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Concept of Supply Chain Management

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ABSTRACT: Supply chain management (SCM) is often a concept that has developed within the manufacturing industry to control logistics. It represents a management process in which enterprises administer and control the worldwide network connected with suppliers, factories, warehouses, distribution centers and retailers by which raw materials are acquired, transformed and delivered to customers. In construction, procurement and procurement similar activities occur during all phases of the construction project. Because of traditional management on the construction process, supplies connected with resources like equipment, labor, material and other services may not be always available on occasion, in right amounts and within the desired quality and cost. So that supply chain management is vital to monitor and control all such logistic actions.

The concept of supply chain management in construction outlining its origins within manufacturing is introduced within this paper. The effectiveness on the supply chain management has been evaluated with its potential benefits on the construction industry. A set of possible barriers, which may affect the effective use of supply chain management concept within the construction industry, has also been presented.

KEY WORDS- Supply Chain management (S.C.M), Total quality management (T.Q.M)

I. INTRODUCTION

Construction is often a vital sector contributing significantly to the economics of all nations. The construction industry must be dynamic to be able to respond to the changes that this world is constantly facing, as well as the actual social, economic, and scientific challenges affecting all companies. The opportunities and problems in construction are wide and varied from those of the last century. The demands regarding clients, companies and employees differ every once in awhile, and thus the vision with the construction industry is often developing; to keep up, management must change far too. This paper will address the growing ought to develop supply chain managing in developing countries, which in turn will help in shaping the goals for the future. Any construction organization needs to have a strategic plan and vision that lead how you can achieve its goals. The key to achieving that sits in successful management, by identifying needs and goals this company wants to achieve. For doing that, supply chain management has to be planned on many amounts.

Supply chain management (SCM) is often a well-established concept within the manufacturing industry even though terminology has changed over time. Ganeshan and Harrison defined supply chain being a network of facilities and distribution options that performs the functions of procurement regarding materials, transformation of these kinds of materials into intermediate and finished products, and distribution of those finished products to absolutely free themes. Supply chains exist with both service and making organizations, although the complexity with the chain may vary significantly from industry to market and firm to corporation.

Concept

Supply chain management involves your strategic and process coordination associated with subcontractors, material suppliers, and information in the supply chain to deliver satisfaction for the ultimate project owner. While each business entity within the supply chain has already been traditionally driven by self-profitability, the idea of supply chain management involves optimization of synergistic relationships between supply chain members to ultimately fulfill the project owner. The concept evolves via controlling the supply chain being a single process rather than being a sum of independent transactional relationships. The expected end result is usually a mutually beneficial, win-win partnership that makes a synergistic supply chain when the entire chain is more effective than the sum its individual parts

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If at all possible, supply chain management represents a win-win, utopian target of circular benefits. Each company in your supply chain obtains a profitability and success simply by creating customer value with regards to a functional, high-quality project at a satisfactory price. Each organization in the supply chain can reduce costs and increase its project performance through supply chain management, thereby enabling the supply chain to provide value to the challenge owner. The satisfied project owner subsequently rewards the supply string with loyal contracting strength, allowing profitability to be transferred down again throughout the supply string. This in turn fosters further supply chain integration in addition to responsiveness, causing the never-ending cycle to repeat.

As stated earlier, a prime contractor just might position a firm being a market leader through exploitation associated with best practice operations, but the nature in the linked firms in your supply chain necessitates that subcontractors and material suppliers must be part of this strategy. The prime contractor cannot become an industry leader without supply string support, and, thus, supply chain management is usually a prerequisite for developing a new competitive advantage for prosperous construction operations.

II. SCM IN CONSTRUCTION

Although engineers, construction managers and contractors will not typically consider the provide chain or SCM, they deal with this supply chain and make SCM decisions each and every day. In construction, supply chain describes the end-to-end “chain” associated with stakeholders and partners who come together both on individual projects and throughout a firm’s business life. In the project, a supply chain includes the owner, planner, designer, architect, manufacture, construction manager, general contractor, subcontractors, suppliers, distributors, in addition to manufacturers. Throughout a firm’s organization life, components of a supply chain also can include accounting, human sources, equipment fleet operations, and many others.

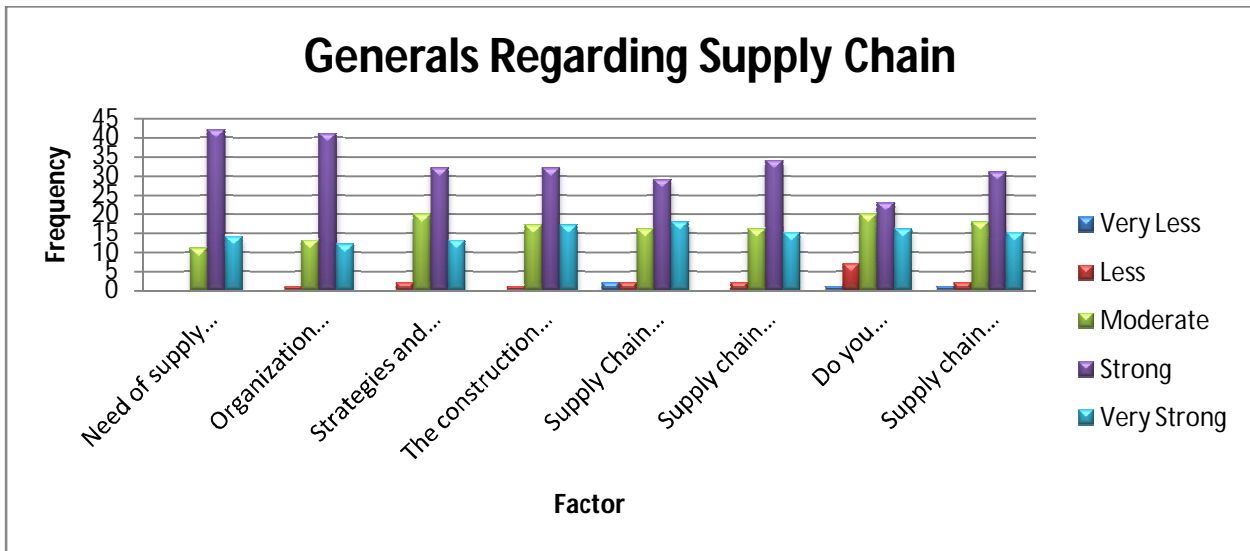
Within the construction challenge, the supply chain could be simply conceived with the owner at the top followed by designer, contractor, specialist contractors/subcontractors/suppliers etc., forming various degrees of supply chain. Demand is seen as flowing down the chain regarding information, e. g. challenge briefs, drawings, schedules, operates orders etc, with a flow associated with goods and materials flowing in the opposite direction.

Generals Regarding Supply Chain	Very Less	Less	Moderate	Strong	Very Strong
Need of supply chain management to your organization	0	0	11	42	14
Organization recognize the benefits that are possible from implementation of supply chain management	0	1	13	41	12
Strategies and methods like Just in time & lean management, etc. are useful for supply chain management	0	2	20	32	13
The construction supply chain is fragmented	0	1	17	32	17
Supply Chain Management is capable for resolving high fragmentation, low productivity	2	2	16	29	18
Supply chain management informs the alternatives of materials & resources available in the local market & worldwide	0	2	16	34	15
Do you think, Short term objectives & price oriented approach persists in the industry??	1	7	20	23	16
Supply chain management is more effective than traditional management	1	2	18	31	15

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III. BENEFITS OF SUPPLY CHAIN MANAGEMENT

The business enterprise agencies often desire to slow up the product or service advancement time period, help the product or service excellent as well as lessen production charges as well as lead instances. Distinct aspects involving organization procedure re-engineering, arrangement, products managing, as well as total quality management (TQM) have been accustomed to accomplish that concentrate on, however good results, with greatest, offers to date been just a few. Supply chain management to its all natural mother nature gets the potential to handle this kind of difficulties as well as problems. This kind of truth continues to be recognized simply by plenty of agencies which acknowledged eventually the fact this constant competition of the organization is usually tied to this dynamics from the present chain(s). This kind of recognition is usually bringing about a large modify in the way agencies connect to his or her present string associates, thus producing far better data communication as well as coordination. An additional benefit could possibly be experienced inside small deal charges while continues to be discovered simply by Stanford ET's. He remarked that the successfully structured present string you could end up small deal charges as well as remarkably reasonably competitive marketplace inside global promotes on account of internalizing this deals between the dealing associates within the string via cohesiveness as well as coordination.

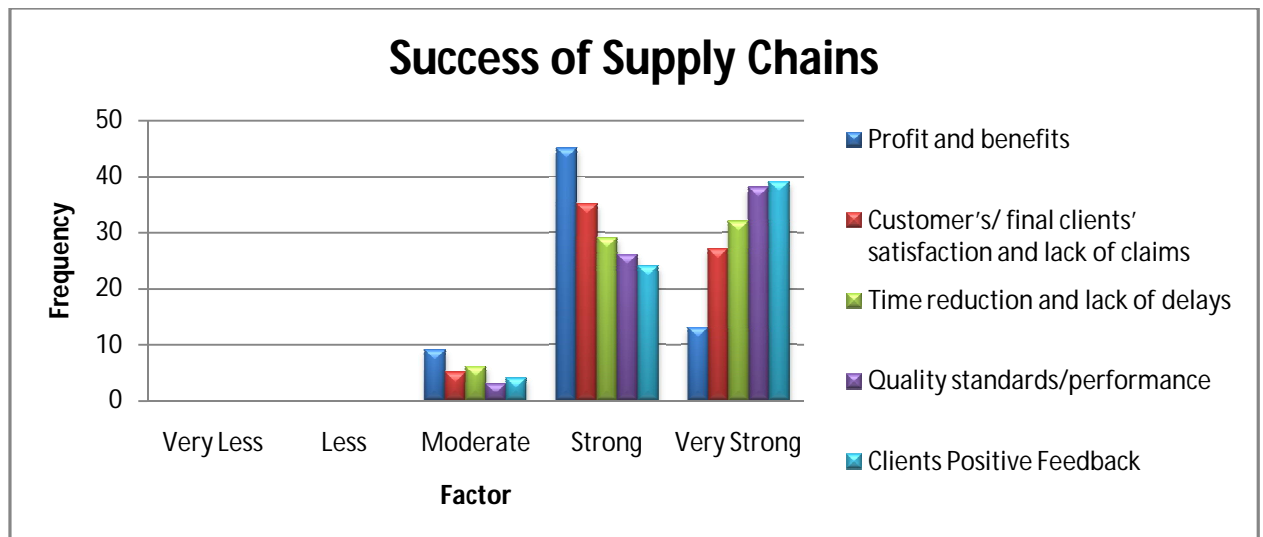
Supply chain management talks about this company overall. It includes not only human relationships using additional operates inside the firm but using most dealing associate human relationships away from firm. This is why Present Chain Administration is usually thought to include 'Visibility' as well as enables advancement of an reliable present as well as require program through the client towards the supplier. Therefore any adviser, by taking any all natural view from the procedure coming from begin to complete, could create a whole policy for this movements over the string of an particular product or service. This sort of setting up may come about between the various functional groupings (sales/marketing, production, distribution) of an vertically bundled company or concerning many self-sufficient businesses within the submitting station (raw stuff suppliers, producers, 3rd party logistics services). This can present far better program, lessen stocks; lessen documents, help combine submitting focuses, as well as lessen travel charges.

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Success of Supply Chains	Very Less	Less	Moderate	Strong	Very Strong
Profit and benefits			9	45	13
Customer's/ final clients' satisfaction and lack of claims			5	35	27
Time reduction and lack of delays			6	29	32
Quality standards/performance			3	26	38
Clients Positive Feedback			4	24	39



Barriers in the Implementation of Supply Chain Management in Construction

The authors have concluded the following reasons for the slow growth of supply chain management in construction.

- Lack of guidance for creating alliances with supply chain partners
- Failure to develop measures for monitoring alliances
- Inability to broaden the supply chain vision beyond the procurement or product distribution to encompass larger business processes
- Inability to integrate the company's internal procedures
- Lack of trust inside and outside a company
- Organizational resistance to the concept
- Lack of integrated information systems and electronic commerce linking firms
- Lack of suitable organizational setup.

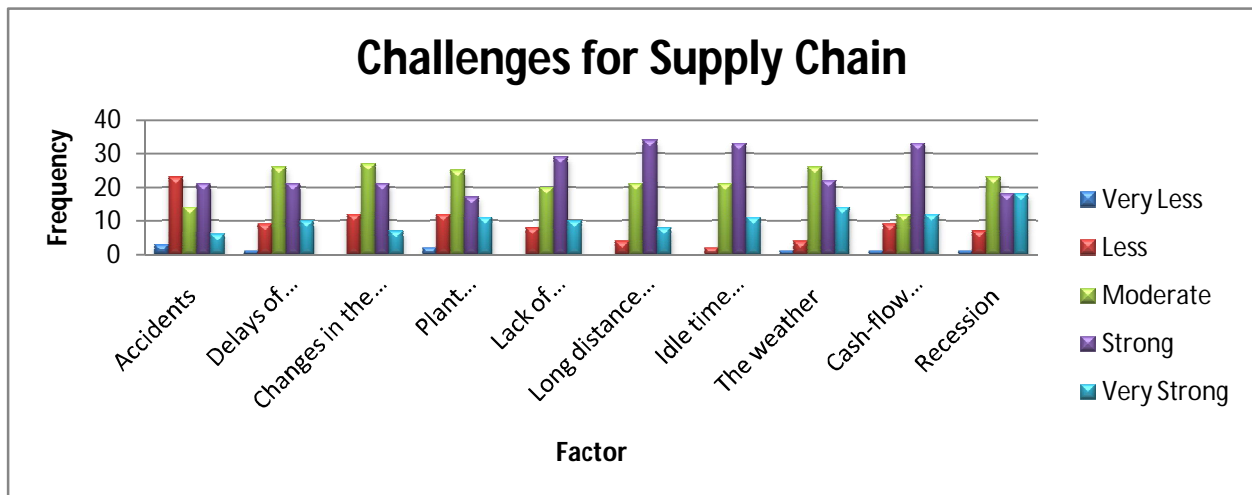
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Challenges in Supply Chain Management

Challenges for Supply Chain	Very Less	Less	Moderate	Strong	Very Strong
Accidents	3	23	14	21	6
Delays of Deliveries & Technical restrictions of deliveries (schedules, weight, rush hours, etc.)	1	9	26	21	10
Changes in the contract and the design/work specification		12	27	21	7
Plant breakdowns and maintenance of machinery	2	12	25	17	11
Lack of information and improper communication form		8	20	29	10
Long distance to suppliers and length of supply chain (number of people involved)		4	21	34	8
Idle time between deliveries and tasks		2	21	33	11
The weather	1	4	26	22	14
Cash-flow Problems	1	9	12	33	12
Recession	1	7	23	18	18



IV. CONCLUSIONS

Supply chain management (SCM) is a good opportunity for the construction industry primarily to scale back cost and time, and thus increase profitability. SCM principles seem to have much toughness to smoothen and integrate the building processes. The supply chains in construction may be divided into two major groups as materials chain and the construction chain, which could help to individual the procurement and management operations.

From the results and discussions obtained after working on the methodology one can conclude that:

- In the local construction industry, the material supply or purchase process takes place in four steps. First is to identify the requirement of the material under the title requisition. Second, requesting the quotations from the suppliers. Third, comparing the quotations sent by the suppliers in various bases and selecting the best one. Ultimately, awarding the purchase order to the supplier selected in the comparison step.

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- The implementation of the supply chain management in the local construction industry is in primary condition. Organizations know the benefits of implementation of supply chain management but actual application is not up to the mark to achieve the sustainable development. There are so many obstacles which affects the growth or development of the supply chain management environment.
- With analysis of questionnaire survey of material supply chain process we come to know that what are the actual problems to be faced in various phases of material supply chain process and what are the key factors which can contribute in the integration of supply chains. Ultimately with help of these two we can make framework which will help the construction industry to mitigate the problems arising during supply chain process, with possible solutions and exact use of key integrating factors for the same.

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