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SUPPLY CHAIN PERFORMANCE INFLUENCER IN CONSTRUCTION DOMAIN: A KEY FACTOR ANALYSIS

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Abstract

Purpose: This study objective to indentify Factors affecting Supply Chain performance of the Construction Companies in India to put forth solutions that can boost the production of construction companies by improving the performance of supply chains.

Methodology: The intentions of pilot research study discover the involvement of supply chain management effectiveness of construction companies. This pilot research study was focused by applying primary research tool called pre-tested questionnaire of five-point likert scale to identify the construction company's success factors. The sample data collected from 150 respondents of 4 construction companies in Bengaluru in the State of Karnataka.

Results: The increasing importance of supply chain relationships in construction companies in respect of project management significance will increase customer satisfaction and achievement of organizational goals. Project management of construction companies had realize that the flow of information in a best coordinated manner with access to information relevant to data to improve customer and supplier relationship. This Project management of construction companies identifies information technology as a best potential tool for improvement.

Unique contribution to theory, practice and policy: Construction companies should also be aware that speed changes in customer demand aspects, globalization of markets trends and changing technology in companies to concentrate efforts on improving competitiveness by way of trying to achieve customer satisfaction through adding more value to their products in Project management of construction companies. The implementation of process strategies of construction companies will improve construction projects quality performance and supply chain management performance.

Keywords: *Supply Chain Performance, Influencer, Construction Domain:*

1.0 INTRODUCTION

Prioritizing the effective factors in the chain in respect of the importance of each can be assessed in the construction projects. By standardizing and improving internal processes and time-efficiency will increase and the quality of construction will improve. The study takes a practical approach in categorizing the effective factors in supply chain management of construction companies in India. By analysis and assessment of factors influencing the supply chain of construction companies in the construction industry is one of the major prerequisites for developing improvement in construction project management. On the other hand the construction companies have realized in the current competitive environment that they cannot manage to handle everything on their own.

Supply chain management of construction companies is a systematic analysis covers the coordination and synchronization of the flow of resources in the construction network of suppliers related, production facilities. The components of this construction company's network play different roles in the supply chain. The process starts from raw materials to suppliers and turns the materials into final products in the construction companies and distributes the end product through distribution centers. The Supply chain management goal to run the aforementioned process in a way that customers are enabled to receive reliable services or products at the lowest cost and quickly in construction companies best project management.

The main goal of supply chain management had to improve supply chain process so as to deliver the product properly to customers with timely and at lowest cost in the construction companies. The observation reveals that supply chain management can improve responsiveness to customers; increase profits had drawn the attention of many managers to the notion of supply chain management in construction companies. The key factors leading construction companies toward supply chain management shows the need for improvement activities, increased outsourcing plan, increased transportation cost; and increased competitive stress, increased globalization.

The supply chain is that network of independent construction companies that are involved through upstream and downstream linkages relevant in the different processes and activities that produce value in the form of products and services in construction companies. The methodology to identify factors in Supply Chain Management construction companies relevant to Benchmarking is always a difficult task to achieve for reasons such as quality, time factor and targeted processes. There need for construction companies planning/research tools to help managers decision by taking vision plan, mission relevant, CSF and key internal business processes construction companies. Construction Company's integration among those tools and procedures is necessary to improve the business process by concentrating best logistics and supply chain factors to improve the construction quality and standards.

1.1 Objectives of the study:

- 1) Determine CSF and key performance factors relevant to construction project management
- 2) To study the construction companies related key factors contribution to improve the quality of products and competitiveness
- 3) To design the best project management system to improve the construction companies profitability and customer satisfaction

- 4) To offer best plans or models to improve construction companies quality policies and project management practices

1.3 Hypothesis:

H1: The Supply Chain Management Performance of construction companies positively affects Business Performance by considering key factors of project management

H2: The Supply Chain Management Performance of construction companies will not absolutely marks Business Recital by considering key aspects of project management

Nominal supply chain management (SCM) has grown into an important means of fortifying competitive lead and varying organizational enactment since competition is less amongst organizations, but supplementary between supply chains. This research hypothesizes and advances three dimensions of SCM exercise (supplier relationship management, manufacturing flow management, and product development and commercialization) and tests the associations between these SCM practices, competitive advantage, and organizational concert.

2.0 METHODOLOGY

The intentions of pilot research study discover the involvement of supply chain management effectiveness of construction companies. This pilot research study was focused by applying primary research tool called pre-tested questionnaire of five-point likert scale to identify the construction company's success factors. The sample data collected from 150 respondents of 4 construction companies in Bengaluru in the State of Karnataka.

3.0 RESULTS

3.1 Key factors affecting on Supply Chain Management

Table1: Key factors affecting on Supply Chain Management

Factors	Percentage of influence on decisions
Technology based CRM	62
Technology services to Suppliers	
Software to serve its Suppliers	55
MIS to functional areas	75
IT Applications	65
Product Quality	82
Process Technology	85
Regulatory Compliance	56
Production Scheduling	64
Distribution System	49

The data for the study was collected from prominent Construction organizations and the relationships proposed in the framework were tested using statistical techniques. The results indicate that enhanced levels of SCM practice can lead to increased competitive advantage and higher organizational performance. These results have value to both to the academic and business worlds as they provide verification of the widely held belief of the advantages of effective supply chain management.

3.2 E-commerce and Supply Chain factors in Construction projects: Factor analysis

Table 2: E-commerce and Supply Chain factors in Construction projects: Factor analysis

System support	Service support	Information support	Service agility
1. Product trial	1. Administrative support on system	1. Availability of hyperlink on website	1. Availability of automated transaction
2. Product returns	2. Stability of system	2. Custom search function	2. Relevant information on website
3. Accurate information on website	3. Ease of transaction process	3. Product variety	3. Simplicity for ease of Understanding
4. Complaint redressal		4. Simplification of user interface	4. Delivery time
5. After sales service			

The objective is to offer the best supply chain encompasses harmonization and information sharing up and down the method among all stakeholders. With skill facilitating evidence flow, a synchronized supply chain can be intended to encounter the tactical, development, and effective objectives of the construction projects.

3.3 Factors of Supply Chain factors contributing for the success of Construction Companies

Table 3: Factors of Supply Chain factors contributing for the success of Construction Companies

Success Factors	Factor Weightage	Average
Technology based Supply Chain	65	35
Planning for Supply Chain	54	46
Supplier Relationship	66	34
Manufacturing Flow	78	22
Customer Services	86	14
Product Development	82	18
Demand Management	76	24
Order Fulfillment	68	32
Audit System	70	30

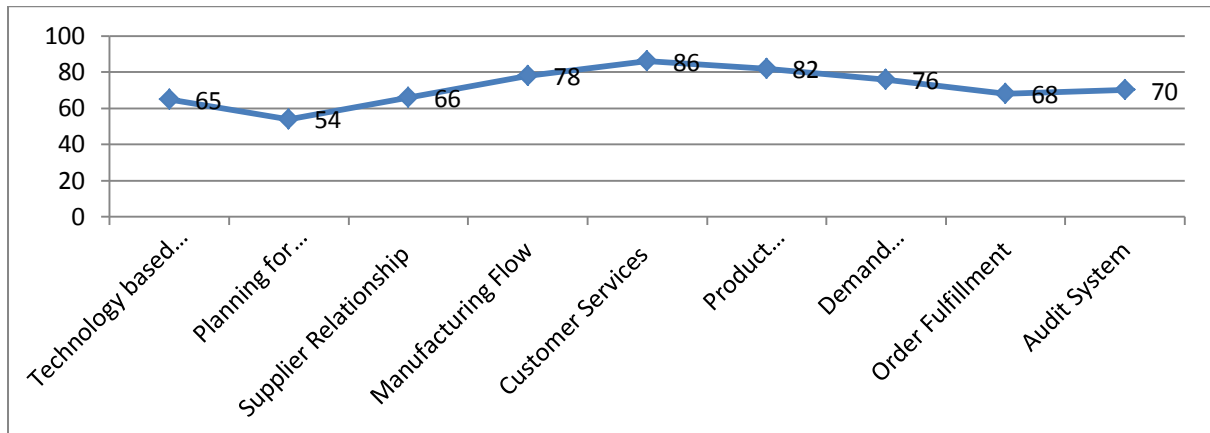


Figure 1: Factors of Supply Chain factors contributing for the success of Construction Companies

3.4 Effectiveness of Supply Chain Management

Table 3: Effectiveness of Supply Chain Management

Effectiveness factors	Excellent	Average
Right selection of Suppliers	54	46
Purchase System	76	24
Transportation	82	18
Project Management	76	24
Stock Management	58	42
Warehouse Management	79	21
Distribution Management	80	20
Quality of Products	66	34
Best MIS	72	28
Adopting Technology changes	64	26
ERP based Solutions	72	28
Managerial efficiency	65	35
Logistic Systems	71	29

3.4.1 Effectiveness of Supply Chain Management

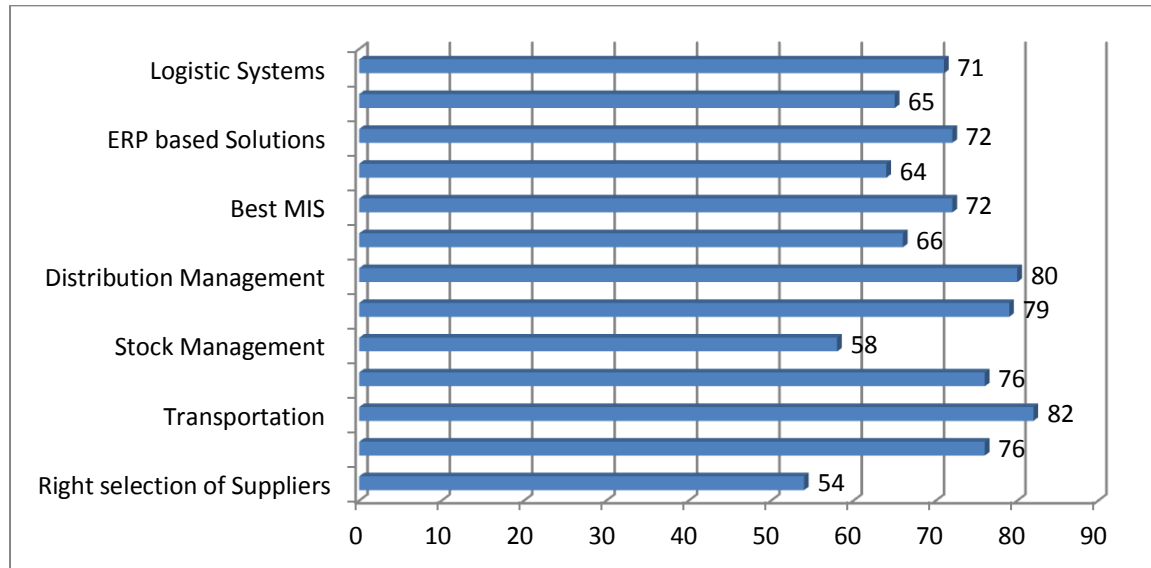


Figure 2: Effectiveness of Supply Chain Management

4.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The increasing importance of supply chain relationships in construction companies in respect of project management significance will increase customer satisfaction and achievement of organizational goals. Project management of construction companies had realize that the flow of information in a best coordinated manner with access to information relevant to data to improve customer and supplier relationship. This Project management of construction companies identifies information technology as a best potential tool for improvement.

Recommendations

Construction companies should also be aware that speed changes in customer demand aspects, globalization of markets trends and changing technology in companies to concentrate efforts on improving competitiveness by way of trying to achieve customer satisfaction through adding more value to their products in Project management of construction companies. The implementation of process strategies of construction companies will improve construction projects quality performance and supply chain management performance.

References:

- Al-Odeh, M., and Smallwood, J. (2012). Sustainable supply chain management: Literature review, trends, and framework. *International Journal of Computational Engineering and Management*, 15(1), 85-93.
- Aref A. Hervani, Marilyn M. Helms and Joseph Sarkis (2005), "Performance measurement for greensupply chain management", *Benchmarking: An international Journal*, Vol. 12, No. 4, pp. 330-352

Bhattacharya A, Jain R, Choudhary A. Green Manufacturing: Energy, Products and Processes, The Green manufacturing report by The Boston Consultancy Group for Confederation of Indian Industry, India, March 17-18, 2011, New Delhi.

Bio-based chemicals: In need of innovative strategies, Chemical Weekly, February 28, 2012.5.Environmental Performance Index (EPI) Survey report, (2010).