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## Supply Chain Management System

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**Abstract:** *Leading industry analysts are projecting continued growth for business applications such as Enterprise Resource Planning, Customer Resource Management, and in particular Supply Chain Management. The survey of manufacturers was conducted that supports the analysts' projections. The survey was conducted to determine the extent to which supply chain management techniques and technologies are being used in different sectors, to understand the challenges faced while implementing Supply Chain systems, to identify key barriers to supply chain collaboration, and to understand the state of the market for SCM systems. The survey findings reveal that the companies face a number of challenges while implementing Supply Chain systems in their organizations. And there are identifiable key barriers to supply*

**Keywords:** *Supply Chain Performance. Business Demand Management, Industry, Customer, and Supplier. Resource Planning.*

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### INTRODUCTION

Leading industry analysts are projecting continued growth for business applications such as Enterprise Resource Planning, Customer Resource Management, and in particular Supply Chain Management. The survey of manufacturers supports the analyst's projections. After the years of wildly exaggerated claims and then skepticism about the potential benefits of technology within the supply chain, it has become clear that a certain level of investment is required just to be "in the game." Over the next five years, these initiatives alone will drive significant investments in supply chain technology, and provide a more firm foundation for tracking products in a real time way. In today's global economy where engineering, component manufacturing, assembly, distribution and aftermarket support are frequently done by third parties (who may be located in different countries), managing a supply chain is a significant challenge.

### LITERATURE REVIEW

#### Supply chain management

supply chain management (SCM) approach is progressively recognized by many organizations as a strategy to attain their business goals today. It has become one of the new era paradigms for organizational sustainability and competitiveness. In this aspect, many companies in electronic manufacturing services (EMS) industry of Malaysia have truly striving hard to achieve superior supply chain performance in order to outperform its competitors. Enhancing supply chain performance is a critical approach for achieving competitive advantages for companies. There are few SCM challenges faced by the companies. For instance, the demand from customers is always variable or changing. According to Lummus and Vokurka demand changes are hard to anticipate. Customers are used to requiring products in a short time frame whenever they increase demands without prior alignment with the company. Besides that, there is high supplier dominance in the industries. This means that companies have no power to shape the relationship with the supplier and must accept quality, price decision and terms and conditions that are dictated by the supplier. The relationship with suppliers is inflexible as suppliers impose restricted conditions to the company such as conditions of non-cancelable, non-rescheduling and non-returnable.

### EXPERIMENTAL SETUP

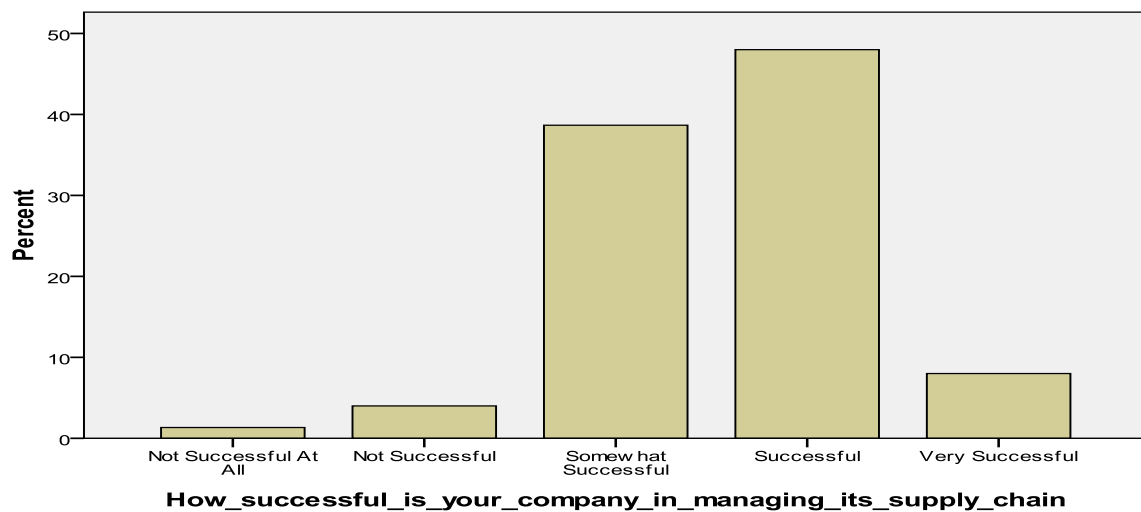
#### Supply-Chain Principles

If supply-chain management has become top management's new "religion," then it needs doctrine. Andersen Consulting has stepped forward to provide the needed guidance, espousing what it calls the "Seven Principles" of supply-chain management. When consistently and comprehensively followed, the consulting firm says, these seven principles bring a host of competitive advantages.

1. Segment customers based on service needs. Companies traditionally have grouped customers by industry, product, or trade channel and then provided the same level of service to everyone within a segment. Effective supply-chain management, by contrast, groups customers by distinct service needs--regardless of industry--and then tailors services to those particular segments.

2. Customize the Supply Chain Management network. In designing their Supply Chain Management network, companies need to focus intensely on the service requirements and profitability of the customer segments identified. The conventional approach of creating a "monolithic" Supply Chain Management network runs counter to successful supply-chain management.
3. Listen to signals of market demand and plan accordingly. Sales and operations planning must span the entire chain to detect early warning signals of changing demand in ordering patterns, customer promotions, and so forth. This demand-intensive approach leads to more consistent forecasts and optimal resource allocation.
4. Differentiate product closer to the customer. Companies today no longer can afford to stockpile inventory to compensate for possible forecasting errors. Instead, they need to postpone product differentiation in the manufacturing process closer to actual consumer demand.
5. Strategically manage the sources of supply. By working closely with their key suppliers to reduce the overall costs of owning materials and services, supply-chain management leaders enhance margins both for themselves and their suppliers. Beating multiple suppliers over the head for the lowest price is out, Andersen advises. "Gain

**How\_successful\_is\_your\_company\_in\_managing\_its\_supply\_chain**



6. Develop a supply-chain-wide technology strategy. As one of the cornerstones of successful supply-chain management, information technology must support multiple levels of decision making. It also should afford a clear view of the flow of products,
7. Adopt channel-spanning performance measures. Excellent supply-chain measurement systems do more than just monitor internal functions. They adopt measures that apply to every link in the supply chain. Importantly, these measurement systems embrace both service and financial metrics, such as each account's true profitability.

**Supply chain performance**

A number of technologies and managerial attention have gone into improving supply chain performance. The increasingly competitive environment calls for speedy, cost efficient, accurate and reliable supply chains. Supply chain management is no longer a matter of operational and functional areas of the firm. Today, it is a strategic issue demanding top-level management attention. The supply chain can have huge leverage on the creation of customer value. Supply chains will fight the new battle for market dominance; as such measurements around the supply chain are critical. If we look at competition today, it is supply chain versus supply chain. This brings out a situation that competitors might focus on developing superior supply chain Performance. Accordingly, companies will have to find or develop metrics measure performance of supply chain.



## **PROCESS MEASUREMENTS**

Key Performance Indicator (KPI) is a performance measure, a yardstick for tracking progress and a tool to achieve a goal. KPI encompasses all areas of Business — Demand Management, Supply, Conversion, and Delivery.

## **PERFORMANCE MEASUREMENT**

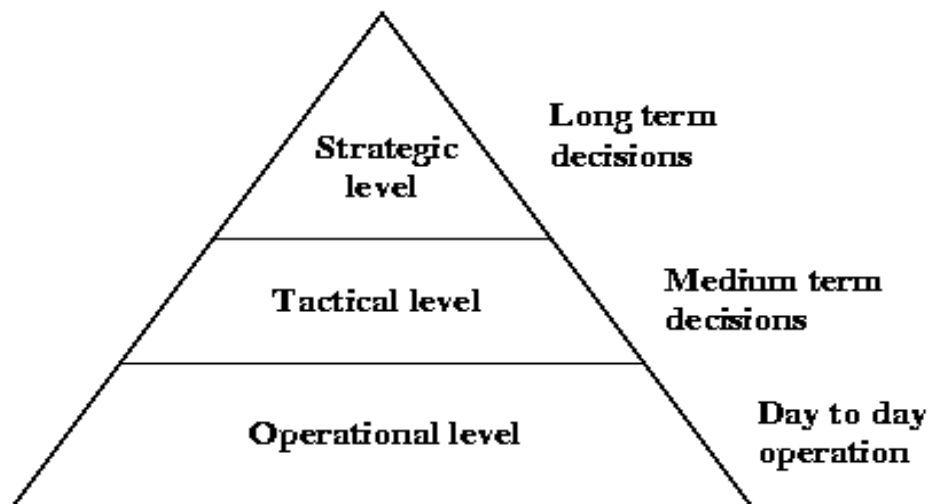
Gunasekaran, Patel and Tirtiroglu explored that SCM needs to be assessed for its performance in order to evolve an efficient and effective supply chain. Swinehart and Smith found that customer satisfaction is increasingly being recognized as an appropriate measure for determining how well a particular organization is accomplishing its mission and while customer satisfaction surveys provide valuable information and may be used to improve the entire operation. Besides that, Liang, Yang, Cook, and Zhu suggested that an appropriate performance measurement system is a critical requirement for the effective management of a supply chain.

Management department functions:

- Inventory management
- Transportation service procurement
- Materials handling
- Inbound transportation
- Transportation operations management
- Warehousing management

## **Objectives of Supply Chain Management**

reducing working capital,  
taking assets off the balance sheet,  
accelerating cash-to-cash cycles,



## **APPLICATION**

Where the technique has been applied Do it right first time makes you think about the Toyota principles, Kaizen and other strategies that have been deployed to improve manufacturing processes and enable production lot sizes of one unit. Japanese companies have been forerunners to implement quality check procedures directly into the manufacturing and assembly process. The objective was to finish each single process step without defects thereby ensuring that pioneered the Total Quality Methods and provided every single employee with the low-resolution image which would not be acceptable, whereas Fig. 3 shows an. Check that the resolution is adequate to reveal the important detail in the figure.

- The colors used in each figure contrast well,
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Aligned with customer requirements, SAP software offers solutions different industries with functionality designed to address requirements unique to each of those industries' business objectives:

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- Higher education
- High technology
- Insurance

Automotive  
• Banking

### **CONCLUSIONS**

Efficient material & supply chain management is crucial for the success of any small scale manufacturing & fabrication project and can be the deciding factor between a successful project and a project full of delays and claims. Better material management methods and decision models are needed to improve the electrical industry current practices, thus increasing efficiency and minimizing costs. An effective supply management system is essential for managing efficient material management to avoid material shortages, misplacements, loss, and theft which might result in increases in crew idle times, loss of productivity and delay of activities. Small scale Electrical industry should implement an efficient material management system due to the fact that in most of the cases they are asked to squeeze their bids in order to keep the costs of a project under budget. In such a case, failures to effectively manage materials could result in decreases in profit or even a loss. The primary goal is to have the material needed, in the amounts needed, with the quality required, and the time that they are needed. Most electrical companies have a material management system that serves their needs, although it could be improved. Standardization of the material management system could be a step forward in improving the system and eliminating some of the bottlenecks.

### **DIRECTIONS FOR FUTURE RESEARCH**

This research established the knowledge and bases that allow re-engineering the current practices for material supply chain management for the electrical fabrication industry. The research provides a framework for the design of a decision support system to assist the decision maker in the construction phase of the project. The implementation of the framework will allow making better decisions on what material to buy when to buy, where to deliver, where to store. This section presents research directions and issues that could be the basis for future research efforts.

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### **REFERENCES**

1. Gunasekaran, A. Patel, C. Tirtiroglu, E. (2001), "Performance measure and metrics inn a supply chain environment", *International Journal of Operations & Production Management* 21 (1/2), pp. 71-87.
2. Handfield, R. B. and Nichols Jr., E. L. (2002), *Supply Chain Redesign: Transforming supply chains into integrated value systems*, FinancialTimes/Prentice Hall, Upper Saddle River, New Jersey
3. Holmberg, S. "A system perspective on supply chain measurement". *International Journal of Physical Distribution & Logistics* 2000; vol. 30;