

Importance of Measuring Supply Chain Management Performance

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Abstract

Due to globalization, customer demand variations and market competition, it is essential for organizations to evaluate and benchmark their Supply Chain Management (SCM) system. Managers are eager to evaluate overall supply chain management system to find out which area in entire supply chain requires more attention in order to remain competitive in market. This paper focuses on why there is a need for a research in measuring supply chain performance, the relevance of the chosen criteria with respect to the major performance issues in a supply chain management and, finally it will provide some future direction on how to develop a model to measure overall supply chain management performance.

Introduction

A supply chain is a system of facilities that procure raw materials, transform them into intermediate goods and then final products, and finally deliver the products to customers through a distribution system that includes a (probably multi-echelon) inventory system. Thus, it spans procurement, manufacturing, and distribution, with effective inventory management as one key element. To fill orders efficiently, it is necessary to understand the linkages and interrelationships of all the key elements of the supply chain [1].

The above definition of a supply chain thus sets the perspective for a compelling need for an elaborate and an integrated performance measurement system. Indeed, the complexity of the supply chain linkages and the conflict of interests amongst collaborative organizations compound the challenge and any proposed performance measurement system requires both an intensive examination of the processes at the interfaces of organizations and an extensive view of an enterprise's own operational environment.

Performance measurement describes the feedback on operations which are geared towards customer satisfaction and strategic decisions and objectives [2]. The performance of each activity can be easily modeled based on its well-defined parameters such as the inventory turnover ratio and the rejection rate of the manufacturing process. There is a lack of models that integrate most of the related major functions in the company [3].

Developing the Principle

Current trends in increasing number of conferences and literature articles shows that supply chain management performance evaluation is the major area for researcher to explore. Many performance measure models are available but all performance measures have different system and different ways for integrating supply chain performance measure. All the existing performance measure system are only capable to answer the basic questions such as what is to be measured, what measures are to be integrated and what is the frequency of integration etc. Therefore, there is a need to develop a supply chain management performance model which integrate all functions of supply chain and measure overall supply chain performance. The model should helps the managers to monitor and guide organization within acceptable and desirable parameters. Figure 1 shows the hierarchical approach that provides the central idea of the entire evaluation process (Figure 1).

Future direction in supply chain management performance measure

The supply chain management is an innovative and a practicable idea that should allow businesses to get a snapshot of their supply chain performance. This shows that there is a need to develop a model that reflects the impact of changes immediately though this impact would only reflect to the degree to which the criteria are important. Since, overall supply chain management depends on many criteria, therefore, multi-criteria decision making tools such as AHP, Fuzzy, DEA can be useful in developing model that evaluate overall supply chain management performance. Developed model should be consist for all sectors, manufacturing or service and measure overall supply chain management performance effectively and efficiently.

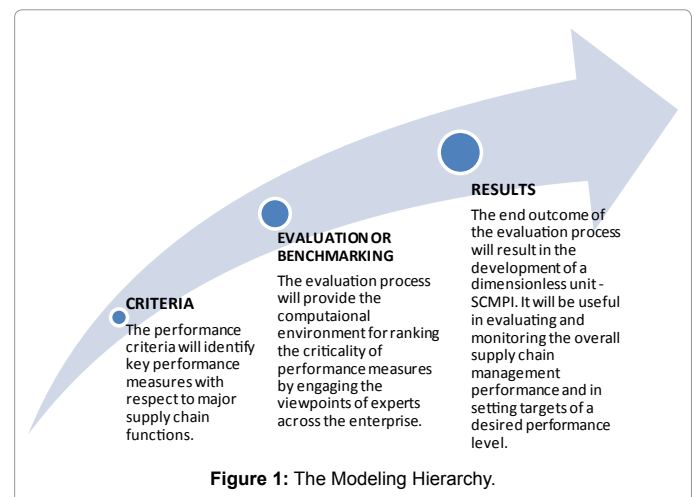


Figure 1: The Modeling Hierarchy.

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Model requirement

- Model should identify and include all major criteria and relevant sub-criteria that required to measure overall supply chain management performance.
- Model should measure overall supply chain performance effectively and efficiently management in all sector such as service or manufacturing.
- The model should be used to evaluate the performance of the organization and benchmark its performance both externally and internally for the ultimate goal of continuous improvement.
- Model should be useful regardless of business nature or size.

Concluding Remarks

As the supply chain management paradigm becomes more pervasive by virtue of global connectivity through advances in information technology and product innovation, the much-hyped need for the 'competitive edge' escalates into a 'cut-throat' competition. The only

way to measure up to this persistent deluge of business opportunism and onus alike is to try to control the transformation processes in a very fundamental way. An effective way to do that is to establish business process model that appeal to reason and are definable at the first place and measurable consequently. And a good way to ensure that such model do evolve reliably is to let the reasoning process surface from a common platform that involves all the stakeholders. This paper highlighted the importance of such a model that can measure overall supply chain management performance. It is also recommended that the developed model can be based on any multi-criteria decision making technique because of the conflicting criteria in developing the performance model.

References

1. Beamon BM (1999) Measuring Supply Chain Performance. *Int J Oper Prod Man* 19: 275-292.
2. Bhagwat R, Sharma MK (2007) Performance Measurement of Supply Chain Management: A Balanced Scorecard Approach. *Comput Ind Eng* 1: 43-62.
3. Dong, Ming (2001) Process Modeling, Performance Analysis and Configuration Simulation in Integrated Supply Chain Network Design. Digital Library and Archives, Virginia Polytechnic Institute and State University, USA.