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The Impact of Supply Chain Integration on Increasing the Competitiveness of Economic Institutions in International Markets

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Abstract

This study aimed to identify the effect of supply chain management on the competitive advantage of the «SOITEX» company. To achieve the objectives of the study, a questionnaire was designed to this effect, and distributed to the sample members whose number reached 50 employees representing the administrative staff of «SOITEX» company. The data were analyzed using the SPSS20 program. The findings of the study show that there is an awareness of a company in addressing supply chain management in its dimensions (supplier relationship management, customer relationship management, information sharing, internal supply practices). Moreover, the study also showed a statistically significant impact between the combined dimensions of supply chain management and the competitive advantage with all its components cost, quality, flexibility, and delivery.

Key words: Supply Chain Management Supplier Relationship Management : Customer Relationship Management: Information sharing competitive advantage

Introduction:

The current data of the global economy clearly highlight the overall transformations and changes that have come to surround economic institutions and constitute their main interest on which their decisions and objectives are based.

Thus, modern concepts have emerged that have affected the course of their work and imposed themselves within their future programs and plans, perhaps the most important of which is supply chain management, which appeared in the field of business starting in the nineties after it occupied the attention of managers and academics for years before that with the term supply or logistics.

Also, the competitive environment that institutions face today has changed significantly and now includes new data, including reducing customs tariffs or even removing them in some cases, as well as improving transportation services and information and communication technology, in addition to global manufacturing.

which has led to the globalization of products and increased market dynamism, which has led to the availability of products to customers all over the world at a faster pace, and the result prevents customers with greater capabilities to access more goods and services and thus the proliferation of options available to them. The previous data made economic institutions reconsider their calculations and adopt a global view of their business and activities and move towards creating new methods in their management and marketing strategy.

Perhaps the most prominent and important of these is supply chain management From this standpoint, institutions are required to increase their focus on re-engineering internal business processes and working more cooperatively and integratedly with partners, suppliers and customers in order to better integrate production and marketing plans.

other than the supply chain as a means of reducing costs, improving product quality and providing them quickly In addition to focusing on understanding changes in customer demands and trying to respond to them appropriately In the context of this changing global scene and the international marketing environment.

the general objective of this study is to analyze the importance of integrating the various parties involved in the supply chain from suppliers, customers and departments and to determine how to organize and manage the supply chain with the aim of creating a sustainable competitive advantage in the target markets, .

as the success of institutions in conquering international markets is directly related to the ability to compete and confront the various competitive forces imposed by the international business environment.

The supply chain includes an integrated system of activities inside and outside the organization These activities include purchasing, storage, transportation, distribution, and other activities responsible for preparing products and delivering them to places of consumption or use.

One of the tasks of supply chain management is to achieve coordination and integration between these activities with the aim of providing products and production inputs at the right time and place and in the required condition in order to achieve the highest possible level of customer service on the one hand, and on the other hand to achieve a competitive advantage for the organization and maximize its profits.

Study Problem:

The search for and defending a competitive advantage has become a concern for every institution moving towards international markets; it is no longer acceptable to assume that good products will sell themselves, and that today's success will continue into tomorrow. Accordingly, the study problem addresses the extent to which supply chain integration contributes to raising the competitiveness of institutions internationally.

The problem was formulated as follows:

To what extent does supply chain integration affect the competitiveness of economic institutions internationally?

Study Questions:

To what extent does supply chain integration affect the competitiveness of Antar Corporation in international markets? Does internal integration of the supply chain affect raising the competitiveness of the institution in international markets?

Does the integration of suppliers in the supply chain affect the competitiveness of the institution in international markets?

Does the integration of customers in the supply chain affect the competitiveness of the institution in international markets?

Importance of the study:

The contribution of this study lies in the integration of the supply chain with customers and suppliers and internal integration in achieving the competitiveness of economic institutions in international markets.

by proposing a practical framework for its use, and developing it as a measuring tool for managers to determine the effects of integration in the supply chain on international competitiveness.

Study variables and data:

The study variables are represented in two types of variables:

1- Independent variables, which include three variables: integration with consumers, integration with suppliers, and internal integration.

2- Dependent variable, which is the level of competitiveness

The independent variables and dependent variable of the study can be defined procedurally as follows:

1- Integration with consumers is an expression of the organization's ability to consolidate and coordinate its relations with consumers of its products and establish strong bridges of communication with them that ensure the flow of information, products, and money between them.
2- Integration with suppliers is an expression of the organization's ability to consolidate and coordinate its relations with suppliers to meet its needs and establish strong bridges of communication with them that ensure the flow of information, supplies and funds between them.
3- Internal integration: is an expression of the organization's ability to coordinate its activities and internal operations so that they work in harmony with each other.
4- Supply chain performance integration is a reflection of the supply chain's ability to meet the needs and satisfy the desires of consumers at the lowest possible cost.

The independent variables and the dependent variable will be measured through a set of phrases that will become clear during our discussion of the field study, which is included in the survey list directed to some officials of international economic companies.

and some officials of buyers of their products and suppliers of their needs, with reliance on the five-point Likert scale to determine the degree of agreement or disagreement on these phrases, and the researcher will rely on the SPSS program for statistical analysis of the study data.

The study data is divided into two types:

1- Secondary data, whose sources are Arab and foreign references, bulletins and reports issued by the International Industries Federation related to the subject of the study.
2- Primary data, whose source is the survey list directed to some officials in international oil companies, and some officials at buyers of their products and suppliers of their needs.

Study Methodology:

The descriptive and analytical approach was relied upon, as Arab and foreign sources were relied upon in order to enrich the theoretical aspect of the study and describe its variables, in addition to the case study approach with the aim of measuring the nature of the relationship between the study variables and determining the impact by using various statistical methods and the statistical analysis program SPSS.V20

Study plan:

First: The theoretical section, which includes:

The first topic: Supply chain management.

The first requirement: The concept of supply chain management.

The second requirement: The functions and objectives of supply chain management.

The second topic: Supply chain integration.

The first requirement: The concept of supply chain integration.

The second requirement: The impact of supply chain integration on the competitiveness of institutions in international markets.

The first research

Supply Chain Management

The first requirement

The concept of supply chain management

In the context of defining the concept of the supply chain, we review the definition provided by Douglas Lambert "in an interview with Darilyn Kane (SCM) describing the supply chain: as an integrated business model that takes a process-based view of how all functions work together and how businesses relate to their suppliers and customers.

The framework that was developed also focuses on finding the appropriate level of partnership with customers and suppliers and creating multi-functional teams that make decisions based on a comprehensive view of the business. He explained that there is a lot of confusion about the term "supply chain", highlighting the presence of many organizations that use the term in job titles and organizational charts.

but take a much narrower view such as the flow of materials that can be better described as logistics rather than a supply chain, while the latter is broader as it represents a combination of purchasing, operations and logistics and requires the participation of all business functions.

Through the definition, it becomes clear that the supply chain represents an integrated vision of logistics services that deals with all flows and operations accompanying the delivery of products from the design stage To the end customer and the entire product life cycle, the supply chain is also concerned with achieving integration with various parties such as customers and owners.

The supply chain has also been defined as the framework that achieves integration between the functions of the institution from the moment of supplying the raw material until reaching the final consumer in order to achieve the material and information flow to increase the efficiency of the internal operations of the organization on the one hand On the other hand, maximizing the value of its products in the eyes of the operators and its owners:

Based on the concept of the supply chain, it can be said that there is no significant difference between supply and the supply chain, as supply refers to the final flows of materials and products inside and outside the institution.

while we find that the supply chain represents the integration between the various parties that make up the chain It may be a group of institutions or organizations that work in an interconnected manner to achieve these flows As for supply chain management.

it is defined as the application of management functions from planning, organizing, directing and controlling all operations and stages and even activities included in the supply chain, through integration between departments and end users as well as relevant information with the aim of creating added value in products or services and providing them to the customer.

Supply chain management is also known as "the theoretical framework used by the organization to achieve integration between its various functions, starting from suppliers and ending with the final consumer, in order to flow the organization's goods, services and related information for the purpose of efficiently managing the organization's internal operations and maximizing the value of its products and services from the point of view of its customers and owners.

It is also known as planning and controlling business operations from raw material suppliers to the final customer, which links partners in order to meet the needs of the final customer in the correct manner According to this definition, supply chain management begins by identifying the needs of the raw material, then production according to the required quality, and finally distributing the product to the target customer in the appropriate place and time and at an acceptable cost.

Thus, the supply chain means the integration of a group of partners with the aim of working to meet the needs of final customers in a way that achieves their loyalty on the one hand, and on the other hand, reducing costs and maximizing financial returns Based on the above, it can be said that the supply chain is a sequential model of activities organized around a group of institutions whose purpose is to place a product or service at the disposal of the customer under optimal conditions in terms of quantity, time, and place.

These institutions share one goal, which is to create value in the product or service provided to the customer It focuses on Supply chain management is more focused on improving the flow in the supply chain and the supply chain from the supplier to the customer, in addition to focusing on improving the flow of added value, and improving the relationship between the two (quarter / cost through the implementation of operations between the relevant parties in the supply chain.

Thus, the supply chain expresses the extent to which activities are integrated within and outside the organization. Internally, it refers to the degree to which manufacturing strategies are determined and operations are practiced and organized within the organization's boundaries to meet customer requirements. Externally, it refers to the degree to which integration is achieved with the producing organization and external partners.

The second requirement

Functions and objectives of supply chain management

⬅ In the context of defining a comprehensive concept of supply chain management, the Global Supply Chain Forum (GSCF) identified eight (08) main functions that form the core of the definition of supply chain management These functions are:

1- Customer relationship management: Provides a structure for how to develop and maintain customer relationships. It identifies target customer groups as part of the business mission and develops agreements with key accounts. Performance reports also measure the profitability and financial impact of key customers.
2- Customer service management provides a source of customer information such as shipping dates, product availability and real-time information between customers and the company.
3- Demand management balances customer requirements with the company's supply capabilities, including demand forecasting, production timing, purchasing, distribution and all the demands of the company's production in general
4- Order management system provides integration between the company's transportation, supply and marketing plans, this requires managing the partnerships that the company maintains to meet customer requirements.
5- Product flow management: produces products and sets the manufacturing flexibility required to serve target markets, requires managing product flow and maintaining the applicable flexibility.
6- Supplier relationship management determines how the company interacts with its suppliers Similar to customer relationship management, partnership management is required to develop key relationships with key suppliers, which may provide a competitive advantage: Product development and marketing provides new product development by integrating customers and suppliers in order to reduce time to market. Developing new products and services in a timely manner is key to the company's success.
7- Returns management: provides an important component of the company's ongoing competitive advantage. It allows the company to monitor productivity improvements and identify valuable projects related to products or services. These processes provide a framework To various aspects of strategic and technical issues involved in supply chain management.

⬅ In light of our analysis regarding the conceptual framework of the supply chain and based on the previous definitions, it can be said that supply chain management includes activities such as identifying sources of raw materials, scheduling production, and the physical distribution system supported by the necessary information flow.

Moreover, supply chain management involves challenges such as building trust between the organization and customers and between the organization and related parties in addition to exchanging information about market needs, developing new products, and meeting customer requirements as efficiently and effectively as possible.

⬅ Objectives of supply chain management in economic institutions :

The goal of supply chain management is to meet customer needs and achieve competitive advantage. It is a series of activities that start from anticipating customer needs and desires, obtaining the capital, materials, individuals.

technologies and information necessary to meet those needs and desires, improving the network for the production of goods or services, and using that network to meet customer demands in a timely manner Simply put, the supply chain in managing a set of customer-oriented operations.

In general, the objectives of supply chain management are focused on two main objectives. The first objective is to maximize the organization's outputs of products and services in the eyes of its customers.

while the second objective is related to managing the organization's relationship with various relevant parties in the supply chain (suppliers, customers).

The organization resorts to achieving the objectives of the supply chain by carrying out the following activities:

- Full knowledge of the various needs and desires of customers and identifying the most important factors leading to their change and development and good planning to satisfy those needs. Flexibility of communication systems to allow easy exchange of information between the organization and its customers.
- Efficiently managing the reverse flows of returns of damaged products and other customers to the organization, and working to reduce the provision of flexible production systems that allow responding to the continuous changes in customer needs of those flows to the minimum possible.
Managing the relationship with suppliers and transforming from mere suppliers to real partners of the organization, which contributes to maximizing the value of its outputs.

- Managing the relationship with customers and involving them in developing and providing new products that suit their desires Both (Gebranichael & Rao) express that the main goal of the supply chain lies in creating value from the production process to the delivery process in a way that allows for the creation of a better competitive advantage for the parties concerned in the supply chain.

and this is through reducing the cost They add that this value is not inherent in the products or services provided, but rather is dependent on the customer's experience and consumer preferences that he desires in the product.

Section Two

Supply Chain Integration

First Requirement

The Concept of Supply Chain Integration

Integration in the supply chain expresses the organization’s linking of its internal operations with external suppliers and customers. Integration also depends on integrating complementary skills and compatible goals, which helps reduce costs and improve the response and level of service provided to customers, thus survival and the ability to compete.

Supply chain integration is defined as the degree to which an organization cooperates strategically with its companies in the supply chain and manages operations within and between organizations in order to achieve effective flows of products, services, information, money and decisions in order to provide maximum value to customers, through information sharing, planning, coordination and control of materials, parts and final goods at the three levels: strategic, tactical and operational.

Integration can be defined in general as the ability of a group of independent parties to work together cooperatively to achieve results acceptable to each of them.

Supply chain integration is considered the essence of the management process and the primary determinant of its success or failure in achieving its goals Researchers do not differ in terms of the content in their definition of supply chain integration For example, Pagell (2004) defines it as an interaction process to perform collective work through which the organizations.

that make up the supply chains can work together cooperatively to achieve results acceptable to each of them. The content of this definition does not differ from the definition of integration in general mentioned above, except for its application to the field of supply chains. (Zhao et al., 2008; Frohlich and Westbrook, 2001) .

They define supply chain integration as the ability of an organization to achieve integration between its internal activities and operations and strategic cooperation with other parties that make up its supply chain in order to achieve effectiveness and efficiency in the flow of products, information, money, and decisions to provide maximum satisfaction of consumer needs at high speed and low cost.

Vijayasarathy defines it as the adoption and use of structures, processes, technologies, and practices that support collaborative teamwork among supply chain parties through which the accurate and timely flow of information, materials, and products can be ensured.

The researcher believes that traditional, non-integrated supply chains suffer from three basic defects: -

The first is the low accuracy of demand forecasting due to the increased degree of uncertainty due to the organization's lack of integration with its consumers, which may lead to the organization's slow response to changes in its consumers' demand, and usually creates a deficit or increase in inventory for both the organization and its suppliers.

The second is the organization's weak ability to adapt to changes in the position of its suppliers due to the lack of integration with them, which may negatively affect the regularity of its production process and the delivery date of its final products.

The third is the lack of consistency and harmony of the organization's internal activities and operations due to the failure to seek to achieve integration between them Accordingly, traditional, non-integrated supply chains face a high degree of interoperability uncertainty, which prompted researchers to urge organizations to achieve and enhance their integration to avoid the negative effects that may result from that.

in addition to the fact that integration enables organizations to avoid activities that do not add value to them, supports product quality, and increases the ability to provide it to consumers at the appropriate time, which leads to sales growth.

Supply chain integration includes supplier integration, customer integration and internal integration as follows:

- Supplier integration: It is an organizational process of organizations that engage in purchasing and material supply, through the application of operational and financial knowledge in order to generate mutual benefits to achieve an efficient flow of materials within the supplier network.

- Customer integration: Customer integration means including customer opinions in the production process with the aim of producing specific products according to their needs and preferences, thus increasing their satisfaction. Also, clear knowledge of the organization's objectives and strategy can reduce uncertainty in the minds of customers.

- Internal integration: Internal integration means the integration between departments and operations within the organization with the aim of meeting customer needs.

It expresses the coordination between departments and functions by creating an integrated system in order to meet customer expectations as well as enhance performance.

Achieving internal integration between marketing and logistics management can lead to better performance and greater effectiveness between departments.

This is evident in reducing the production cycle and improving storage management in addition to increasing product availability levels and improvements in order management and final delivery times.

Thus, in order to achieve effectiveness in the supply chain, this requires achieving internal integration by coordinating relationships and links between various departments and sections.

as well as strengthening relationships with external parties from suppliers and customers and working to achieve cooperation and partnership in order to meet customer requirements with the appropriate quality and cost and to the appropriate place and time.

The second requirement

The impact of supply chain integration on the competitiveness of institutions in international markets

⬅ – The concept of international competitiveness:

International competitiveness has become more than ever an economic necessity This inevitability has gradually imposed itself as an inevitable fact for every institution entering the foreign market It is part of a permanent internationalization process that assumes that institutions create exceptional value for their customers, shareholders and employees.

The concept of the institution's international competitiveness refers to the current and future ability, in addition to the opportunities available to entrepreneurs to design, produce and market products in their own beginnings, .

whose price and non-price characteristics constitute a more attractive package than those of competitors abroad or in local markets. Thus, it can be said that the institution has the ability to compete in international markets if it can sell its products and services and make a profit in local markets that witness foreign competition, or in foreign markets that witness different international competition.

⬅Here we can distinguish between two types of international competitiveness:

-Independent competitiveness, which occurs in the original environment of the institution, and since the latter has good knowledge of its marketing environment and sufficient expertise, which gives it the ability to adapt and confront more strongly, and in return, foreign institutions entering the market will exploit their strengths to control the market and position themselves in the leadership position.

-Diffuse competitiveness Competition in the foreign environment gives international institutions the ability to develop their expected activities as a result of the equality of opportunities and threats that activate the effects of economic globalization and the policy of liberalizing trade between countries.

From the perspective of achieving distinction, uniqueness and superiority in international markets, the concept of competitiveness is linked to

- The institution's possession of a distinctive trademark;

- Providing a new offer with the ability to sell at a low price Competing on the basis of price.

- The institution's possession of the technology element.

- Selling products in foreign markets and increasing its market share.

- Outperforming competing foreign products and services in foreign markets.

The bulk of the competitiveness challenge for the organization lies in responding effectively to the difficult international environment, so organizations need to develop a set of capabilities in the areas of management and marketing and constantly update them over time.

The translation of this strategy depends on:

- Success depends on the presence of five basic components, which are the presence of a mission that reflects a serious commitment to international business activities .

- The ability to identify consumer needs and opportunities and adapt to them quickly

- The ability to understand consumer behavior in different countries.

- The ability to produce and develop high-quality competitive products;

- Good programs and capabilities to examine potential markets and locations.

Based on the above, it can be said that the organization's ability to compete in international markets stems from its ability to provide products and services that meet the needs of international customers better than competitors in terms of quality, price.

or speed of delivery, thus maintaining or increasing its market share.

In general, the organization's international competitiveness represents its long-term performance and growth according to three criteria: cost, quality, and time These Factors are directly related to the needs and details of the foreign consumer.

⬅ Requirements for achieving international competitiveness:

The main challenge for institutions at the present time is to benefit from new markets and resources while facing intense and growing global competition, which requires analyzing the variables of the international environment and the extent of their compatibility with the capabilities and resources of the institution.

Of course, the international environment differs from the local environment in the sources of competitive advantage When institutions are positioned in different environments.

their ability to achieve a competitive advantage depends not only on their internal stock of resources and capabilities, but also on the conditions of the new environment, meaning the extent of the availability of resources within the target countries.

⬅ The most important requirements for achieving competitiveness in international markets are the following:

- Low labor costs, availability of raw materials, in addition to good infrastructure.

- The nature of the demand for the product in the country of origin, as such a factor would contribute to creating international demand for the product due to information about the quality of the product, the reputation of the institution and its brand, which is circulated among consumers across countries;

- Also, among the factors that help in gaining an international competitive advantage are the patents owned by the institution, in addition to the extent of its availability of a qualified workforce, and also the technological element;

As for government policies that encourage the institution to establish international investment projects.

The previous factors may contribute to achieving the institution's international competitiveness, but when the institution moves from the local market to the international market, its competitive position may change. The institution's competitiveness in the local market does not mean its ability to compete in the foreign market.

This is a result of what is called the reflection effect, which works to change the competitiveness of institutions from one market to another, either negatively or positively, depending on the nature of the target market.

Here we can say that in the context of international business, in order for an institution to compete, it must manage its resources and capabilities, so that the workforce must receive good training.

and following a strong administrative approach will lead to quality and productivity Also, among the important factors is that institutions achieve excellence in the field of technology, adapt to technological changes, and build a good reputation.

In addition, institutions also need to be aware of the variables of the targeted local environment and the extent of their availability of resources and capabilities, market conditions, and the government policy followed, with the need to analyze the industry environment and identify the basic factors in strengthening the competitive position.

The ability of an organization to meet the challenges arising from its competitors in foreign markets requires both influence and effectiveness Influence on competitors and effectiveness in the face of inevitable competition are important.

The ability to produce, export, distribute and display products in the international market is important Of course, the policies and strategies implemented by organizations or governments in host countries are very important and have a great impact on the organization's activity there.

Reference list

Sources in Arabic.

⬅ Books:

[1] Al-Bakri, Thamer Yasser 2008 Marketing Strategies, Amman, Al-Bazouri Publishing and Distribution

[2] Zaher Atef, Marketing Services, Dar Al Raya for Publishing and Distribution, First Edition, Amman, 2011.

[3] Nahal Farid Mustafa, Supply Management, Al-Isha'a Technical Library and Printing House, Alexandria, Egypt, 1997.

[4] Nahal Farid Mustafa, "Materials and Supply Management", Modern University Office, Alexandria, Egypt, 2008.

⬅ Articles in a scientific journal

[5] Hussein Yousef Karim Al-Jabouri Hamid Kazim Mutab Al-Shibawi (2015) The role of supply management in achieving competitive advantages. An analytical study of the opinions of a sample of employees of the Samawah Cement Factory. Al-Qadisiyah Journal For Administrative and Economic Sciences 17(3) 30-43

[6] Trish Muhammad Qadri Riyad, Achieving Competitive Advantage Using Porter's Value Chain with Reference to the Nafi'a Ceramics Company in Maghnia, Al-Hikma Journal of Economic Studies, Issue Seven, First Semester14 2016, p.

⬅ Interventions at conferences

[7] 7. Issa Draji, intervention entitled "Environment and Competitive Advantage", Fourth International Forum on Competition and Competitive Strategies for Industrial Institutions Outside the Hydrocarbon Sector in Arab Countries, Faculty of Economics, Business and Management, Hassiba Ben Bouali University, Chlef, November 8-9, 2010

⬅ University dissertations

[8] 8 . Zaghloul Al-Barai Abdel Aziz Salwa, A proposed model for marketing logistics activities to support competitive advantage, an applied study on dairy products companies in Egypt, PhD thesis, Faculty of Commerce, Mansoura University, 2011.

[9] 9. Asaf Muhammad Ahmad Hussein 2015 The Impact of Supply Chain Capabilities on Achieving Competitive Advantage Case Study of Qawar Group of Companies in Jordan, Master's Thesis, Faculty of Business Administration, Middle East University, Jordan

Sources in foreign languages

[10] 10. Bozarth, C. and Handfield, R.B., 2008. Introduction to Operations and Supply Chain Management. 2nd edition. Upper Saddle River: Pearson Prentice Hall.
[11] 11. Christopher, M. (2000), "The Agile Supply Chain", Industrial Marketing Management, 29(1), pp. 37-44.
[12] 12. Enkel, E., Kausch, C. and Gassmann, O. (2005), Managing the Risk of Customer Integration, European Management Journal, 23(2), 203-213.
[13] 13. Hill. Carles & Jones. Gareth, (2001), (strategic management theory: a Integrated Approach), 5th ed, Houghton Mifflin company, New York.
[14] 14. Krajewski, Lee J & Larry P, Ritzman, Operation Management: Processes and Value Chains, 7th ed, New Jersey, Prentice Hall, 2005