Investigating Integration Influence of Supply Chain on Financial productivity–Case Study: Manufacturer Companies in Khuzestan

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Abstract
The purpose of present study is to investigate influence of integrating supply chain on financial productivity of manufacturer companies in Khuzestan. Manufacturer companies are referred to all organizations that receive raw material from other organizations and convert it to a product and deliver it to customers. 217 of such mentioned managers were selected randomly according to sapling formula and studied. Investigation’s conceptual model is designed based on Zhao et. al. (2015) and Flynn et. al. (2010). Questionnaire was used for collecting data. LISEREL software is used for analyzing data for evaluating structural equation and SPSS is used for descriptive statistics and correlation test. Results show positive confirmation and meaningful of customer integration variable influence on financial productivity, positive and meaningful confirmation of supplier integration on financial productivity, and finally internal integration influence on financial productivity.

Keywords: Supply Chain Integration; Financial Productivity.
Introduction

Global competition and increases in customer expectations caused manufacturers to focus more on delivery speed, trustability, and flexibility. Lots of corporations adopted supply chain integration strategy for improving these capabilities (Calantone, 2002) and considering present market changing facts about globalizing, supply chain issue has become a priority of senior executive managers (Groznik & Trkman, 2009). At one side, owning supply chain approach is one a criterion for scientific decision making in business. Business can co-operate with other businesses in areas of supply, constructing, processing, distribution and recycling along with continual transportation, inventory, and information technology with such approach and satisfy the final customer (Tayyebi & Mazloumi, 1388 H.SH.). Managing supply chain is result of productivity improvement and closing internal productivities in a corporation and effectively in relation with external productivity of suppliers, customers, and other members of the channel. However, reaching supply chain integration is a complex task which this strategy should cover flow of material and product from vendors to final consumers which include different outside organizations (e.g. suppliers) and also inside (e.g. productivity) institutes (Kim, 2009). This matter can be done via Cross-functional integration in a corporation and integration with suppliers and/or customers of better supply chain. Advantages of integration and co-operation of supply chain shareholders are acknowledged in many industries and is considered as one of most important parameters for improving productivity. However, some evidences show that supply chain integration is not an efficient strategy to for productivity improvement (Yu et. al. 2013). Coherent understanding of supply chain integration influence on organizational productivity needs investigation of causal relationship between supply chain integration aspects and organizational productivity aspects (Harland et. al. 2007). According to importance of financial productivity investigation -as most fundamental aspect of organizational productivity- and factors affecting it, the presented question is that whether supply chain integration affects financial productivity of manufacturer companies in Khuzestan?

Theoretical Framework

Although SCM approach was first used at 1980 and only emphasized on aspects of creating coherence in process (Cooper et. al., 1997) but during recent years it is discussed systematically and strategically more. However, there were many obstacles in this field that it couldn’t be developed well and there is not a unified definition of SCM or even its forming structure (Harland, 2006). During 60’s and 70’s market had a relative stable behavior in manufacturing and customer demands, had predictable and linear changes, and market variables were changing dependently; therefore, future predictions were possible and competition method was as market had an unsaturated situation and all could be present in market. Competition between organization was low or moderately and the competitions were modular (small with big, big with big), and the only concern of competition was gaining profit. Main though was co-operated and coherent production along with strong designing of products back then and companies knew production increase as an important competitive factor. With increases in diversity of expected patterns of customers during 80’s organization increasingly showed interest to increase flexibility in production lines and developing new products for satisfying customer demands. Along with improvements in processes during 90’s the managers concluded that it is not enough
to only keep an eye on inside of company for gaining competitive advantages and satisfying their customers and they should produce higher quality materials with lower prices and suppliers have a close relationship with market development policies and should know new consumption patterns and help organization for responding to demands by transferring them into company. Low repetitiveness stability in customer demands, unpredictable and non-linear changes of customers, discrete changes of market changes, and impossibility of future predictions can be mentioned as most important trait of this decade from market perspective (Handfield & Nichols, 1999).

**Supply Chain Management**

Supply chain management is an approach and method for efficient integration of suppliers, manufacturers, distributors, and customers for improving long-term productivity of private companies and all of supply chain in a coherent commercial model with high productivity (Chopra and Meindl, 2001). Supply chain management includes collaboration of companies for improving strategic situation and improving productivity efficiency of the set. This value bearing integrated process should be monitored from providing material to delivering product/service. Supply chain management tries in direction of creating trust between different stages of the chain, information transition about market demands, and developing new products in a way that different stages of the chain have a long-term relation with each other for providing customer demands (Bowersox et. al. 2002).

**Financial Productivity**

Productivity is a repetitive issue in most branches of management and professors and educational managers are interested in it. Although there is no general consensus about the term and definition of *productivity*, importance of concept of productivity is widely known. One could hope for reaching to an agreement about terms and definitions according to increases in literature studies. Productivity includes financial productivity, operational productivity, and organizational efficiency. Traditionally, organizational productivity considered as the financial productivity that budget considerations, assets, operations, products, services, markets, and human resources affect organization success at bottom-line in (Farsani et. al. 2013). Business productivity which depicts strategic management is a subset of organizational efficiency general concept and can be defined as reaching organization goal about gaining profit and increasing selling and market share and also to realize company’s general strategic goals (Kaplan et. al. 2014).

**Conceptual Model Research**

Conceptual model of study is as bellow according to the introduced generalities:

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Customer Integration
Suppliers Integration
Internal Integration
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Supply Chain Integration (SCI)
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Financial Productivity
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Hypothesizes

a. Customer integration has positive and meaningful effect of financial productivity;
b. Supplier integration has positive and meaningful effect of financial productivity;
c. Internal Integration has positive and meaningful effect of financial productivity.

Methodology

Statistical population of present study includes managers of manufacturing companies of Khuzestan which includes 500 corporations and sample population in this study id 217 persons of the mentioned companies. Questionnaire is used for collecting data. The questionnaire is designed according to indexes in existing literature. Questionnaire (Flynn et. al. 2010) is used measuring dimensions of supply chain. Cronbach’s alpha is used for measuring stability of questionnaires. Cronbach’s alpha for this study calculated 0.905 which expresses validity of questionnaire. Then, data calculated by LISREL and SPSS softwares were analyzed.

Results

Structural model via LISREL software is used for assessing present study hypothesizes.
Table 1. Results of Research

<table>
<thead>
<tr>
<th>Hypothesis Title</th>
<th>Test Amount</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Internal Integration has positive and meaningful effect of financial productivity.</td>
<td>Standard Coeff. = 0.29 Meaningfulness Value= 3.64</td>
<td>Confirmed with 95% validity</td>
</tr>
<tr>
<td>H2: Customer integration has positive and meaningful effect of financial productivity;</td>
<td>Standard Coeff. = 0.53 Meaningfulness Value= 6.48</td>
<td>Confirmed with 95% validity</td>
</tr>
<tr>
<td>H3: Supplier integration has positive and meaningful effect of financial productivity</td>
<td>Standard Coeff. = 0.18 Meaningfulness Value= 3.19</td>
<td>Confirmed with 95% validity</td>
</tr>
</tbody>
</table>

Assessing First Hypothesis

According to this that meaningfulness level is less than 0.05 error, therefore the assumption of existing a meaningful relation between internal integration and financial productivity is confirmed with error level of 0.05. Also, according to figure 1 and 2 and according to this fact that standard coefficient is 0.29 and meaningfulness value (t-value) is 3.64 which is more than 1.96; therefore, one can say that the relation between these two variable is 95 percent meaningful and then the research hypothesis is not failed.
Assessing Second Hypothesis

According to this that meaningfulness level is less than 0.05 error, therefore the assumption of existing a meaningful relation between customer integration and financial productivity is confirmed with error level of 0.05. Also according to this fact that standard coefficient is 0.53 and meaningfulness value (t-value) is 6.48 which is more than 1.96; therefore, one can say that the relation between these two variables is 95 percent meaningful and then the research hypothesis is not failed.

Assessing Third Hypothesis

According to this that meaningfulness level is less than 0.05 error, therefore the assumption of existing a meaningful relation between supplier integration and financial productivity is confirmed with error level of 0.05. Also according to this fact that standard coefficient is 0.18 and meaningfulness value (t-value) is 3.19 which is more than 1.96; therefore, one can say that the relation between these two variable is 95 percent meaningful and then the research hypothesis is not failed.

Conclusion

According to increasingly needs in business environment and impossibility of its future changes it is caused that organizations are no longer capable to continue production and life with traditional methods. Manufacturers are faced with global challenges like: rivals with low production capitals, fluctuation and instability of goods prices, customer expectation increment, and unstable and chaotic economic conditions. Today’s organizations actually need exact cooperation for supplying raw material and on-time delivery to customer is such conditions for they can to reduce costs, have on-time receive and delivery, and finally satisfy customer. It is tried is this study to measure influence of supply chain integration on financial productivity. Results of research show that supply chain integrity positively and meaningfully influences financial productivity of manufacturer companies of Ahwaz town. One can argue that integrity along with different components of supply chain provide a condition for company that company will be able to create an integrity between different roles of supply, production, and distribution according to influence of all aspects of supply chain integrity on corporate financial productivity. Therefore, it is suggested to see these areas from planning and action point of view as a whole and integrated matter. Integrated view to these tasks, not only leads to reduction of costs in supply chain but also prevent reworks and repetitions in jobs in these areas and consequently areas of supply, production and distribution would be managed properly by time and resources management. Different actions would be done in triple areas of supply chain in this path and at last the value which is expected by customer will be created.