



# Examination of the Effect of Strategic Supply Management Skills and Supplier Integration on Supply Management Performance in Chain Stores

Aghaei Mohammad<sup>1</sup>, Jabarzadeh Karbasi, Bahram<sup>2\*</sup> and Kajian Omid<sup>3</sup>

<sup>1</sup>Department of Business Management, Branch, Shahid Beheshti University (SBU), Tehran, IRAN

<sup>2</sup>Master of Business Management, Researcher at the ETKA Research and Development Center, Tehran, IRAN

<sup>3</sup>Master of Business Management, Arak Branch, Islamic Azad University, Arak, IRAN

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## Abstract

*Daily increasing competition among chain stores and intensely changing demands of the customers caused that the managers of these stores search ways to supply their customers' demands as soon as possible. What helps in achieving this aim is the availability of an efficient supply manager. But there are a lot of factors inside or outside the company that affect this system. Regarding these matters, this study aims at examining the impact of the strategic supply management skills and the supplier integration on the supply management performance in chain stores in Iran. Here, data related to 268 questionnaires received from the managers of different levels of these stores were analyzed by the structural equation modeling. The achieved results indicated that the strategic supply management skills are influential on the supply management performance positively and significantly. It was also revealed that the supplier integration has a positive effect on the supply management performance too. From another side, results showed that the strategic management skills influence the supply management performance of chain stores in Iran.*

**Keywords:** Strategic supply management skills, supplier integration, supply management performance, chain stores.

## Introduction

Constant changes in technology, market conditions and style of business beside different and changing expectations of the customers can be considered as the effective factors in the supply chain<sup>1,2</sup>. In such a business milieu innovation in the produce and organizational processes is reckoned as a vital and significant factor in the companies' success<sup>3</sup>. The management of the supply chain in its current manner is the result of the studies done in the late 1950s on the inventory transferring to the company and out of it. The planning made for the raw materials in 1970s was the actual beginning of the supply chain operation<sup>4</sup>. The supply chain has been defined as a compound system involving four processes of program, source, produce and presentation which connects different parts such as materials providers, production facilities, distribution services and the customers through sending current materials and receiving current information<sup>5,6</sup>. The accomplished studies in the domain of the supply chain management have emphasized strongly on the role it plays in the organization success<sup>7</sup> and on the necessity of the conformity of many activities with particular skills in this domain<sup>8</sup>. In fact, what is looked at in these studies is the essentiality of development of a series of supply chain skills which are used for the effective management of blending processes of the chain components. These skills will finally affect the general performance of the supply chain<sup>9</sup>. As it was mentioned at the beginning, the growth of competition and the created methods influenced by universalizing processes have propelled the organizations to look for ways to accommodate with these changes and also the preservation of their positions in

the contest. Therefore, having a source-based approach toward many of these organizational processes can play an important role in achieving this aim<sup>10,11</sup>. Making goods delivery or servicing the customer processes more efficient can lead to greater adaptation of the organization to the fast environmental changes beside reducing a lot of expenses<sup>12</sup>. Yet, what causes this success from the viewpoint of many experts is the knowledge of skills, characteristics and actions that will finally result in the improvement of the supply chain and increase the chance of the organization success<sup>9,13</sup>. Concerning what was discussed, the present study aims at the investigation of the effect of the supply chain management skills on the performance of the supply chain management, the supplier integration and the perceived state of the supply management in chain stores. Recognizing these skills and an awareness of how they affect the supply management performance and the supplier integration can provide these companies authorities with more lucid perspective and beneficial guidelines in order to improve the skills of the managers and review their strategies. According to the accomplished researches two main problems in the supply chain are uncertainty and a need for harmony between various activities<sup>14,15</sup>. In other words, the performance and duties of the supply management like stock management is primarily based on the staff competence. Developing and optimizing these capabilities in the way that caused the organization becomes competitive have always been one of the important issues of the management. In order to manage training and develop the competence of the supply management personnel, the managers require knowledge of key skills for the

successful supply management performance<sup>9</sup>. In different studies a number of proficiencies have been identified for the strategic supply management among them we can refer to: supervising the supply milieu of the company, developing and managing the supply strategy of the company as a coherent framework, creating data management system which facilitate the strategic supply planning, combining marketing and operational activities in order to make the strategic program of the company, designing its supply base, expanding and managing the supply chains, making and running programs to preserve the environment and identifying industries that present principal sources<sup>16</sup>.

**Study literature: Supply Chain Management:** Farazelle knows the supply chain as one of the most important and newest subjects by which organizations are trying to create value for the stockholders and the beneficiaries. In addition, the supply chain management is an interdisciplinary subject which includes fields such as marketing, operation management, purchase and patronage<sup>17</sup>. The supply chain is a sequence which involves all activities related to the goods flow and material conversion from the stage of raw materials preparation to the stage of product delivery to the customer. According to Simchi-Levi et al the management of the supply chain is applied to a collection of approaches that is used for the total efficiency of the material providers, manufacturers, storerooms, and stores in such a way that goods are distributed enough in a suitable time and place with least production expenses while presenting services to meet needs is also satisfactory<sup>18</sup>. In another definition, the supply chain management involves both the integration of the supply chain activities and their related information flow through an improvement in the chain relations in order to access a reliable and constant competitive advantage. Hence, the supply chain management means the process of integrating the supply chain activities and its related information flows through improving and coordinating activities in the supply chain of producing and supplying product<sup>19</sup>. Based on the strategic management definitions it seems that this concept in the field of business supply chain is also formed by three processes including strategic analysis and selection and the accomplishment of that strategy. Considering this, according to Williamson theory each dealing is explained based on the indices of unreliability derived from dealing, abundance or repetition of dealing and determining assets<sup>20</sup>. They show the unreliability derived from dealing by criteria such as persistence in providing goods demands of the company by a beneficiary, capability of forecasting beneficiary's behavior, the company controlling and supervising the beneficiary's conduct and time duration between beneficiary performance and its consequences for the company. From another side, the criteria including number of contracts, their periods and the value of the contracts between the company and the beneficiary are used to indicate abundance or dealing repetition. Assets determination is also defined by the criteria such as particular site or department, assets including brand which is considered by the beneficiary for the company or vice verse<sup>21</sup>.

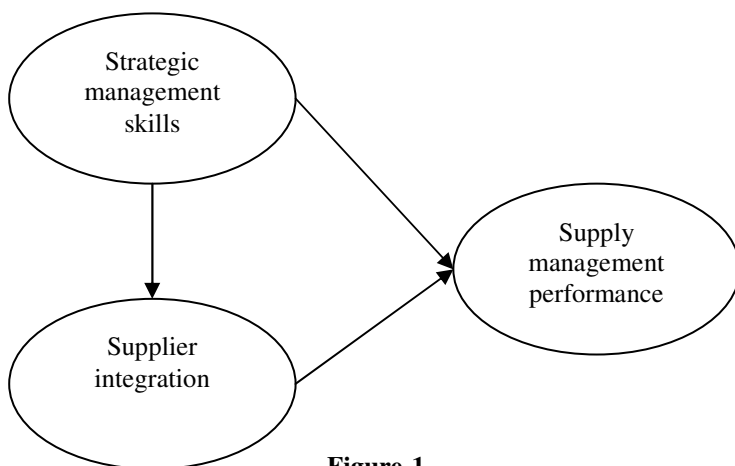
**Strategic Management Skills:** Basically the performance of the supply management duties like assurance of the material availability and stock management in the first step depends on the merits of the operating force in the supply chain management department<sup>9</sup>. As Carter & Narasimhan believed special skills in these people affect the company's efficiency and performance intensely<sup>22</sup>. Yet, unfortunately many of the accomplished works in the field of the supply chain skills concentrated merely on the identification and classification of the skills. Cavinato<sup>23</sup> mentioned seven technical skills that the managers desire their improvement in the organization. These skills are material knowledge, production systems and technologies, stock systems and material management and JIT, quality systems, producing conventional relations, computerized, automatic and management information systems, and finally managing expenses. In other words, strategic management skills is applied to the skills such as controlling the company's supply milieu, developing and managing the company's supply strategy as a coherent framework, creating data management system which causes simplification of the strategic supply planning, mixing marketing and operational activities to plan the company's strategic program, designing and managing company's supply base, developing and managing supply chains, creating and running programs for preserving the environment and identifying industries that present main sources<sup>16</sup>.

**Supply Management Performance:** Assessing performance is vital for the success of every organization because it facilitates our understanding of the behavior, forms it and improves competitiveness<sup>24</sup>. Yet, according to the viewpoint of some researchers despite the significance of assessing performance after one decade from the presentation of the idea of performance assessment in the supply chain management and development of a series of articles related to the theory and action in the supply chain, assessing performance has not been sufficiently attended. Gunasekaran et al developed a framework for performance assessment from the strategic, tactical and operational levels in the supply chain. This framework basically deals with the supplier, delivery, customer services and stock and logistic expenses<sup>25</sup>. Li et al examined five common dimensions of the supply chain management including strategic partnership with the supplier, communication with the customer, the level of information sharing, the quality of information sharing and delay. Moreover, they considered the relationship between these dimensions, competitive advantage and organizational performance. The results of this research using a source-based approach signify that the usual higher level of SCM can lead to the achievement of the competitive advantage and the improvement of organizational performance<sup>26</sup>. Besides, this competitive advantage can affect the performance of the organization directly and positively.

**The Supplier Integration:** The supplier integration is the process of harmonizing or gathering together different groups, duties or organizations physically or through information

technology for common working and this is often formed with a common aim<sup>27</sup>. The supply chain management enters the integration of the supplier and buyer operations in taking vital decisions for the supply in order to create a valuable source of competitive advantage. Consequently, the influential selection of the supplier and managing them are the capacities which enable the company to reach at the general goals of the supply chain such as the customer satisfaction<sup>28</sup>. In fact, when the supplier deals with the process of the supply management we will have higher quality, more economy in the expenses, close cooperation to achieve goals and reducing the time of the product delivery to the market<sup>29</sup>. On the other side, Miller believed that since rivals are not capable of copying this strategy for the same expense the integration of the supplier is counted as a unique action for the company<sup>30</sup>. The supplier integration is applied to activities such as the supplier participation in inter-functional groups, supporting the product developing process and participation in the designing process<sup>31</sup>. In another way, it is defined as “the combination of inner-company resources with the resources and capabilities of the key chosen suppliers through blending inter-companies business processes for attaining the competitive advantage”<sup>32</sup>. Eltantawy et al concluded that the strategic skills and the perceived condition are basic anticipators of the supplier and performance integration. In addition, the relationship between strategic skills and performance has been modulated by the supplier integration. The results also showed which of the strategic skills describes integration more properly<sup>9</sup>. Danese indicated that the supplier integration and fast actions of the supply network affect operational aims considerably<sup>2</sup>. Danese et al showed in their study that in the supply network, inland and foreign integration actions have positive and significant effect on responding<sup>15</sup>.

**Hypotheses:** i. The strategic supply management skills affect the supply management performance, ii. The strategic supply management skills affect the supplier integration, iii. The supplier integration affects the supply management performance.



**Figure-1**  
**Research conceptual model**

## Methodology

The present research based on its aim lies within the group of the applied researches and regarding the method of gathering data and their analysis stands as a descriptive one. The structural equation modeling has been used for analyzing data. Since the aim of the research is the examination of the effect of the supply management skills and the supplier integration on the supply management performance in chain stores, the target society here involves the managers of different ranks in these stores. In this study 300 questionnaires were sent to the managers of chain stores in Iran from which 268 were returned completed. The questionnaire used had 9 questions for assessing dependent and independent variables. 3 separate questions for assessing each variable including the supply management skills, the supplier integration and the management performance were used, all of them had been the criterion questions used by Eltantawy et al<sup>9</sup>. These questions were examined as Likert septuplet range, from 7 (completely agreed) to 1 (completely disagreed). In this research the questionnaire reliability was calculated for the supply management skills, the supplier integration and the supply management performance as 0.87, 0.78, 0.83 and for the whole questionnaire 0.82 using Cronbach Alpha method.

**Structural Equation Modeling:** In order to evaluate the suggested model we used structural equation modeling (SEM). Before examining the structural coefficients, the model fitness was considered. The first model fitness has been reported based on fitness indices used in this study. Since the amounts of these indices indicated that the suggested model needed correction and improvement, in the next step considering the corrected indices in Amos 18 output we added co-variance path to the model between visual and informational elements. After applying these modifications another analysis was done and the results of its fitness indices have been shown in Table-1. As it was expected, fitness indices intend an improvement in the model fitness that made them acceptable.

## Results and Discussion

In Table-1, CMIN=401.756 and the significance level (P=0.001) represent a favorable result, yet DF also plays an important role here. Concerning the relative indices the amounts are as the followings: CMIN/DF=1.55 which indicates the acceptable condition of the model; RMSEA=0.033 for the codified model intends the acceptability of the model; TLI=0.917 and CFI=0.903 and since these are close amounts more than 0.90, the model is considered as credible; and finally NFI=0.90 and IFI=0.92 for the second model signify the credibility of the model. The amounts of fitness total indices in the above table inform us that the measuring model of this research is completely credible. The proper fitness of the model is also supported by the amounts of 0.901 for GFI and 0.921 for AGFI.

The achieved results from testing the model indicates that regression coefficient of the strategic management skills on the

supply management performance is 0.356, the significant amount of 0.000 less than  $\alpha=0.05$ . Based on this,  $H_0$  is rejected and this means that the strategic management skills have a positive and significant effect on the supply management performance. Another finding of this research is concerning the effect of the strategic management skills on the supplier integration, something that was confirmed considering the

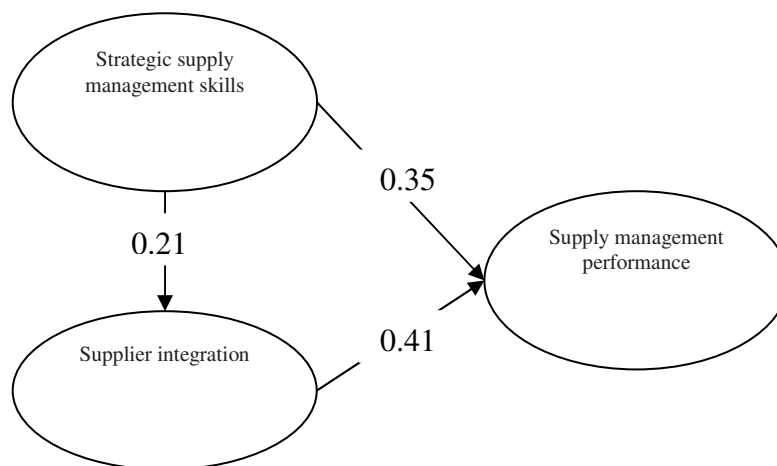
relevant regression coefficient of 0.218 which is 0.001 less than significance level of  $\alpha= 0.05$ . Our last hypothesis,  $H_0$  was rejected by referring to the regression coefficient related to the effect of the supplier integration on the supply management performance that is 0.415, the amount of 0.000 less than  $\alpha= 0.05$ . Hence, the supplier integration affects the supply management performance positively and significantly.

**Table-1**  
**Fitness indices for models 1 and 2**

Model's fitness indices	X <sup>2</sup>	Df	X <sup>2</sup> /DF	GFI	AGFI	IFI	TLI	CFI	NFI	EMSEA
1	452.323	281	1.609	.681	.698	.714	.691	.777	.701	.09
2	401.756	258	1.557	.901	.921	.924	.917	.903	.90	.033
Independence model	8714.012	275	31.687	.25	.201	-	-	-	-	.233

**Table-2**  
**Paths structural model and their standard coefficients in the final model**

Path coefficients			$\beta$	P
Strategic supply management skills	→	Supply management performance	.356	.000
Strategic supply management skills	→	Supplier integration	.218	.001
Supplier integration	→	Supply management performance	.415	.000



**Figure-2**  
**Research model**

## Conclusion

As it was stated before, the present study tried to examine the effectiveness of the strategic supply management skills and the supplier integration on the supply management performance. Meanwhile, hypotheses which were formed based on theoretical principles were reviewed. The first thing that came out as the result of this research was the positive and significant influence of the strategic supply management skills on the performance of the supply management which accorded with the result of Lawler et al<sup>33</sup> and Eltantawy et al<sup>9</sup> studies. Regarding this, we suggest the managers to pay more attention to the training of their staff to benefit from strategic supply management skills. Even in order to reach at a desirable performance of the supply management they would better engage those employees who enjoy the strategic skills. On the other hand, it is proposed that by considering the situation of the company essential skills are identified and necessary actions are taken for their promotions. The second hypothesis which was confirmed examined the influence of the strategic supply management skills on the supplier integration. The results were similar to what Japers and Van den Ende<sup>31</sup> and Eltantawy et al<sup>9</sup> had reached at. These researchers showed in their studies that the strategic supply management skills affect the supplier integration. In fact, integration enables the company to have a better and more comprehensive understanding of the future of the key supply factors and the customer changing taste. Therefore, access to the vital information can be advantageous in taking significant decisions. Besides, update training of the managers and the personnel of the supply management to obtain more applied information can lead finally to the performance improvement. The third hypothesis of the study examined the effectiveness of the supplier integration on the supply management performance which was based on the obtained amounts of the regression coefficients and significance. Eltantawy<sup>9</sup>, Giunipero et al<sup>34</sup> and Hoopes et al<sup>35</sup> had presented similar findings. Our suggestion is that regarding the state of their customers and their purchase basket, the stores choose suitable suppliers and then through creating necessary coordination and managing the supplier increase the influentiality of the chain. One beneficial instrument here is using informational systems and more advanced programs of the supply chain.

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