The Influence of Supply Chain Management Practices in the Enterprise Performance

Daniel Spina
Fundação Getulio Vargas

Luiz Carlos Di Serio
Fundação Getulio Vargas

Luiz Artur Ledur Brito
Fundação Getulio Vargas

André Luís de Castro Moura Duarte
Insper Instituto de Ensino e Pesquisa

This empirical research identified which supply chain management (SCM) practices should be adopted by managers in order to achieve superior performance for their companies. Approximately 800 worldwide firms were analyzed, spread across 13 different industries, to understand the impact of 31 practices in five enterprise operational performance indicators.

INTRODUCTION

First level headings should be bold, all caps, 11 pt Times New Roman, Left Justified with 1 line space above and below the heading. What practices should supply chain managers adopt to increase operational performance of their processes? This question has been the key motivator in developing this investigation, as many researchers have attempted to understand the effect of adopting practices on company performance (Ahmed et al 1996; Alam et al 2012; Cao e Zhang 2011; Chavez et al 2012; Gimenez et al 2012; Gunasekaran et al 2004; Harrison and New 2002; Hayes and Pisano 1994; Hayes and Wheelwright 1984; Hayes and Upton 1998; Li et al 2005; Liu et al 2013; Lockamy and McCormack 2004; Ramanathan 2012; Sukati et al 2013; Tan 2002).

Some studies, however, have not been conclusive (Ketokivi and Schroeder 2004; Pilkington and Fitzgerald 2006) and others only focus on the impact of practices on organizations' financial performance (Venkatraman and Ramanujam 1986). In addition, the use of context variables provides greater explanatory power in understanding the relationship between practices and performance. What we have seen, though, is that many investigations end up failing to duly explore control variables and tend to deal with the influence of practices in isolation rather than collectively (March and Sutton 1997). In other words, it is important for practices to be connected by multiple variables in order for us to understand the broad effect on enterprise performance.

Hence, the intent of this research was to identify which supply chain management practices are able to increase organizational performance and, consequently, indicate to managers which practices they should incorporate in their business processes. For that purpose, this investigation sought to address previously identified gaps by analyzing over 800 businesses, spread over 13 different industries, to ascertain the effect of 31 supply chain management practices on 5 performance indicators. Finally, the study considered three context variables: industry type, company size and continental region of operation.

LITERATURE REVIEW AND HYPOTHESIS

Supply Chain Management as a Source of Superior Performance

Supply chain management has been emerging as one of the main areas in businesses that can offer sources of competitive advantage (Lockamy and McCormack 2004). Furthermore, the importance of this topic to organizations is reinforced by factors such as increasing competition, globalization, greater product variety, outsourcing, shorter product life cycles, continuous advances in technology and ever-demanding clients (Giunipero et al 2008; Gunasekaran et al 2001; Lee 2002; Li et al 2005; Mentzer et al 2001; McCormack and Lockamy 2004). In addition, the amount of scientific research, congresses and studies has been increasing yearly (Burgess et al 2006; Giunipero et al 2008).

Currently, competition in global markets is much greater between supply chains than between enterprises. For this reason, supply chain management has become a critical factor of success for companies. In this context, collective efficiency requires internal and external partner collaboration throughout the supply chain (Friemann and Verhasselt 2012). According to Alam et al (2012), an effective supply chain must connect the network's members and their respective functions to ensure an uninterrupted flow for balancing supply and demand. To Reiner and Hofmann (2006), the search for improving efficiency has been stimulated not only by companies' individual perceptions, but also throughout the supply chains.

To Chen and Paulraj (2004), the supply chain management construct begins by developing a collaborative advantage, as opposed to Porter's competitive advantage. Likewise, Dyer and Singh (1998) adopt a relational perspective as motivation for obtaining competitive advantage. Therefore, according to Chen and Paulraj (2004), supply chain performance is not affected by a single company, but by the influence of all members in the chain. Thus, one of the tendencies of modern economics is that competition will not remain centralized in firms against firms, but will include supply chains versus supply chains (Lambert et al 1997).

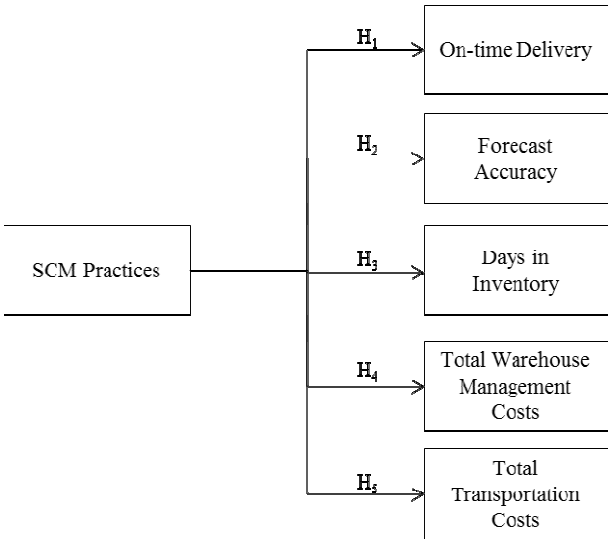
Based on the discussion on supply chain management (Christopher and Ryals 1999; Giunipero et al 2008; Gunasekaran et al 2001; Hendricks and Singhal 2005; Lambert et al 1997; Lee 2002; Li et al 2005; Mentzer et al 2001; McCormack and Lockamy 2004) and the resource-based view, we may say that management practices can offer superior performance to enterprises. Thus, said practices are internal resources and/or competences used to create value (Hayes and Pisano 1994; Hayes and Upton, 1998; Wu et al 2012). As a result, existing competitive differences between companies are explained by how the resources are combined with each other (Barney 1991). In other words, the heterogeneity of practices helps justify the differences in organizations' operational performance (Peteraf and Barney 2003). Table 1 presents the elements found in the literature that address the influence of management practices in supply chain processes.

TABLE 1
SUPPLY CHAIN MANAGEMENT PRACTICES

SCM Practices	Contribution
Collaboration	• Collaboration practice is related to the perspectives of: transaction costs, resource-based view, extended resource-based view and relational view (Cao e Zhang 2011) • VMI (Vendor Managed Inventory) and CPFR (Collaborative Planning Forecasting and Replenishment) programs are examples of collaboration practices (Cigolini, Cozzi and Perona 2004) • Collaboration practices do not involve only technological initiatives, but also simulation and optimization systems: ERPs, MRPs, what-if scenarios (Gimenez et al 2012) • The exchange of information involves sharing critical information, while coordination affects how firms will process such information (Liu et al 2013) • Collaboration practices exalt mutual benefits. Collaboration practices have explained approximately 23,7% of enterprise performance variability (Flynn et al 2010) • Internal and external collaboration practices explained 8,5% of enterprise performance variability in Malaysia (Sukati et al 2013)
Demand and Supply Planning	• Planning practice is based on decision-making that is centralized and in combination with other company areas (Feng 2010) • Practices must incorporate qualitative and quantitative elements in order to improve forecast accuracy: promotions, cannibalization, product life cycle, seasonal variation, trends, prices (Ramanathan 2012) • Planning practices need frequent updating, due to fluctuations in demand, prices, costs, leadtime (Jonsson and Mattssonz 2008)
Inventory, Production and Distribution	• Lean philosophy is a way of minimizing waste in the production process: excess inventory, inactivity, set-up time reduction (Chavez et al 2012; Li et al 2005) • JIT practices seek to minimize the level of inventory, ensure product quality and equipment reliability (Cigolini, Cozzi and Perona 2004) • Production practices (reorder point, kanban, MRP) are applicable according to the type of product and inventory to be employed (Jonsson and Mattssonz 2008) • APS practices use the concepts of finite capacity and prioritization during planning, and not at a posteriori (Jonsson and Mattssonz 2008) • DRP practices use the same logic as MRP to determine which products should be distributed when and where (Cigolini, Cozzi and Perona 2004)
Logistics	• The level of warehouse automatization favors loading and replacing products in a quick and frequent manner (Cigolini, Cozzi and Perona 2004) • Corporate partnerships and arrangements can help in supporting logistical services, transportation and movement (Chen and Paulraj 2004) • Transport process design is needed to support decisions on inventory level and transportation costs (Cigolini, Cozzi and Perona 2004) • Transportation optimization practice is used for the purpose of reducing transportation costs by defining the best route (Cigolini, Cozzi and Perona 2004)

As the object of this study, 5 indicators were selected to measure the correlation between supply chain management practices and enterprise performance. Figure 1 presents the hypotheses defined to answer the research question.

FIGURE 1
HYPOTHESIS – THE INFLUENCE OF SCM PRACTICES IN KEY OPERATIONAL INDICATORS



METHODOLOGY

This study used dependent, independent and control variables. The latter were net revenue, location and industry type. Dependent variables were the performance indicators, tested against the independent variables (supply chain management practices), in order to measure the strength of their relationship. The dependent variables applied were: on time delivery (%), forecast accuracy (%), days in inventory, total warehouse management costs (% of revenue) and total transportation costs (% of revenue). Dependent and independent variables were selected based on the intersection of two sources. The first variables were selected from the SAP Benchmarking survey; these were later crossed with the variables selected from the literature review.

The research method used quantitative, more specifically multivariate analysis. Initially, each variable was described statistically (average, standard deviation, Q1, Q3, median, asymmetry and kurtosis). After that, a series of factorial tests was conducted, so as to abbreviate the group of 31 practices into a smaller set of variables. Finally, the relationships between practice components (independent variables) and performance indicators (dependent variables) were identified by multiple linear regression. Table 3 below details each type of variable used in the investigation.

Multivariate analysis was conducted using a secondary database from the SAP Benchmarking program, which currently covers over 30 business processes, close to 800 performance indicators and upwards of 1200 best practices. This study specifically used the survey on supply chain management in 875 companies, of which 88,9% displayed revenues under 5 billion USD. Regarding location, most of said businesses were in North America (46%), followed by Europe, Middle East and Africa (22%), Asia Pacific (20%) and lastly Latin America (12%).

DISCUSSIONS

The individual average for each type of industry was calculated in descriptive analysis. The results are detailed in Table 3. Generally speaking, the average for all industries was 87,3% in on time delivery and 77,4% in forecast accuracy. Regarding the days in inventory indicator, the general average was 94 days (discounting industries with identified outliers). Warehouse management costs (also discounting outlier industries) averaged at 1,5% of company net revenue. Finally, the average for total transportation

costs was 3,6% of company net revenue (again discounting outlier industries).

TABLE 2
KEY PERFORMANCE INDICATOR MEAN PER INDUSTRY

Industry	Delivery On-time (in %)	Forecast Accuracy (in %)	Days in Inventory (in days)	Warehouse Management Costs (in % of revenue)	Transportation Costs (in % of revenue)
Aerospace	78,16	65,46	316*	137*	23,8*
Automotive	91,48	78,47	61,95	2,439	3,439
Chemicals	81,19	77,95	723*	1,194	4,209
Consumer Products	90,27	75,74	182	31,8*	15*
Engineering Construction	81,64	75	84,3	0,1532	1,279
High Tech	84,32	76,75	68,43	0,781	1,262
Industrial Machinery	85,18	76,87	2376*	1,396	2,382
Life Sciences	89,51	75,57	134,9	0,855	1,237
Mill Products	87,95	81,42	114,4	11,56*	39,2*
Oil and Gas	92,72	82,48	26432*	4,05	1,325
Retail	87,91	84,66	92,8	1,191	10,24
Telecommunications	94,25	76,69	25,8	1,334	3,17
Wholesale Distribution	90,04	79,44	86,4	16,8*	7,43

*Values with outliers

Supply chain management practices, in turn, were analyzed using the average of each practice per industry. Values observed the scale of 1 (low-level adoption) to 5 (high level adoption). For a neater presentation of the averages, the 31 practices were combined in 11 groups. Table 4 details the averages for each group of practices in all industries. Generally speaking, collaboration practices had a low level of adoption (1,9) with both customers and suppliers.

TABLE 3
SCM PRACTICES ADOPTION MEAN

SCM Practices	Mean
Performance Management	2,5
Demand Planning And Forecasting	2,5
Supply Planning	2,6
Inventory Planning	2,2
Distribution Planning	2,4
Sales And Operations Planning (S&OP)	2,4
Customer Collaboration	1,9
Supplier Collaboration	1,9
Production Planning And Detailed Scheduling	2,1
Transportation Planning And Vehicle Scheduling	2,3
Sales Order Promising	2,1

*Scales from 1 (low-level adoption) to 5 (high-level adoption)

Close to the average of the selected scale (2,4) were performance management and planning practices involving demand, inventory, supply, sales and operations, distribution and transportation. Production planning and sales order promising placed a little below the average (2,1).

Factorial analysis indicated that the 31 supply chain management practices studied (sales and operations planning, demand planning, supply planning, distribution planning, inventory planning, production planning and control, transportation management, availability check, collaboration and supply chain monitoring) could be combined into 6 groups, which explained close to 60% of total variance in practices. The 6 practice groups were planning, collaboration, transportation, distribution, inventory and production.

TABLE 4
SCM PRACTICES ADOPTION MEAN

Components		Cronbach's alpha	Number of practices
1	Sales and Operations Planning Practices	0,876	8
2	Transportation Management Practices	0,832	6
3	Collaboration Practices	0,779	5
4	Distribution Management Practices	0,785	4
5	Inventory Management Practices	0,812	4
6	Production Management Practices	0,799	4

Table 4 presents each formed component and the amount of practices combined in each group, as well as Cronbach's alpha, signaling the strength of the grouping. With this analysis, the first question of the investigation could now be answered: in other words, managers should pay attention to practices related to planning, collaboration, transportation, distribution, inventory and production.

Finally, the multiple linear regression results showed that on time delivery and forecast accuracy are positively influenced by supply chain management practices. Furthermore, the indicators for days in inventory, warehouse management and transportation costs are influenced by company size and location. Table 6 lays out the results of each of the tested hypotheses, as well as a brief discussion addressing the aspects noted in the literature and in the conducted multiple linear regression.

CONCLUSIONS

This investigation sought to assess whether supply chain management practices can influence enterprise operational performance. To that end, certain theories were used to support the matter and define the scope of the study. The first evoked the theory of supply chain management as a value-generating leverage (Giunipero et al 2008; Gunasekaran et al 2001; Lee 2002; Li et al 2005; Mentzer et al 2001; McCormack and Lockamy 2004). The resource-based view was then discussed as a foundation for defining supply chain management practices (Hayes and Pisano 1994; Hayes and Upton 1998).

TABLE 5
MULTIPLE LINEAR REGRESSION ANALYSIS

Hypothesis	Result	Comments
SCM Practices → on-time delivery (H_1)	Hypothesis H_1 can be **ACCEPTED**, because collaboration and distribution practices explained 4,1% of on-time delivery variability	Reinforced the works of Li et al (2005) and Alam et al (2012), who claimed that adopting supply chain management practices could result in superior performance in on-time delivery. The model did not, however, confirm that planning practices influenced on-time delivery performance as proposed by Lockamy and McCormack (2004).
SCM Practices → forecast accuracy (H_2)	Hypothesis H_2 can be **ACCEPTED**, because the practice of collaboration explained 5,1% of forecast accuracy variability	Reinforced the works of Li et al (2005) and Ramanathan (2012), who claimed that adopting supply chain management practices could result in superior performance in forecast accuracy. It did not, however, confirm that planning practices influenced forecast accuracy performance as proposed by Lockamy and McCormack (2004).
SCM Practices → days in inventory (H_3)	Hypothesis H_3 can be **REJECTED**; although, despite no practices appeared to be significant, the company size variable explained 4,3% of days in inventory variability	The influence of supply chain management practices in days in inventory was not confirmed – opposed to other authors' conclusions (Gaur et al 2005; Gunasekaran et al 2004; Harrison and New 2002; Hendricks and Singhal 2005; Jonsson and Mattssonz 2008; Lee and Billington 1992; Li et al 2005). The study corroborated, however, the work of Choudhary and Tripathi (2012), which mentioned the existence of other factors that would justify maintaining a high inventory level in order to deal with uncertainties in the supply chain.
SCM Practices → total warehouse management costs (H_4)	Hypothesis H_4 can be **REJECTED**; the production practice presented a negative relationship and the company size and location variables explained close to 12,8% of the model's variability	The model did not confirm that inventory management practices influenced warehouse costs, as proposed by Lockamy and McCormack (2004).
SCM Practices → total transportation costs (H_5)	Hypothesis H_5 can be **REJECTED**; the production practice presented a negative relationship and the company size and location variables explained close to 15,6% of the model's variability	The model did not confirm that supply chain management practices influenced transportation costs, as commented by Gunasekaran et al (2004), Lee and Billington (1992).

In this context, several authors have cited the impact that supply chain management practices bring to company performance (Alam et al 2012; Choudhary and Tripathi 2012; Harrison and New 2002; Gunasekaran et al 2004; Jonsson and Mattssonz 2008; Lee and Billington 1992; Li et al 2005; Lockamy and McCormack 2004; Ramanathan 2012). There is a large amount of practices investigated in both the academic and corporate worlds, making it difficult for managers to decide which to adopt. The main aspect of this research was to answer which practices managers should select in order to achieve superior performance in their organizations.

Generally speaking, we may say that supply chain management practices positively influenced enterprise performance indicators. Collaboration and distribution practices explained performance in on time delivery and forecast accuracy. The practices of production management, planning, transportation and inventory, on the other hand, were not significant to explain businesses' superior performance – which does not mean that these practices cannot improve companies' performance. According to Ketokivi and Schroeder (2004), said practices may no longer be perceived as a tool for creating competitive advantage, but rather for competitive parity. Similarly, Barney (1991) highlights that adopting organizational resources (practices) can result in temporary or sustainable improved performance. This helps to explain why businesses don't obtain superior performance, even when they adopt supply chain management practices.

The control variables of company size and location were dominant in explaining metrics related to costs, days in inventory, warehouse and transportation costs. This demonstrates the strength of large businesses within the supply chain, especially regarding costs metrics. Moreover, factorial analysis results reveals that the 31 practices studied here can be condensed into 6 groups explaining 63% of the practices' variance. An important contribution to management is this division into groups for planning sales and operations, collaboration, distribution, production, transportation and inventory.

In closing, these results enable a better understanding of the effects of adopting supply chain management practices on business performance. As aforementioned, there are few empirical investigations that address a group of practices and performance indicators, as well as contemplating a large number of companies and industry types. This article has also contributed meaningfully by presenting descriptive industry measurements that can be used for comparison in future studies. Finally, these results can influence which supply chain management practices managers should adopt for increased enterprise performance.

REFERENCES

Ahmed, N. U., Montagno, R. V., Firenze, R. J. (1996). Operations strategy and organizational performance: an empirical study. *International Journal of Operations & Production Management*, 16, (5), 41–53.

Alam, A., Bagchi, P. K., Kim, B., Mitra, S., Seabra, F. (2012). *Supply chain Integration and its Effect on Performance: A Multi-Country Study. POMS 23rd Annual Conference Chicago*, Illinois, USA.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management,* 17, (1), 99-120.

Burgess, K., Singh, P. J., Koroglu, R. (2006). Supply chain management: a structured literature review and implications for future research. *International Journal of Operations & Production Management,* 26, (7), 703–729.

Cao, M., Zhang, Q. (2011). Supply chain collaboration: Impact on collaborative advantage and firm performance. *Journal of Operations Management,* 29, (3), 163-180.

Chavez, R., Gimenez, C., Fynes, B., Wiengarten, F., Yu, W. (2012). Internal lean practices and operational performance of industry clockspeed. *International Journal of Operations & Production Management,* 33, (5), 562–588.

Christopher, M., Ryals, L. (1999). Supply chain strategy: Its impact on shareholder value. *International Journal of Logistics Management,* 10, (1), 1-10.

Chen, I. J., Paulraj, A. (2004). Towards a theory of supply chain management: the constructs and

measurements. *Journal of Operations Management,* 22, (2), 119–150.
Choudhary, H., Tripathi, G. (2012). An Analysis of Inventory Turnover and Its. *Journal of Services Research,* 12, (1).
Cigolini, R., Cozzi, M., Perona, M. (2004). A new framework for supply chain management: conceptual model and empirical test. *International Journal of Operations & Production Management,* 24, (1), 7–41.
Dyer, J. H., Singh, H. (1998). The relational view: cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review,* 23, (4), 660–679.
Feng, Y., Amours, S. D., Beauregard, R. (2010). Simulation and performance evaluation of partially and fully integrated sales and operations planning. *International Journal of Production Research,* 48, (19), 5859–5883.
Friemann, F., Verhasselt, S. (2012). *Best Practices for Supply Chain Management Techniques and Concepts across Industries. POMS 23rd Annual Conference Chicago*, Illinois, USA.
Flynn, B. B., Huo, B., Zhao, X. (2010). The impact of supply chain integration on performance : A contingency and configuration approach. *Journal of Operations Management,* 28, (1), 58–71.
Gaur, V., Fisher, M. L., Raman, A. (2005). An Econometric Analysis of Inventory Turnover Performance in Retail Services, *Management Science,* 51, (2), 181-194.
Gimenez, C., Vaart, T. V. D., Donk, D. P. V. (2012). Supply chain integration and performance: the moderating effect of supply complexity. *International Journal of Operations & Production Management,* 32, (5), 583–610.
Giunipero, L. C., Hooker, R. E., Joseph-Matthews, S., Yoon, T. E., Brudvig, S. (2008). A Decade of SCM literature: Past, Present and Future Implications. *Journal of Supply Chain Management,* 44, (4), 66-86.
Gunasekaran, A., Patel, C., Tittiroglu, E. (2001). Performance measures and metrics in a supply chain environment. *International Journal of Operations & Production Management,* 21, (1/2), 71-87.
Gunasekaran, A., Patel, C., McGaugheyc, R. E. (2004). A framework for supply chain performance measurement. *International Journal of Production Economics,* 87, (3), 333–347.
Harrison, A., New, C. (2002). The role of coherent supply chain strategy and performance management in achieving competitive advantage: an international survey. *Journal of the Operational Research Society*, 53, (3), 263–271.
Hayes, R., Pisano, G. (1994). *Beyond world-class: the new manufacturing strategy. Harvard Business Review* January-February.
Hayes, R. H., Upton, D. M. (1998). Operations-Based Strategy. *California Management Review,* 40, (4), 8–25.
Hayes, R., Wheelwright, S. (1984). *Restoring Our Competitive Edge: Competing through Manufacturing*. Wiley, New York.
Hendricks, K. B., Sinhghal, V. R. (2005). Association between supply chain glitches and operating performance. *Management Science,* 51, (5), 695-711.
Jonsson, P., Mattsonz, S. (2008). Inventory management practices and their implications on perceived planning performance. *International Journal of Production Research,* 46, (7), 1787–1812.
Ketokivi, M. A., Schroeder, R. G. (2004). Manufacturing practices, strategic fit and performance: a routine-based view. *International Journal of Operations and Production Management,* 24, (2), 171-191.
Lambert, M. D., Cooper, C. M., Pagh, D. J. (1998). Supply Chain Management: Implementation Issues and Research Opportunities. *The International Journal of Logistics Management,* 9, (2), 1-19.
Lee, H. L. (2002). Aligning Supply Chain Strategies with Product Uncertainties. *California Management Review*, 44, (3), 105–119.
Lee, H. L., Billington, C. (1992). *Managing supply chain inventory: pitfalls and opportunities, Sloan Management Review,* Spring, 65-73.
Li, S., Rao, S. S., Ragu-Nathan, T. S., Ragu-Nathan, B. (2005). Development and validation of a measurement for studying supply chain management practices. *Journal of Operations*

Management, 23, (6), 618–641.
Liu H., Ke, W., Wei, K. K., Zhua, Z. (2013). Effects of supply chain integration and market orientation on firm performance: Evidence from China. *International Journal of Operations & Production Management,* 33, (3), 322–346.
Lockamy, A., McCormack, K. (2004). Linking SCOR planning practices to supply chain performance, an explorative study. *International Journal of Operations & Production Management,* 24, (12), 1192–1218.
March, J. G., Sutton, R. I. (1997). Organizational performance as a dependent variable. *Organization Science,* 8, (6), 698-706.
Mentzer, J. T., Dewitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, D. C., Zacharia, Z. G. (2001). Defining Supply Chain (SC) management. *Journal of Business Logistics,* 22, (2).
McCormack, K., Lockamy, A. (2004). The development of a supply chain management process maturity model using the concepts of business process orientation. S*upply Chain Management: an International Journal*, 9, (4), 272–278.
Peteraf, M. A., Barney, J. B. (2003). Unraveling the resource-based tangle. *Managerial and Decision Economics,* 24, (4), 309-323.
Ramanathan, U. (2012). Supply chain collaboration for improved forecast accuracy of promotional sales. *International Journal of Operations & Production Management,* 32, (6), 676–695.
Reiner, G., Hofmann, P. (2006). Efficiency analysis of supply chain processes. *International Journal of Production Research,* 44, (23), 5065–5087.
Sukati, I., Hamid, A. B., Baharun, R. (2013). Testing the Effect of the Supply Chain Management Implementation on Business Performance : An Empirical Study. *International Business Research,* 6, (1), 76–90.
Tan, K. C. (2002). Supply Chain Management: Practices, Concerns, and Performance Issues. *Journal of Supply Chain Management*, 38, (1), 42-53.
Venkatraman, N., Ramanujam, V. (1986). Measurement of Business Performance in Strategy Research: A Comparison of Approaches. *The Academy of Management Review,* 11, (4), 801-814.
Wu, S. J., Melnyk, S. A., Swink, M. (2012). An empirical investigation of the combinatorial nature of operational practices and operational capabilities: Compensatory or additive? *International Journal of Operations & Production Management*, 32, (2), 121–155.