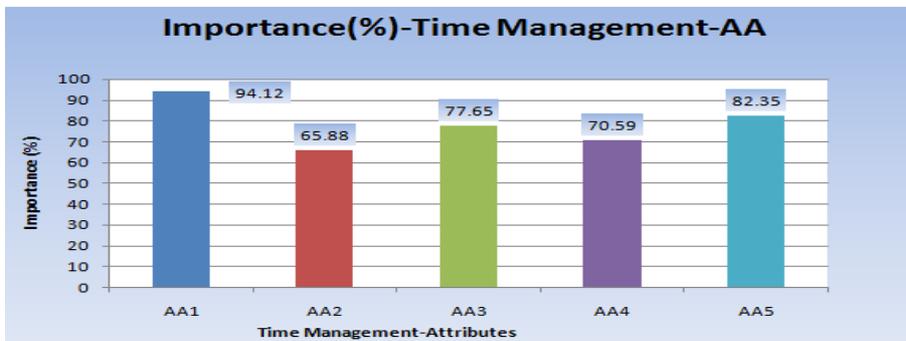


Figure 5: Hero Moto Corp Results

Operational Strategy Group

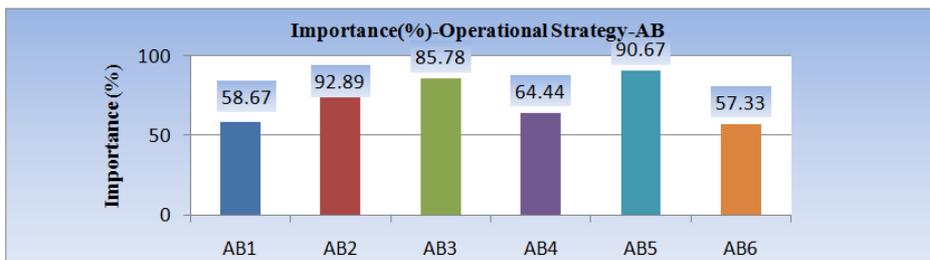


Figure 6: GKN Driveline India Results



Figure 7: Hero Moto Corp Results

Future Strategy Group

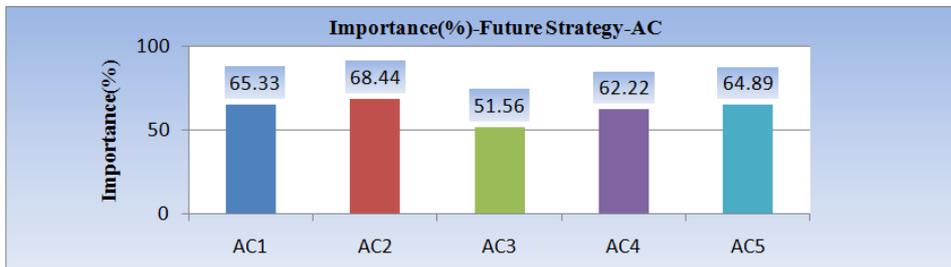


Figure 8: GKN Driveline India Results



Figure 9: Hero Moto Corp Results

COMPARISON OF RESULTS

The comparison of the results for top 3 attributes/ factors can be shown as in below table:

Table 2: Comparison of Results

Factor	Rank					
	GKN Driveline India Limited			Hero Moto Corp		
Group	1	2	3	1	2	3
Time Management	AA1	AA5	AA2	AA1	AA5	AA3
Operational Strategy	AB2	AB5	AB3	AB5	AB3	AB2
Future Strategy	AC2	AC1	AC5	AC2	AC1	AC5

GENERALISATION/CONCLUSIONS

On the behalf of above table, considering the 2 factors as the most favourable to present in other similar industries we can conclude them as below:

Table 3: Generalised Factors Table

Group	Generalised Factors	
	Notation	Name
Time Management	AA1	On-time delivery of firm's product to customer end
	AA5	Meeting the prescribed lead times in SCM cycles
Operational Strategy	AB2	Discussing firm's future needs with the suppliers
	AB5	To participate supplier's sourcing decision
Future Strategy	AC2	To create an environment of trust among all concerning supply chain members
	AC1	To improve integration among supply chain activities

SUGGESTION FOR FUTURE STUDY

The above concluded factors can be considered as the vital factors to examine and improve any automotive sector SCM services.

Observing this study and after undergoing the topic, it may be suggested that more rigorous study and analysis is required for the subjected platform industries. Since India is a developing country or we should say that the top most developing country, so we need to do some serious research on SCM practices being followed not just in automotive sector of the country but in other sectors as well, so that it can keep the growth predicted and on track. SCM is like the back bone of any industry or any country.

REFERENCES

1. Automotive (2006). Automotive Mission Plan 2006-2016 – A Mission for Development of Indian Automotive Industry. Ministry of Heavy Industries & Public Enterprises, Government of India. <http://dhi.nic.in>
2. Bhardwaj S. and Jawalkar C.S. (2015). A study on supply chain issues of Indian Railway in Samastipur division using AHP technique. IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE), Vol. 4, PP 62-67.
3. Davinder Saini (2016). SCM Issues and Hindrances in leading Automotive Organisation- GKN Driveline India Limited. International Journal of Logistics & Supply Chain Management Perspectives, Vol-5, Number -3, PP-2409-2416
4. Davinder Saini & C. S. Jawalkar (2016). SCM Complexities and its associated challenges in the Indian Automotive Industry. I-managers's Journal of Mechanical Engineering, Vol. 6, No.1, PP 1-8.
5. Davinder Saini (2016). A Study based on SCM Challenges and associated financial aspects in Hitachi Automotive Systems. International Journal of Applied Financial Management Perspectives, Vol. 5, No. 3, PP 2598-2605.
6. Davinder Saini (2016). SCM Issues and Hindrances in leading 2-wheeler organisation 'Hero Moto Corp'. International Journal of Trade and Global Business Perspectives, Vol. 5, No. 3, PP 2944-2951
7. <http://www.ibef.org/industry/india-automobiles.aspx> (08/05/2016)
8. Lee H.L and Ng S.M (2007). Introduction to the special Issue on Global Supply Chain
9. Management. Production and Operations Management, Vol. 6 (3), PP 191-192.

10. Mac Carthy & Atthirawong (2003). Factors Affecting Location Decisions in International operations – A Delphi study. International Journal of Operations & Production Management Vol. 23 No. 7, PP 794-818.
11. R. Cloutier, G. Muller, D. Verma, R. Nilchiani, E. Hole, and M. Bone (2010).The concept of Reference Architectures. Syst Eng, Vol.13, No.1, PP 14–27
12. Ray, S.,(2012).Economic Performance of Indian Automobile Industry: An Econometric Appraisal. Business Intelligence Journal, Vol. 5, No.1.
13. Shaojun & Shensheng (2015). The Role of Supply-Chain Management in E-commerce. unpan1.un.org/intradoc/groups/public/documents/un/unpan001216.pdf (23/05/2016)
14. Souresh Bhattacharya, Dr. D. Mukhopadhyay and Dr. Sunil Giri,(2014). International Journal of Managing Value and Supply Chains (IJMVSC) Vol.5, No. 2.
15. Sumit Gulyani (2001).Effects of Poor Transportation on Lean Production and Industrial Clustering: Evidence from the Indian Auto Industry.World Development Vol. 29, No-7, PP- 1157-1177.
16. <http://www.dataquestcorp.com/supply-chain-management.html> (2/06/2016)

