**A Case Study on Supply Chain Management in Residential Building Construction around Mysuru**

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**Abstract**

Supply Chain Management is the coordination, the board and technique that drives the progression of labor and products and combines all cycles that change unrefined components into eventual outcomes or transform raw materials into final products. It comprises the dynamic smoothing out of a business' stock side exercises to boost client worth and gain an upper hand in the commercial center. The essential reason for the supply chain is to satisfy the prerequisite, drive client esteem, further develop responsiveness, work with monetary achievement and fabricate an excellent organization. The construction supply chain assumes a significant part in the development market rivalry. Construction supply chain management helps undertakings by assisting with further developing seriousness, increment benefits and has more command over the various elements and factors inside the venture. The venture examines the development production network attributes, difficulties and issues supply chains experience and the advantages of a coordinated supply chain in the construction sector in Mysuru.

**Introduction**

The management of the progression of labor and products among organizations and areas is known as store network the executives (SCM) and it comprise of the development and capacity of unrefined substances, work-in-process stock, and completed merchandise, as well as start to finish request satisfaction from starting place to point of utilization. Supply chain contains interlocked or interweaved organizations, channels, and hub associations join to give things and administrations to end clients. The "plan, arranging, execution, control, and checking of supply chain exercises fully intent on making net worth, constructing a serious framework, utilizing worldwide coordinated operations, synchronizing supply with request, and estimating execution universally" has been characterized as supply chain management. Modern designing, frameworks designing, tasks the executives, planned operations, obtainment, data innovation, and showcasing all assume a part in SCM, which seeks for a fair methodology.

In supply-chain management marketing channels are extremely significant. . Current supply-chain management research is centered on issues like supportability and risk management, in addition to other things. Supply chain resilience is a fundamental point referenced in SCM. The "applicable qualities" of SCM, moral issues, interior mix, straightforwardness/perceivability, and human resources/ability management from certain perspectives, are subjects that have been underrepresented on the review plan to until. The wide-ranging of actions required to plan, control, and execute a product's flow from materials to production to distribution in the most cost-effective manner is known as supply chain management (SCM). SCM refers to the coordinated planning and execution of operations that maximize the flow of materials, information, and capital in tasks such as demand planning, sourcing, production, inventory management, and logistics, as well as storage and transportation.

**[1] Dr. Ghaith Al-Werikat (2017)** published a paper a **“Supply Chain Management in Construction”** and concluded “Construction companies can custom SCM to gain more control over projects, enhance revenues, and minimize time, cost, and waste. The Construction Supply Chain is made up of several groupings, the largest of which are the material and construction chains. Integrating the construction and material chains facilitates policymaking by enabling more collaboration, smoother information flow, and more efficient information exchange throughout the construction chain”.

**[2] Mamta Negi etal (2017)** studied on “**Sustainable supply chain management in Indian construction Industry”** and said “With an proper synergy between the Construction Project Management Techniques and the Supply Chain Management there are favorable circumstances that can be achieved in reducing delivery time, augmenting the quality, waste minimization, green procurement to strive towards common goal of Internal and External customer satisfaction for sustainable development of the nation in all respect.

**Objectives**

1. Study various parameters of supply chain management influencing the construction in Mysuru Region.
2. Influences & effects of parameters on a Residential building.
3. To recognize and understand the relevant aspects of the relationship between the owner, the builder and the suppliers.

**Methodology**

The Project consists of 4 different stages to find the faults in the supply chain Management in construction related to Mysuru.

* **Stage 1:** Asurvey was conducted with respect to rented tenants to know about their needs of their dream house (1000 samples collected).
* **Stage 2:** Scrutinizing the survey data obtained from the clients and segregating the important needs in a residential building.
* **Stage 3:** To conduct a survey related to construction material manufactures and suppliers in and around Mysuru.
* **Stage 4:** To propose a generic application methodology of supply chain management (SCM) in the residential building construction sector in and around Mysuru.

**Findings from Survey**

1. People of medium income group plan to construct the house both for personal and rent purpose (Even in commercial aspect).
2. People of higher income group, plan to construct the house for personal purpose only (Concept of Duplex buildings).
3. More than 75% of the people who were questioned don’t know about green building concept.
4. People, who knew about green building concept, are hesitant to adopt it, thinking it’s not economical.
5. More than 95% of the people are interested in kitchen and room’s interior design.
6. People knew only about the construction materials which are advertised more on social media platforms.
7. Around 70 – 80 % of the families are dependent on bank loans to construct their houses.



**Fig: Construction Cost Break Down**

**Conclusion**

1. The initial stage in the Supply Chain Management in Construction is purchasing of site, where a client is spending 2 to 3 % of his whole investment of house construction, which can be cut down through newer technologies (use of apps).
2. One of the major problems in terms of SCM in Construction around Mysore is related to the materials such as Cement & Steel which costs around 10 – 15% of his/her investment, where the client is paying more (4% to 5%) as he/she is buying from wholesalers/ retailers. **(Manufacturing Plants for Cement & Steel can be established in and around Mysore)**.
3. More than 5 – 6% of his investment his spent on the transportation of the materials to the site, which can be cut down by 2 to 3% by shaving a transporting carrier (Logistics) system w.r.t construction materials.
4. Government can promote the concept of green building by providing some beneficiary schemes for the construction of houses which inculcate both rainwater harvesting system & solar panels.
5. Supply chain assimilation aids to the effectiveness and stream-lines the intents of all parties convoluted, aiding to achieve goal congruence, efficiency and the minimisation of waste.

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