



A STUDY ON “IMPACT OF SUPPLY CHAIN MANAGEMENT ON PROBLEMS FACED AND PROSPECTS OF EMPLOYEES IN FREIGHT LOGISTICS COMPANIES”

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ABSTRACT: The term “Supply Chain Management” was coined in 1982 by Keith Oliver of Booz, Allen and Hamilton Inc. But the discipline and practice has been in existence for centuries. The terms Logistics and Supply Chain Management are used interchangeably these days, but there is a subtle difference that exists between the two. ‘Logistics’ has a military origin, and used to be associated with the movement of troops and their supplies in the battlefield. But like so many other technologies and terminologies, it entered into the business lexicon gradually and has now become synonymous with the set of activities ranging from procurement of raw materials, to the delivery of the final polished good to the end consumer

KEYWORDS: Logistics management, Supply chain management.

INTRODUCTION: Reduction has to be a continuous improvement programme rather than a one-time attempt, keeping in mind the ever demanding customers who want a better-quality- product at a lower price. Thus supply chain cost reduction is one of the most critical tasks facing the Indian companies. When the competition is no longer among individual companies but among entire supply chains, every area of end to-end cost reduction needs to be looked into. Therefore, this research focuses on the subject of being able to be most cost- effective and do better customer services, by customising the supply chain strategies.

OBJECTIVES OF THE STUDY:

- To study the organizational details of executives responsible for SCM practices and the various elements of supply chain management practices
- To analyse supply chain systems and their benefits in the study domain
- To ascertain the problems in implementing the supply chain management in manufacturing companies
- To identify the impact of supply chain management organisational efficiency
- To examine the influence of organisational details of respondents and various suitability of the SCM systems on benefits and problems in manufacturing sectors.

- To analyse the influence of benefits and problems of SCM on the manufacturing companies

NEED FOR THE STUDY:

Supply chain management spans all movement and storage of raw materials, work-in-process inventory, and finished-goods from the point of origin to the point of consumption (supply chain)

REVIEW OF LITERATURE:

Jones and Riley (1985) - "Supply chain management deals with the total flow of materials from supplier through end-users..."

Houlihan (1988) - Differences between supply chain management and classical materials and manufacturing control

Stevens (1989) - "The objective of managing the supply chain is to synchronize the requirements of the customer with the flow of materials from suppliers in order to effect a balance between what are often seen as conflicting goals of high customer service, low inventory management, and low unit cost

La Londe and Masters (1994) - Supply chain strategy includes: two or more firms in a supply chain entering into a long-term agreement; development of trust and commitment to the relationship. the the integration of logistics activities involving the sharing of demand and sales data; ... the potential for a shift in the locus of control of the logistics process."

Cooper et al. (1997) - Supply chain management is "... an integrative philosophy to manage the total flow of a distribution-channel from supplier to the ultimate user."

Monczka, Trent, and Handfield (1998) - SCM requires traditionally separate materials functions to report to an executive responsible for co-ordinating the entire materials process, and also requires joint relationships with suppliers across multiple tiers. SCM is a concept, "whose primary objective is to integrate and manage the sourcing, flow, and control of materials using a total systems perspective across multiple functions and multiple tiers of suppliers."

Peter F. Drucker, 1998 the supply chain is not a chain of businesses with one-to-one, business-to-business relationships, but a network of multiple businesses and relationships

Bowers, 1997 SCM deals with total business-process excellence and represents a new way of managing the business and relationships with other members of the supply chain

Christopher, 1992 the ultimate success of the single business will depend on management's ability to integrate the company's intricate network of business relationships

Walker W.T.(2005) lists out various significant threads of developments in production and inventory planning and control. The supply chain networks involve five principles (velocity, variability, vocalize, visualize and value) to analyze a competitor's network, to rationalize an existing network and to design, operate and optimize a new network.

Gregor Dudek and Hartmut Stadler (2005) proposes a non-hierarchical, negotiation-based scheme which can be used to synchronize the plans between two independent supply chain partners linked by material flows. The author attempts to link and coordinate planning between isolated parts of Supply Chain through Supply Chain planning matrix. He advocates Collaborative planning between adjacent planning domains.

Mehra (2005) discusses various views and contributions of various authors writing on the critical issues of managing supply chains, specifically, topics, such as relationship, quality, performance, integration, responsiveness, risk management strategies, agility and incentive systems in the supply chains are addressed

RESEARCH METHODOLOGY:

The Review of Literature identifies the gap in the Laterature. There are few studies about the SCM implications in manufacturing Industry and supply chain management in India. The marketing demand, systems, practices, procedures, standards, cultures and labour content and labour relations are different. Hence their suitability and adoptability are limited.

RESEARCH DESIGN:

In line with the research objectives, the following methodology is adopted. It is explained under six headings namely. Sources of data, Sample size, Questionnaire design. Scale development, Pilot study and Data analysis and Statistical Tools companies in Chennai and their T1 and T2 suppliers. The secondary data is collected from books, journals and web sites etc..

SAMPLING TECHNIQUE:

The respondents are selected from Production Planning and Supply Chain Management Departments of companies and suppliers. The population of manufacturing company is unknown. At the first stage 655 questionnaires are circulated to above said respondents by following convenient sampling method. Only 398 respondents returned their responses. Out of the 398, 17 responses are found to be incomplete and cannot be used for Research. The remaining 381 are completely filled and used for the Research. Hence the sample size of the Research is 381. Care is taken while selecting the respondents to see that the selected sample represents the universe.

ANALYSIS PERTAINING TO OBJECTIVE 1**Position in company**

Position	Frequency	Valid Percent
Sr. Manager	27	7.1
Manager	196	51.4
Dy. Manager	158	41.5
Total	381	100.0

International Research Journal

IJNRD

Research Through Innovation

Age in company

Age	Frequency	Valid Percent
30 - 40	176	46.2
41 - 50	108	28.3
Above 50	97	25.5
Total	381	100.0

Experience

Years	Frequency	Valid Percent
0 - 5	135	35.4
6 - 10	118	24.7
Over 10	128	41.7
Total	381	100.0

Educational Qualification

Major	Frequency	Valid Percent
Technical Education	219	57.5
NON - Technical Education	162	42.5
Total	381	100.0

Opinion of executives to have a separate logistics department in manufacturing companies

Opinion	Frequency	Percent	Valid Percent	Cumulative percent
Yes	224	84.9	84.9	84.9
No	57	15.1	15.1	100.0
Total	381	100.0	100.0	

Clear logistics Strategic plan

Opinion	Frequency	Percent	Valid Percent	Cumulative percent
Yes	287	75.3	75.3	75.3
No	94	24.7	24.7	100.0
Total	381	100.0	100.0	

Standard software packages procedures

Opinion	Frequency	Percent	Valid Percent	Cumulative percent
Yes	246	64.6	64.6	64.6
No	135	35.4	35.4	100.0
Total	381	100.0	100.0	

One sample statistic for elements of SCM

Elements of SCM	N	Mean	Std. Deviation	Std. Error Mean
Close partnership with supplies	381	4.483	.685	.071
Close partnership with customers	381	4.387	.676	.070
JIT supply	381	4.397	.739	.076
e-procurement	381	4.473	.600	.062
Outsourcing	381	4.408	.679	.070
Subcontracting	381	4.526	.669	.063
3PL	381	4.397	.677	.070
Plan strategically	381	4.473	.716	.074
Supply Chain Benchmarking	381	4.333	.742	.076
Few Suppliers	381	4.516	.774	.080
Holding safety stock	381	4.413	.756	.078
Use of external consultants	381	4.365	.869	.090
Others	381	4.215	.895	.092

Material Requirement Planning (MRP)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	164	43.0	43.0	43.0
Standard Package	139	36.6	36.6	79.6
Not in use	78	20.4	20.4	100.0
Total	381	100.0	100.0	

Manufacturing Resources planning (MRPII)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	139	36.6	36.6	36.6
Standard Package	148	38.7	38.7	75.3
Not in use	94	24.7	24.7	100.0
Total	381	100.0	100.0	

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Enterprise Resource planning (ERP)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	148	38.7	38.7	38.7
Standard Package	139	36.6	36.6	75.3
Not in use	94	24.7	24.7	100.0
Total	381	100.0	100.0	

Warehouse Management System (WMS)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	197	51.6	51.6	51.6
Standard Package	115	30.1	30.1	81.7
Not in use	69	18.3	18.3	100.0
Total	381	100.0	100.0	

Customer Relationship Management (CRM)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	188	49.5	49.5	49.5
Standard Package	127	33.3	33.3	82.8
Not in use	66	17.2	17.2	100.0
Total	381	100.0	100.0	

Supplier Relationship Management (SRM)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	164	43.0	43.0	43.0
Standard Package	139	36.6	36.6	79.6
Not in use	78	20.4	20.4	100.0
Total	381	100.0	100.0	

Advanced Planning System (APS)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	164	43.0	43.0	43.0
Standard Package	139	36.6	36.6	79.6
Not in use	78	20.4	20.4	100.0
Total	381	100.0	100.0	

Just In Time (JIT)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	164	43.0	43.0	43.0
Standard Package	135	35.5	35.5	78.5
Not in use	82	21.5	21.5	100.0
Total	381	100.0	100.0	

E-Commerce

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	152	39.8	39.8	39.8
Standard Package	135	35.5	35.5	75.3
Not in use	94	24.7	24.7	100.0
Total	381	100.0	100.0	

Decision support/expert system

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	184	48.4	48.4	48.4
Standard Package	127	33.3	33.3	81.7
Not in use	70	18.3	18.3	100.0
Total	381	100.0	100.0	

Radio Frequency Identification (RFID)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	160	41.9	41.9	41.9
Standard Package	131	34.4	34.4	76.3
Not in use	90	23.7	23.7	100.0
Total	381	100.0	100.0	

Electronic Data Interchange (EDI)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	168	44.1	44.1	44.1
Standard Package	160	41.9	41.9	86.0
Not in use	53	14.0	14.0	100.0
Total	381	100.0	100.0	

Transport Management System (TMS)

Option	Frequency	Percent	Valid Percent	Cummulative Percent
Custom made	176	46.2	46.2	46.2
Standard Package	152	39.8	39.8	86.0
Not in use	53	14.0	14.0	100.0
Total	381	100.0	100.0	

ANALYSIS PERTAINING TO OBJECTIVE 4**KMO and Bartlett's Test**

KMO measure of sampling adequacy		.811
Bartlett's Test of Sphericity	Approx. Chi-Square	746.972
	Df	136
	Sig.	.000

Total Variance Explained

Component	Initial Eigen			Extraction Sums of Squared Loadings			Rotation Sums Values of Squared Loadings		
	Total	% of Cumulative Variance %	Cumulative Variance %	Total	% of Cumulative Variance %	% of Cumulative	Total	Variance	% of Cumulative
2	1.968	37.551	37.551	6.384	37.551	37.551	3.583	21.079	21.079
3	1.247	11.579	49.130	1.968	11.579	49.130	2.549	14.997	36.075
4	1.167	7.333	56.463	1.247	7.333	56.463	2.378	13.990	50.065
5	1.008	6.865	63.328	1.167	6.865	63.328	1.826	10.744	60.809
6	0.887	5.929	69.257	1.008	5.929	69.527	1.436	8.448	69.257
7	0.728	5.220	74.777						
8	0.627	4.280	78.757						

9	0.570	3.685	82.442						
10	0.497	3.335	85.798						
11	0.411	2.923	91.136						
12	0.353	2.415	93.210						
13	0.337	2.074	95.195						
14	0.266	1.984	96.760						
15	0.231	1.565	98.111						
16	0.176	1.359	99.152						
17	0.144	0.848	100.00						

Rotated Component Matrix (a)

	Component				
	1	2	3	4	5
Introduce production planning and control system	.815				
Refines the inventory control system	.773				
Insists to follow periodic quality certifications	.758				
Helps to adopt corporate social responsibility	.660				
SCM is the performance measurement indicator	.634				
Helps to carry out expansion plans	.613				
Helps to integrate all the departments		.774			
Helps the organization in involving HR performance		.721			
SCM is performance measurement indicator		.690			
Helps refine the infrastructure development and facilities		.587			
SCM helps to control expenditure in the organization			.782		
Helps to give proper responses to customers on their complaints			.739		
SCM helps to adopt technology and flexibility			.733		
Human behaviour has effectiveness on supply chain and customer services				.773	
A minor change in demand has significant effectiveness on supply chain variation				.763	
Helps to achieve bench marking against industry leaders					.796
Encourages to learn skills, knowledge acquirement in organization					.604

Final Cluster Centers of executives perception towards

	Cluster	
	1	2
Periodic controls	2.28	4.51
Constructive integration	2.58	4.44

Technological augmentation	2.22	4.44
Best customer service	2.67	4.52
Skill developments	4.00	4.38

Number of Cases in each Cluster of executives perception toward effectiveness of

Cluster	1	107.000(28.1%)
	2	274.000(71.9%)
Valid		381.000(100%)
Missing		.000

Crosstab for the association between clusters of prospects of SCM and effectiveness of SCM

			Effectiveness		Total
			1	2	1
Prospects	1	Count	78	94	172
		% within Prospects	45.3%	54.7%	100.0%
	2	Count	29	180	209
		% within Prospects	13.9%	86.1%	100.0%
Total		Count	107	274	381
		% within Prospects	28.1%	71.9%	100.0%

Chi-Square Tests for the association between clusters of prospects of SCM and effectiveness of SCM

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11.356(b)	1	.001		
Continuity Correction(a)	9.845	1	.002		
Likelihood Ratio	11.576	1	.001		
Fisher's Exact Test				.001	.001
Linear-by-Linear Association	11.234	1	.001		
N of Valid Cases	381				

Crosstab for the association between clusters of problems of SCM and effectiveness of SCM

			Effectiveness		Total
			1	2	1
Problems	1	Count	53	90	143

		% within Problems	37.1%	62.9%	100.0%
	2	Count	53	185	238
		% within Problems	22.3%	77.7%	100.0%
Total		Count	106	275	381
		% within Problems	27.8%	72.2%	100.0%

Chi-Square Tests for the association between clusters of problems of SCM and effectiveness of SCM

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.351(b)	1	.025		
Continuity Correction(a)	1.677	1	.195		
Likelihood Ratio	2.311	1	.128		
Fisher's Exact Test				.025	.098
Linear-by-Linear Association	2.326	1	.127		
N of Valid Cases	381				

Crosstab association between clusters of problems and procedure in case of non conformities regarding SCM in manufacturing companies

		Need for logistics department		Total	
		1	2	1	
Effectiveness	1	Count	91	16	107
		% within Effectiveness	85.1%	14.9%	100.0%
	2	Count	233	41	274
		% within Effectiveness	97.8%	17.2%	100.0%
Total		Count	324	57	381
		% within Effectiveness	85.1%	14.9%	100.0%

Crosstab association between clusters effectiveness and clear logistics strategic plan in manufacturing companies

		Need for logistics department		Total	
		1	2	1	
Effectiveness	1	Count	87	20	107
		% within Effectiveness	81.3%	18.7%	100.0%

			Soft Package		Total
			1	2	1
Effectiveness	1	Count	74	33	107
		% within Effectiveness	69.2%	30.8%	100.0%
	2	Count	172	102	274
		% within Effectiveness	72.2%	42.8%	100.0%

	2	Count	201	73	274
		% within Effectiveness	84.4%	30.6%	100.0%
Total		Count	288	93	381
		% within Effectiveness	75.6%	24.4%	100.0%

Chi Squares test for association between clusters effectiveness and clearlogistics strategic plan in manufacturing companies

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.587(b)	1	.444		
Continuity Correction(a)	.248	1	.618		
Likelihood Ratio	.608	1	.436		
Fisher's Exact Test				.594	.315
Linear-by-Linear Association	.580	1	.446		
N of Valid Cases	381				

Crosstab association between clusters effectiveness and procedure for non-conformities regarding SCM in manufacturing companies Soft package

Total	Count	246	135	381
	% within Effectiveness	64.6%	35.4%	100.0%

Chi-Squares test for association between clusters effectiveness and procedure for non-conformities regarding SCM in Manufacturing companies

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.350(b)	1	.554		
Continuity Correction(a)	.123	1	.726		
Likelihood Ratio	.355	1	.551		
Fisher's Exact Test				.634	.367
Linear-by-Linear Association	.347	1	.556		
N of Valid Cases	381				

FINDINGS, SUGGESTIONS AND CONCLUSIONS:

FINDINGS:

The sample unit consists of 7.1% Sr. Manager, 51.4% managers and 41.5% deputy managers in manufacturing companies. In an age wise distribution 46.2% of employees in the age group of 30 to 40 years, 28.3% of employees between 41 to 50 years and 25.5% of the employees in the age of above 50 years. The percentage analysis revealed that 35.4% of employees have five years of experience, 33.6% of the employees have more than 10 years of experience and 30.9% of the employees have 6 to 10 years of experience. 41.7% of the organization involve in both manufacturing and trading organization, 33.6% of them are only manufacturing organization and 24.7% only do trading. 57.5% of the employees with experience in SCM have technical educational qualification and 42.5% of the employees have non-technical education. 84.9% of the executives of manufacturing companies agreed that their organizations have separate logistics department for the smooth flow of supply chain management practices and 15.1% feel that there is no need to have a separate logistics department. 75.3% of the executives of manufacturing companies have clear logistics strategic plan for the smooth flow of supply chain management practices. 24.7% feel that there is no need to have a logistic strategic plan. 64.6% of the executives of manufacturing and trading companies use standard software packages for handling supply chain whereas 35.5% of the executives in the organization are not interested in using standard software packages in handling supply chain.

SUGGESTIONS AND RECOMMENDATIONS:

Based on the findings emerged from the analysis of the data collected through questionnaires and interactions with the manufacturing company executives, the followingsuggestions are offered to improve the SCM Practices, which are prevalent in companies.

In the manufacturing companies, SCM practices may be accelerated through effective implementation of change management techniques and restructuring the basic environment to increase the individual and organizational efficiency. The supplier and customer needs to be totally identified in all manufacturing companies to avoid supply chain breakage. This would help the companies to attain maximum efficiency of the organization within the limited resources.

The logistic strategic planning in manufacturing companies need to be revamped to meet the present innovative technological requirements of the suppliers and customers. Managers of manufacturing companies should be trained adequately to be able to use stateof the art technology. Separate training and development wing may be created to discuss the technological developments and innovations in SCM practices. It is necessary to make SCM training cost effective and link it to business strategy and goal.

The separate logistic department must be sound enough, so as to aid the process of just in time supply out sourcing and third party logistics. The format of the SCM should be modified to facilitate further refinements and improvements in tune with the changes in the organisational structure,systems and procedures, work technology, information technology and other environmental factors. Incentive and reward systems based on individual and team achievement need to be introduced for best SCM practices.

Since the managers of manufacturing companies are well acquainted with methods of SCM, internal orientation and external chains, they may be further enlightened through both internal and external training programmes to achieve their desired goals of SCM in their organisations.

Periodic evaluation programmes and clinics by the top management may be conducted to interact with all the employees individually. It would enable them to express their opinion about the present scenario of the SCM effectiveness s and developmental activities.

Measures must be taken to implement SCM techniques in T1 and T2 suppliers to increase productivity and profitability. The production planning must be redesigned toavoid the chain break of SCM.

The collective and equal enthusiasm must be created among all the suppliers during economic upswing to practice effective SCM and they might be told the significance of management strategic activities as the long term process to accrue maximum prospects.

The production department should organize classes, debates, panel discussions etc. to create a view among the executives that SCM is an integrated system meant for every one in an organization.

The efforts must be made by the HR departments to restructure all the HR policies and review the system to generate application of shop floor production activities in SCM..

Special care must be taken by the quality department to monitor the short term effects of ISO and ERP practices on productivity and profitability and the long term prospectsof buildinggood developmental climate Concerted efforts must be made by T1 and T2 suppliers to restructure production planning control system and implementing effectively. Much more focus and emphasize onidentifying and developing production and inner and hidden potential for the own and organizational betterment in the present competitive industrial and economic scenario.

Orchestration of SCM members must be done periodically to evaluate the increase in productivity and profitability during economic upswing and recession.

CONCLUSION:

The supply chain is considered as the most significant resource activating all other resources in manufacturing industry which are production driven. The supply chain objectives are accomplished by strengthening the management strategic activities, maintaining the production level, to maximize their production potential. Strong management strategic activities initiate creative skills and initiate thesuppliers to innovate new products and

services. Shop floor production activities are fulfilled through conducive supplier development, production planning and developmental climate prevailing in the organisation. New dimensions of Orchestration of SCM in the form of discussions on production, performance measurement, manufacturing reviews are to be incorporated to retain production capacity.

Training and development program are found to be popular among the new product development scenario during economic upswing and useful to increase productivity and profitability. Accurate evaluation of performance measures adds impetus to the companies' goodwill and promotes customer loyalty. Appropriate quality assessment system followed by the automobile companies through Self evaluation, Appraisers' report and Reviewers' report reflects on the attachment of the suppliers to the company. Developing core competencies and managerial capabilities increases the value of the production force. The automobile Companies providing supply chain opportunities are able to retain quality of production. The management prefer the effective supply chains during economic upswing and recession and challenging work involving cutting edge technology.

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QUESTIONNAIRE

1. Name of the Company :
2. Location :
3. Position in Company :
4. Age :
5. Experience :
6. Nature of organisation :
7. Educational qualification :
8. Does you company have a separate logistics department?
Yes No
9. Does your company have a clear logistics strategic plan?
Yes No
10. Your company have a Standard software packages procedures
Yes No
11. Which of the following you think that your company needs to do in or order to manage its supply chain better?

Mark **Y** in the all the apply

	Improve	Start Implementing	Satisfied already	Not appropriate
a) Close partnership with suppliers				
b) Close partnership with customers				
c) JIT supply				
d) e-procurement				
e) Outsourcing				
f) Subcontracting				
g) 3PL				
h) Plan strategically				
i) Supply Chain Benchmarking				
j) Few suppliers				
k) Many suppliers				
l) Holding safety stock				
m) Use of external consultants				
n) Other (<i>specify</i>)				

12. Do you have procedures in place in case of non-conformities regarding SCM?

Yes No

13. What types of systems are currently in use in your company to support Supply Chain Management?

14. If None now, do you plan to install any one of the below?

Mark **Y** in all that apply

	Custom -made	Standard package	Not in use
A. Material Requirements Planning (MRP)			
B. Manufacturing Resources Planning (MRPII)			
C. Enterprise Resource Planning (ERP)			
D. Warehouse Management System (WMS)			
E. Supply Chain Management (SCM)			
F. Customer Relationships Management (CRM)			
G. Supplier Relationships Management (SRM)			
H. Advanced Planning System (APS)			
I. Just In Time (JIT)			
J. E-commerce			
K. Decision support / expert system			
L. Radio Frequency Identification (RFID)			
M. Electronic Data Interchange (EDI)			
N. Transport Management System(TMS)			
O. Others (<i>specify</i>)			

15. In what level your company is facing the below problems when using these systems?

Mark **Y** in all that apply

	No problem at all	Little problem	Some problem	Significant problem	Serious problem	Don't know
	(1)	(2)	(3)	(4)	(5)	
Resistance to change from employees						
Resources shortages e.g. no maintenance and update						
Skills shortages e.g. Computer illiteracy within the company						
Insufficient vendor support						
Hidden cost						
Integration with existing system						
Integration with supplier's system						
Integration with customer's system						
Possibility of chain failure						
Lack of supplies from tier 1 and tier 2 supplier						
Difficulties during economic upswing						
Difficulties during economic recession						
Hindrances from management strategic activities for effective SCM						
New product developments gives additional burden to SCM						
No proper orchestration of SCM members						
No periodic manufacturing reviews						
Failure of inventory control						

16. How much did you actually benefit from using these systems? Mark **Y** in all that apply

	Not at all	Little	Average	Greatly	A lot	Don't know
	(1)	(2)	(3)	(4)	(5)	
AA Better quality of information						
AB Better quantity of information						
AC Flexibility						
AD Reduced lead-time in production						
AE Cost saving						
AF Forecasting						
AG Resource planning						
AH Better operational efficiency						
AI Reduced inventory level						
AJ More accurate costing						
AK Inc coordination with suppliers						
AL Inc coordination with customers						
AM Increased sales						

17. Effectiveness of supply chain management in customer services in manufacturing companies

	More Effective	Medium effective	Neutral	Less effective	No effective
Introduce production planning and control system					
Refines the inventory control system					
Insists to follow periodic quality certifications					

	More Effective	Medium effective	Neutral	Less effective	No effective
SCM is the performance measurement indicator					
Helps the organization in involving HR performance					
SCM is performance measurement indicator					
Helps refine the infrastructure development and facilities					
SCM helps to control expenditure in the organization					
Helps to give proper responses to customers on their complaints					
SCM helps to adopt technology and flexibility					
Human behaviour has effectiveness on supply chain and customer services					
A minor change in demand has significant effectiveness on supply chain variation					
Helps to achieve benchmarking against industry leaders					

Research through innovation