

Consolidation of performance measures in a supply chain environment

ABSTRACT

Purpose: Many researchers have stressed the importance of using the right measures and metrics to manage a supply chain efficiently and effectively and have developed them from different perspectives. The basic purpose of this paper is to consolidate the measures and metrics that have been developed so far, verify the relevance of these measures from the practitioners, produce a usable list with proper classification (database), and demonstrate the use of this database through a case study.

Design/methodology/approach: An initial list of metrics and measures is consolidated after analyzing the literature (journals and books) and web sites that deal with supply chains and conducting interviews with industry practitioners. A questionnaire is designed with these measures and metrics and is sent to 300 companies within the electronics industry in Malaysia to obtain feedback from the industry practitioners about the relevance of these measures. A case study is conducted with an electronics manufacturing company to demonstrate the use of the database to identify relevant measures and metrics.

Findings: About 838 performance measures form the initial list. From these, the practitioners consider 159 important and very important measures and 135 are in use in the industry. The entire list of measures is classified into the following metrics: Fund flow, Internal process flow, Material flow, Sales and services flow, Information flow, and Partner evaluation. These metrics are further classified into different groups of measures using confirmatory factor analysis.

Research limitations/implications: Only the industry practitioners from electronics industry in Malaysia participate in the study to identify the relevant measures and metrics.

Originality/value: The paper will be valuable to the academicians and practitioners working to develop measures and metrics for manufacturing supply chains.

Keyword: Supply chain management; Electronics industry; Performance measures; Consolidation; Malaysia