



A STUDY ON SUPPLY CHAIN MANAGEMENT PRACTICES IN AUTOMOBILE COMPANIES IN CHENNAI

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Abstract

The automobile companies in India are witnessing many acceptable and effective transformations and the policy instruments are encouraging them to adopt efficient supply chain management practices for improving their production and sales performance and competitiveness. The findings elucidate that strategic supplier partnering, customer relationship management, information sharing, internal lean practice and capacity and production planning are main supply chain management practices adopted by automobile companies. Significant difference exists amongst demographics of employees and supply chain management practices in automobile companies. Strategic supplier partnering, information sharing, customer relationship management, internal lean practice and capacity and production planning have positive and significant impact on performance of automobile companies. Therefore, automobile companies should adopt e-procurement whenever necessary and their business partners must keep completely informed about problems in business. Automobile companies should give sufficient lead times to their suppliers and they must employ modern production planning and programmes and they should adopt flexible production capacity plans if possible.

Key Words: *Automobile Companies, Employees, Performance, Supply Chain Management Practices.*

1. Introduction

Supply chain management is the integration of business activities of business partners from transformation of raw materials in to the products that are delivered to end users or customers, consisting of all kind of all intermediate functions of processing, transportation, storage and selling of those products to customers (Wisner et al 2012). Supply chain management is an assembly of organization participated directly in the forward and backward movement of information on service, products and financial resources from the point of production to sales or customers (Mentzer et al 2001). Further, supply chain management provides advantage and supremacy for companies to coordinate their activities in order to attain higher degree of operation and balancing interaction among various players in the supply chain management (Lambert and Cooper, 2000).

The manufacturing companies are putting a lot of efforts to increase their performance by adopting variety of supply chain management practices in order to meet the demands of customers and make them satisfaction. Meanwhile, supply chain management practices generate reliable and flexible partners in supply chain and manage them efficiently. The adoption of supply chain management practices is inevitable because they reduce cost of operations and sharing of quality information among players in the supply chain and it is also an inseparable element of corporate social responsibility of manufacturing companies (Wei and Xiang, 2013). The automobile companies in India are witnessing many acceptable and effective transformations and the policy instruments are encouraging them to adopt efficient supply chain management practices for improving their production and sales performance and competitiveness.



Therefore, it is necessary to study supply chain management practices in automobile companies in Chennai since it the automobile hub of India.

2. Review of Literature

Agus (2011) found that adoption of modern technologies, strategic supplier partnership, innovation and lean production were significantly influencing quality of products and performance of manufacturing firms.

Kushwaha (2012) concluded that customer relationship management, distribution management and information and communication were supply chain management practices adopted by firms and they had significant impact on their performance.

Ghatebi et al (2013) revealed that sharing of information, quality of information and customer relationship management were major supply chain management practices in organizations and they had affected their performance and competitiveness.

Dubihlela and Omoruyi (2014) indicated that supply chain management practices were positively and significantly influencing performance of and medium size enterprises. Strategic supplier partnership, sharing of information and adoption of modern technologies were important supply chain management practices adopted by them.

Spina et al (2015) showed that inventory and production management, logistics, distribution, collaboration of suppliers and customers demand forecasting and sales were main supply chain management practices followed among enterprises and they had significant impact on their performance.

Shukla (2016) found that supplier partnership, information sharing, customer relationship management, logistic and production planning had positive and significant influence on operational performance of manufacturing firms.

Wijetunge (2017) concluded that quality and sharing of information, strategic supplier partnership, internal lean and customer relations had positive and significant relation with performance of small and medium sized enterprises.

Ahmed (2018) revealed that external and internal practices, management support, production and design and logistics and transport practices had positive and significant influence on performance of textile industrial enterprises.

Khalil (2019) indicated that information quality, learn practices, internal process and innovation were positively and significantly affecting performance of small and medium size enterprises.

Siahaan et al (2020) showed that quality of information, strategic supplier partnership, and information sharing and customer relationship had positive and significant impact on performance of organizations.

3. Methodology

The present study is conducted in Chennai. Random sampling method is used to select employees working in automobile companies. Data are gathered from 180 employees working in automobile



companies with the help questionnaire. Percentage is used to know demographics of employees. Mean and standard deviation are worked out to understand supply chain management practices in automobile companies. ANOVA test and t-test are applied to examine difference amongst demographics of employees and supply chain management practices in automobile companies. The regression analysis is employed to assess impact of supply chain management practices on performance of automobile companies.

4. Results

4.1. Demographics of Employees

The demographics of employees are given in Table-1. Two third of employees is male (66.11 per cent), near to half of them are falling in to age group of 26 – 30 years (45.00), nearly half of them are B.E. holder (48.33 per cent), higher than two fifth of them are bearing working experience of 5 – 8 years (41.11 per cent) and nearly two fifth of them are having monthly salary of Rs.20,001 – Rs.30,000 (38.88 per cent).

Table-1. Demographics of Employees

Demographics	Number (n = 180)	Percentage
Gender		
Male	119	66.11
Female	61	33.89
Age		
21 – 25 years	17	9.44
26 – 30 years	81	45.00
31 – 35 years	53	29.45
36 – 40 years	29	16.11
Education		
Diploma	59	32.78
B.E.	87	48.33
B.Tech.	34	18.89
Working Experience		
1 – 4 years	66	36.67
5 – 8 years	74	41.11
9 – 12 years	40	22.22
Monthly Salary		
Less than Rs.20,000	50	27.78
Rs.20,001 – Rs.30,000	70	38.88
Rs.30,001 – Rs.40,000	37	20.56
More than Rs.40,000	23	12.78

4.2. Supply chain management practices in automobile companies

The supply chain management practices in automobile companies are given below as.

4.2.1. Strategic Supplier Partnering

The strategic supplier partnering in automobile companies is given in Table-2.



Table-2. Strategic Supplier Partnering in Automobile Companies

Strategic Supplier Partnering	Mean	Standard Deviation
Automobile company is relying on some reliable suppliers	3.78	0.73
Automobile company is relying on some high standards suppliers	3.80	0.85
Automobile company is selecting suppliers based on quality criterion	3.85	0.38
Automobile company is maintaining long term relation with its suppliers	3.83	0.76
Automobile company is doing e-procurement	3.35	0.60

The employees are agreed with automobile company is relying on some reliable suppliers, automobile company is relying on some high standards suppliers, automobile company is selecting suppliers based on quality criterion and automobile company is maintaining long term relation with its suppliers, while, they are neutral with automobile company is doing e-procurement.

4.2.2. Customer Relationship Management

The customer relationship management in automobile companies is given in Table-3.

Table-3. Customer Relationship Management in Automobile Companies

Customer Relationship Management	Mean	Standard Deviation
Automobile company is clearly prioritizing its customers	3.90	1.05
Automobile company is interacting with its customers at regular interval	3.88	0.91
Automobile company is getting feedback regularly from its customers	3.92	1.03
Automobile company is assessing satisfaction of its customers frequently	3.80	0.89
Automobile company is generally fulfilling expectation of its customers	3.77	0.99

The employees are agreed with automobile company is clearly prioritizing its customers, automobile company is interacting with its customers at regular interval, automobile company is getting feedback regularly from its customers, automobile company is assessing satisfaction of its customers frequently and automobile company is generally fulfilling expectation of its customers.

4.2.3. Information Sharing

The information sharing in automobile companies is given in Table-4.

Table-4. Information Sharing in Automobile Companies

Information Sharing	Mean	Standard Deviation
Automobile company is sharing information efficiently with its all divisions	3.75	0.87
Automobile company is communicating its requirements and changes to its business partners well in advance	3.73	0.93
Automobile company's business partners are sharing information regularly among them	3.67	0.82
Automobile company's business partners are keeping completely informed about problems in business	3.39	1.07
Automobile company's business partners are sharing information of main business operations among them	3.63	0.77

The employees are agreed with automobile company is sharing information efficiently with its all divisions, automobile company is communicating its requirements and changes to its business partners



well in advance, automobile company’s business partners are sharing information regularly among them and automobile company’s business partners are sharing information of main business operations among them, while, they are neutral with automobile company’s business partners are keeping completely informed about problems in business.

4.2.4. Internal Lean Practice

The internal lean practice in automobile companies is given in Table-5.

Table-5. Internal Lean Practice in Automobile Companies

Internal Lean Practice	Mean	Standard Deviation
Automobile company is attempting to decrease waste of time in its operations	3.84	0.85
Automobile company is continuously concentrating on improvement of quality	3.81	0.78
Automobile company is supplying materials as per demand of customers	3.71	0.82
Automobile company is pushing its suppliers to small lead times	3.33	1.05
Automobile company is streamlining activities of its suppliers	3.69	0.92

The employees are agreed with automobile company is attempting to decrease waste of time in its operations, automobile company is continuously concentrating on improvement of quality, automobile company is supplying materials as per demand of customers and automobile company is streamlining activities of its suppliers, while, they are neutral with automobile company is pushing its suppliers to small lead times.

4.2.5. Capacity and Production Planning

The capacity and production planning in automobile companies is given in Table-6.

Table-6. Capacity and Production Planning in Automobile Companies

Capacity and Production Planning	Mean	Standard Deviation
Automobile company is adopting green technologies for its operations	3.87	0.57
Automobile company is employing modern production planning and programmes	3.37	0.87
Automobile company is alerting its production mix as per demand in market	3.76	0.72
Automobile company is using customer linked production strategies	3.79	0.68
Automobile company is adopting flexible production capacity plans	3.30	0.98

The employees are agreed with automobile company is adopting green technologies for its operations, automobile company is alerting its production mix as per demand in market and automobile company is using customer linked production strategies, while, they are neutral with automobile company is employing modern production planning and programmes and automobile company is adopting flexible production capacity plans.

4.3. Demographics of employees and supply chain management practices in automobile companies

To examine difference amongst demographics of employees and supply chain management practices in automobile companies, t- test and ANOVA test are applied and results are given in Table-7.



Table-7. Demographics of Employees and Supply Chain Management Practices in Automobile Companies

Particulars	t-Value / F-Value	Significance
Gender and Supply Chain Management Practices	4.118** (t-value)	.000
Age and Supply Chain Management Practices	5.724** (F-value)	.000
Education and Supply Chain Management Practices	5.842** (F-value)	.000
Working Experience and Supply Chain Management Practices	5.536** (F-value)	.000
Monthly Salary and Supply Chain Management Practices	5.675** (F-value)	.000

** Significance at 1% level

The F-values and t-value are elucidating that there exists significant difference amongst demographics of employees and supply chain management practices in automobile companies.

4.4. Impact of Supply Chain Management Practices on Performance of Automobile Companies

The regression analysis is employed to assess impact of supply chain management practices on performance of automobile companies and the result is given in Table-8. R^2 is 0.60 and adjusted R^2 is 0.58 and these measures imply that the model is in good fit. F-value is 26.928 revealing that the model is significant.

Table-8. Impact of Supply Chain Management Practices on Performance of Automobile Companies

Supply Chain Management Practices	Partial Regression Coefficients	t-Value	Significance
Intercept	1.119**	12.976	.000
Strategic Supplier Partnering (X_1)	.394**	7.892	.000
Customer Relationship Management (X_2)	.352**	6.924	.000
Information Sharing (X_3)	.375**	7.348	.000
Internal Lean Practice (X_4)	.338**	6.685	.000
Capacity and Production Planning (X_5)	.316**	6.476	.000
R^2	0.60	-	-
Adjusted R^2	0.58	-	-
F	26.928**	-	.000

** Significance at 1% level

Strategic supplier partnering, information sharing, customer relationship management, internal lean practice and capacity and production planning are having positive and significant impact on performance of automobile companies.

5. Conclusion

The above finding explicates that strategic supplier partnering, customer relationship management, information sharing, internal lean practice and capacity and production planning are main supply chain management practices adopted by automobile companies. Significant difference exists amongst



demographics of employees and supply chain management practices in automobile companies. Strategic supplier partnering, information sharing, customer relationship management, internal lean practice and capacity and production planning have positive and significant impact on performance of automobile companies. Therefore, automobile companies should adopt e-procurement whenever necessary and their business partners must keep completely informed about problems in business. Automobile companies should give sufficient lead times to their suppliers and they must employ modern production planning and programmes and they should adopt flexible production capacity plans if possible.

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