

The impact of supply chain management on the performance marketing of Algerian economic institutions: A case study of Biskria Cement Company

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Abstract:

This research paper sheds light on the impact of supply chain management on the performance marketing of Algerian economic institutions. Biskria Cement Company was selected for a field study, where questionnaires were distributed to a sample of employees within the marketing and supply departments. The study sample amounted to 40 individuals. The findings of study indicated that it is necessary to pay attention to managing relationships with suppliers and to have full knowledge of everything related to them, improving relationships with customers, also diversify means of transportation and ensure their effectiveness.

Keywords: supply chain, supply chain management, performance marketing, Biskria Cement Company.

JEL Classification Codes: M11, L23, L11, L25

1. INTRODUCTION

The concept of supply chain appeared for the first time in the military field, its concept developed and expanded to reach economic organizations and institutions due to its success. This expansion is particularly significant as every company is reliant on supplies, making them indispensable, along with all the interconnected elements that constitute the entire chain. There is

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no doubt that “Supply chain management (SCM) is one of the most cited and analyzed concepts recently in logistics and operations management” (Demeter & Gelei, 2003) it has been receiving increasing interest from many researchers due to it being considered the science and art of the flow of goods and services. In addition, it has great importance in covering everything related to the processes of collecting and flowing information about consumers and suppliers and providing raw materials for the purpose of manufacturing, storing and delivering to the consumer the final goods. This not only helps Institutions in achieving marketing performance but also to their survival and growth in the market.

Through the above we can pose the following problematic:

What is the impact of supply chain management on performance marketing of Biskria Cement Company?

To answer the problematic, we presented a main hypothesis, which states:

- **There is a statistically significant effect of supply chain management on the performance marketing of Biskria Cement Company.**

And emerge from it the following sub-hypotheses:

- **H1:** There is a statistically significant relationship between customer relationship management and performance marketing in all its dimensions in the Biskria Cement Company.
- **H2:** There is a statistically significant relationship between suppliers relationship management and the dimensions of performance marketing for the Biskria Cement Company.
- **H3:** There is a statistically significant relationship between logistics and the dimensions of performance marketing for the Biskria Cement Company.

Study importance

- It is necessary to address the problematic of the impact of supply chain management on performance marketing.
- It is necessary to address the impact of supply chain management on the performance marketing of the Biskria Cement Company, especially since many organizations do not care about the importance of all dimensions of S.C.M.

Study objectives

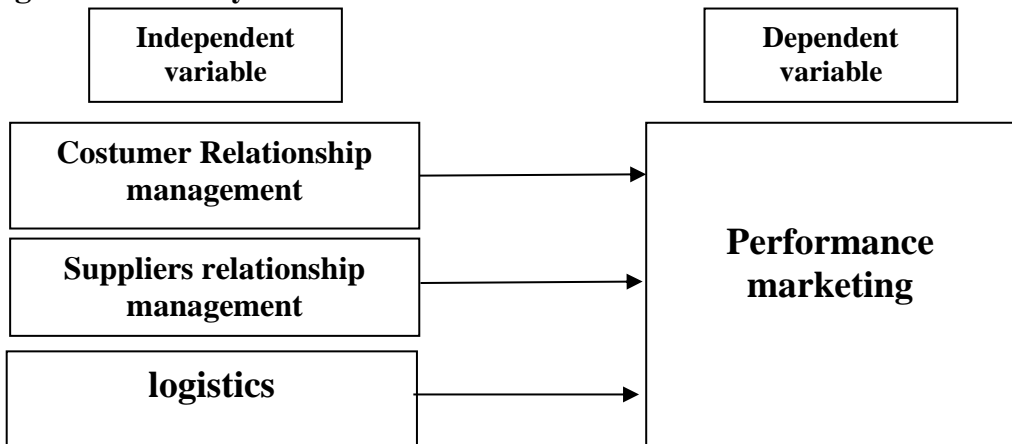
Through this study, we seek to achieve the following objectives:

- Clarifying the theoretical aspect of the study variables by using previous scientific literature and research.
- Explaining the importance of supply chain management in economic institutions.
- Explaining the impact of supply chain management on performance marketing.
- Providing recommendations to parties interested in the field of supply chain management, particularly those specific to the cement sector, in order to use all components of the supply chain, to enhance performance marketing, including increasing sales, market share, and profitability.

Methodology

In this study we use the descriptive and analytical approaches in describing the research sample, in addition to study and analyze the relationship between the dependent and independent variables of the study.

Figure one: Study model



2. What is supply chain management?

2.1 Supply chain

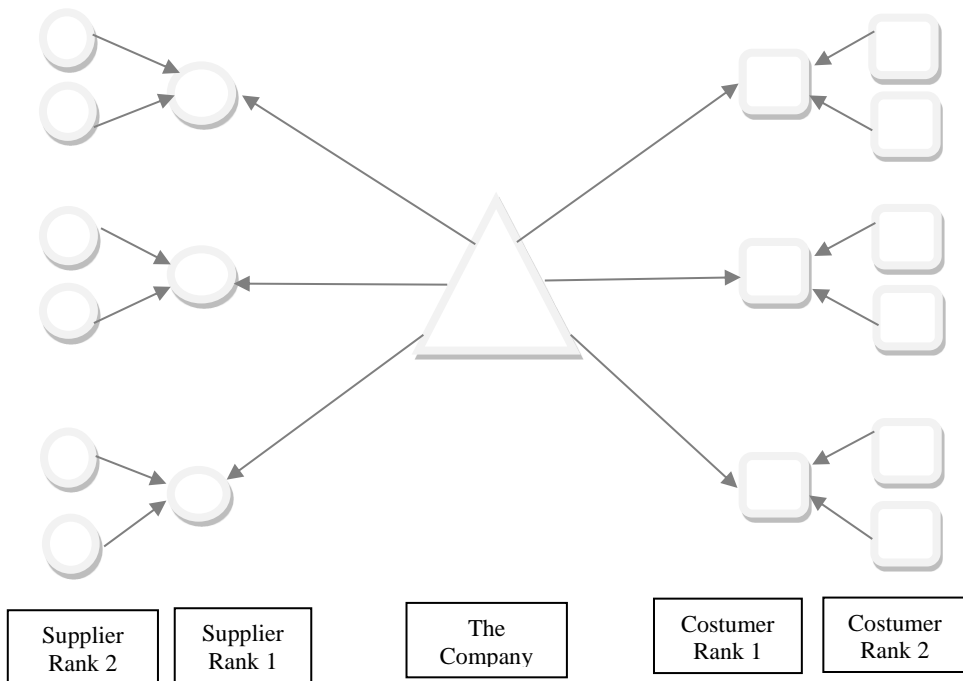
Is a set of discrete processes that are linked together with the goal of securing delivery of products to the consumer. It is an integrated system comprising companies, people, technologies, and resources required to

transfer of products or services from suppliers to customers. This system ensures the optimal utilization of resources available in order to deliver the final product to the consumer. (قندوز، 2022، صفحة 126)

2.2 Components of the supply chain

In fact, supply chains consisting of a complex network of organizations, as shown in the following figure which represents the movement of raw materials, products, money and information:

Figure two: Components of supply chain.



Source: (LE MOIGNE, 2013, p. 09)

2.3 Supply chain management

Since the introduction of supply chain management in the 1980s it has become one of the most popular concepts within management in general, a number of specialized journals have reviewed in the fields of manufacturing, distribution, marketing, customer management, transportation and integration and published articles on SCM topics or related to SCM, the development of SCM in the 1990s was driven by fierce global competition. (Mamun, 2014, p. 239)

-Supply Chain Management (SCM) involves the integrated planning, coordination, and control of all supply chain processes and activities to provide greater consumer value while minimizing costs. The effectiveness of the entire supply chain is influenced by the needs and demands of various stakeholders within it. (Van der Vorst, 2004, p. 06)

-Supply chain management encompasses a network of interconnected strategies aimed at enhancing the efficiency of vendors, manufacturing processes, warehouses, distributors, and retailers. This optimization starts with raw materials from suppliers, progresses to inventory in warehouses, and carries through the production process until the products are ready for market. It also includes the process of distributing manufactured goods to customers at a reasonable and competitive prices. (Sutanto, Harianto, & Balkan, 2023, p. 129)

From the above, we can say that supply chain management is a process that ensures the flow of everything related to transforming inputs into outputs that can be distributed and ready for final consumption, including managing the relationships of all its elements, including suppliers, customers and logistics.

2.4 The importance of supply chain management

Supply chain management aims to ensure that suppliers have the information they need to deliver the right raw materials and final materials to the customers to the right place at the right time (A. K. , Singh, Simran, & C. P. , 2010, p. 99) this requires the timely and accurate flow of high-quality information throughout the supply chain.

The following are the key reasons why supply chain is important: (Kleab, 2017)

- **SCM is essential for the foundation of all societies** Effective supply chain management is essential for businesses to succeed by ensuring that the right products are delivered in the right quantities to the right places at the right time, businesses can also improve customer service, satisfy producers and distributors, and make it easy for consumers to find the products they want.
- **Increased competition:** Supply Chain Management (SCM) serves as the cornerstone for enhancing a company's competitiveness. In

contemporary business, true competition is not merely a comparison of one company against another rather, it's comparing supply chains with each other. (Abdul Hamid, 2018, p. 03)

- **Facilitating the exchange of information:** Adopting supply chain management and control practices can promote the exchange of information and empower businesses to sustain a keen market responsiveness and maintain a high degree of market sensitivity. (Wei & Xiang, 2013, p. 280)
- **Reducing costs:** The importance of supply chain management is to minimize costs and maximize customer value by managing the materials flows from product design to delivery of the final product to customers. (Kerber & Dreckshage, 2011, p. 01)

2.5 Dimension of supply chain management

➤ **Customers Relationship Management (CRM)**

is an integrated information system used to plan, schedule, and monitor pre-sales and post-sales activities in an organization by taking care of current and potential customers and also including the call center, sales force, marketing and field service, the main goal of supply chain management is to achieve profitability and increase growth through a deep understanding of customer behavior. (Buttle , 2009, p. 04)

➤ **Suppliers relationship management (SRM)**

Suppliers relationship management is not only the key point of strategic supply chain management, but also the core of supply chain management (Zeng, 2020) SRM it consists of planning, implementing, developing and monitoring the organization's relationship with its current, future or potential suppliers. The main administrative activities of supplier management are represented in selecting the best suppliers and monitoring and evaluating development and integration. (Priyesh , Sharma, Samuel, & Sanjay , 2017, p. 01)

➤ **Logistics** (Turkay, 2023)

Logistics is the planning, implementation and control of the efficient flow of goods, services and information from the point of origin to the point of consumption in order to meet the needs of customers, which entails coordinating all the tasks associated with transporting goods from one

location to another. It means that it is concerned with the financial and practical aspects of transporting goods from one place to another, related to Logistics also deals with delivery, warehousing, inventory control, packing and other associated tasks.

3. What is performance marketing?

3.1 Definition of performance marketing

Performance marketing is considered as a fundamental and important concept in management and marketing literature, and one of the tools related to the organization's continuity increasing its expansion in the market and achieving profits. There are several definitions related to performance marketing that were derived from the definition of performance.

-The performance means achieving organizational goals and objectives whatever their nature, diversity and variety, this accomplishment can be understood in the strict and narrow sense (result, outcome) or in the broad and comprehensive sense of the process that leads to the result (action). (YOUUB, 2022, p. 651),

-The performance marketing is defined as the extent of the organization's success in the market, which it achieves through the products it provides. (شكر و بلل، 2020، صفحة 158) And it's defined also by (مسعود & كنعان، 2020، p. 28) as the outputs provided by the organization that reflect its achievements.

-The performance marketing of companies includes the goals to be achieved, which constitute a fundamental factor in their success or failure in the long or short term, internally or externally. (الطويل و العابدي، 2013، صفحة 119)

From the above, we can say that performance marketing represents the level of required performance determined by the company's management, which is achieved by the company reaching its previously set goals.

3.2 the importance of performance marketing

The importance of performance marketing in companies and organizations is to: (الطويل و العابدي، 2013، الصفحات 118-119)

- Create value for their customers, shareholders and individuals as they are the primary means of creating value. This represents the

most important goals that companies seek to achieve:

- Satisfying customers needs.
- Achieving returns on investment.
- Comparing the organization's performance compared to competitors. Through this comparison, it can know its position in the market, evaluate its performance, use its resources efficiently, and take full advantage of the opportunities available to it.

3.3 Dimensions of marketing performance

➤ **Profitability:**

Profitability represents the organization's ability to achieve profit, meaning that it covers all its expenses with income in addition to obtaining a surplus, which is profit. It is also defined as the organization's ability to achieve profit through the use of capital and factors of production in the market economy. (Geamănu, 2011, p. 118)

➤ **Sales growth:** (Sumarsan, Henry, Erika, & Albert, 2022, p. 101)

Sales are the revenues that an organization receives, as a result of providing goods and services. Companies that have stable sales can obtain higher debts, which means that the more stable the company's sales are, the greater its ability to meet its obligations.

The sales growth indicator is as follows

Sales Growth = This year sales – Last year sales/ Last year sales

➤ **Market share:**

It is the share of the market controlled by a product or brand belonging to the company (Lee G. & Masao , 1988, p. 17) there is a strategic marketing definition of market share from the American Marketing Association website the proportion of the total quantity or dollar sales in a market that is held by each of the competitors. The market can be defined as broadly as the industry, or all substitutes, or as narrowly as a specific market segment. The choice of market depends on which level gives the best insight into competitive position" (Hsu, 2022, p. 26)

4. Case Study Biskria cement company

4.1 Identification card of the company (biskria, 2021)

The cement company “BISKRIA CEMENT” is a company by share, private under Algerian law that was created in January 2009 and works

started in 2013. Its share capital estimated by 4,284,000,000 DA and the main vocation of the company is the production and marketing of cements. It is composed of a single entity located at the company's headquarters. Its shareholders are all Algerian private economic operators. Covering an area of 100 hectares. The cement plant is 18Km northeast of the capital of the state of BISKRA, from which it bears its name, 5 Km south of the municipality of BRANIS. It draw its main raw materials from the mount of M'hor deposit for limestone, located about 2 Km away and Etaref for clay, located 15 Km away.

Furthermore, it includes more than 1400 direct and indirect job positions. In addition to that, "BISKRIA CEMENT" products comply with the international standard that defines the requirements of the quality management system.

4.1.1 CE MARK

ISO 9001 -2015 the ISO standard is used to demonstrate the ability to consistently provide products and services that meet customer and regulatory requirements.

4.1.2 Production capacity of the company

Biskria Cement is the largest plant in Algeria with three lines with a total capacity of 5.000.000 tons/ year divided into:

- 02 million for the line number 01;
- 02 million for the line number 02;
- 01 million for the line number 02.

In addition to that, there is a cement storage space of more than 40,000T. Other activities:

In addition to the main activity, which is the production of cement, the company carries out other activities, including:

- Maintenance and repair of quarry machinery and public works.
- Maintenance and repair of production equipment, through the mechanical and electrical maintenance workshop and the boiler industry.
- Sewage water treatment.
- Handling equipment rental.

4.2 Analysis of questionnaire results

In order to identify the impact of supply chain management on the performance marketing of Biskria cement a questionnaire form was used as a data collection tool.

- **Study sample:** The questionnaire was distributed to a sample of Biskria Cement company employees, estimated at 40 employees of both genders.
- **Stability of the study tool:** In this research, Cronbach's alpha coefficient was relied upon to measure the stability of the study tool, which determines the level of acceptance of the measurement tool at a level of (0.60) or more. The results were as follows:

Table 1. Testing the reliability of questionnaire items for all variables using the alpha reliability coefficient.

Reliability coefficient value (questionnaire)	Statement
0.912	Independent variable
0.845	Dependent variable
0.783	The whole questionnaire

Source: 23 SPSS programs outputs.

From the table above, we conclude that the alpha coefficient for the questionnaire items, and for all variables, is greater than (80%), which indicates the existence of a good consistency and correlation relationship between the questionnaire statements. This percentage exceeds the statistically acceptable percentage of (60) % or more, and this confirms the stability of the questionnaire study tool.

4.3 Description of sample characteristics.

Table 2. Description of the study sample according to Duplicates and the percentage.

%	Duplicates	Categories	Variable
80.0	32	male	Sex
20.0	8	female	
100.0	40	total	
32.5	13	Less than 30 years old	Age
52.5	21	From 30 to less than 40 years old	
10.0	4	From 40 to less than 50 years old	
5.0	2	From 50 years old and over	
100.0	40	total	Educational level
5.0	2	Average or less	
30.0	12	Secondary	
57.5	23	University	
7.5	3	Postgraduate	
5.0	2	total	Job position
60.0	24	Engineer	
12.5	5	Quality controller	
17.5	7	Purchases Manager	
10.0	4	Sales manager	
100.0	40	total	

Source: 23 SPSS programs outputs.

The table above shows that the majority of the respondent category represents engineers at 60%, while the others category percentage rank between 10% and 17.5%. In other hand the distribution of the sample items by gender, the results indicates that the majority of respondents are male, at a rate of 80%, while the percentage of females is estimated at 20%, due to the nature of the work in this company.

However, the distribution of sample items according to age, show that most of the respondents are confined to the age group from 30 to 40 years, and this is a good indicator that indicates that the majority of respondents have experience and awareness regarding the subject of the study.

Regarding the distribution of sample items according to educational level, the

majority of respondents have a university level, representing 57.5% of the study sample.

4.4 Testing the study hypotheses.

We will discuss testing the study hypotheses to test **the impact of supply chain management on the performance marketing of Biskria cement company.**

➤ **First- Testing the main hypothesis:**

The hypothesis states that: There is a statistically significant effect of **supply chain management on the performance marketing of Biskria cement** at 5% level of significance.

Table 3. One-way analysis of variance (ANOVA) of the sample members’ answers between supply chain management and performance marketing.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.147	1	7.147	39.097	.000
Residual	6.946	38	0.183		
Total	14.093	39		R	R Square
				0.712	0.507

Source: 23SPSS programs outputs.

The table above shows that the calculated value of (f) is (39.097) at degrees of freedom (1 and 39) and the significance level of (f) is (sig=0.00), as it is less than (0.05) the level approved for this study, which necessitates rejecting the null hypothesis. The alternative hypothesis, which states that there is an impact of supply chain management on the marketing performance of Algerian economic institutions, is accepted at 5% level of significance.

What confirms the existence of the relationship between the two variables is the correlation coefficient that was estimated at (0.712), which is a fairly good direct relationship, and the coefficient of determination that reached (0.507) explains that (50.7%) of the variation of the marketing performance variable (the dependent variable) is due (or explained by) to variation in supply chain management variable (the independent variable).

➤ **Testing the first sub-hypothesis:**

The hypothesis states that: There is a statistically significant effect of relationships with suppliers on the performance marketing of Algerian economic institutions at 5% level of significance.

Table 4. One-way analysis of variance (ANOVA) of the sample members' answers between the dimension of managing relationships with suppliers and performance marketing.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.118	1	0.118	0.320	0.57
Residual	13.976	38	0.368		
Total	14.093	39		R	R Square
				0.091	0.008

Source: Source: 23SPSS programs outputs.

According to the results in the table above the calculated value of (f) is (0.320) at degrees of freedom (1 and 39) and the significance level of (f) is (0.57sig=), as it is greater than (0.05) the level approved for this study, so, we accept the null hypothesis, and we reject the alternative hypothesis. This means that there is no effect of suppliers relationship management on the performance marketing of Biskria cement Company at 5% level of significance.

This result is confirmed by the correlation coefficient, which was estimated at (0.091) and the coefficient of determination, which was (0.008).

➤ **Testing the second sub-hypothesis:**

The hypothesis states that: There is a statistically significant effect of customer relationship management on performance marketing of Algerian economic institutions at 5% level of significance.

Table 5. One-way analysis of variance (ANOVA) of the sample members' answers between the customer relationship management dimension and performance marketing.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.926	1	4.926	20.418	.000
	Residual	9.168	38	0.241		
	Total	14.093	39		R	R Square
					0.591	0.350

Source: Source: 23SPSS programs outputs.

The table above shows that the calculated value of (f) is (20.418) at degrees of freedom (1 and 39) and the significance level of (f) is (0.00sig=), as it is less than (0.05); so, we reject the null hypothesis and we accept the alternative hypothesis. This means that there is a significant impact of customer relationship management on the performance marketing of Algerian economic institutions.

This conclusion is confirmed by the correlation coefficient that was estimated at (0.591), which is a somewhat weak direct relationship; and the coefficient of determination is (0.350) explains that (35%) of the variation on the marketing performance variable is explained by the variation in customer relationship management.

➤ **Testing the third sub-hypothesis:**

The hypothesis states that: There is a statistically significant effect of the logistics on the performance marketing of Algerian economic institutions at 5% level of significance.

Table 6. One-way analysis of variance (ANOVA) of the sample members' answers between the logistics and performance marketing.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.455	1	7.455	42.669	0.000
	Residual	6.639	38	0.175		
	Total	14.094	39		R	R Square
					0.727	0.529

Source: Source: 23SPSS programs outputs.

The table above shows that the calculated value of (f) is (42.669) at degrees of freedom (1 and 39) and the significance level of (f = 0.00), as it is less than (0.05); so, we reject the hypothesis and we accept the alternative hypothesis. This means that there is an effect of the logistics on the marketing performance of Algerian economic institutions at 5% level of significance.

What confirms the existence of the relationship between the two variables is the correlation coefficient that was estimated at (0.727), which signifies straightforward relationship. And according to the coefficient of determination (0.529), we conclude that approximately (53%) of the variation on the performance marketing variable is explained by the variation in the logistics.

4. CONCLUSION

The supply chain management is the managing of the relationship with the customer in order to attract and retain him better than competitors. In addition, to logistics, which plays an essential role in packaging, storing and transporting the institution's products to the customer in the right way, at the right time, and in the right quantity without forgetting the important element in the supply chain, which is the suppliers, a successful entity must pay attention to managing the relationship with them, so that without them the production process within the organization slows down or becomes impossible. All of this contributes, in one way or another, to the institution's

expansion and maintaining its position within its markets. The objective this study is to examine the impact of supply chain management on the marketing performance in economic institution, to do so, we take the Biskria Cement Company as study case.

Through the field study of the Biskria Cement Company, a set of results and suggestions can be presented, which are as follows:

Results:

- Supply chain management is considered an important element in influencing the performance marketing of institutions.
- Organizations that adopt supply chain management in all its dimensions achieve strong and important performance marketing that is better than other organizations that adopt only one dimension.
- To ensure the survival and continuation of organizations in the market, supply chain management is among the important and most successful means of achieving this.

Recommendations:

- Through the statistical analysis of the study, the Biskria Cement Company must pay more attention to its supply chain, including its management.
- The Biskria Cement Company should pay more attention to its customers and involve them in some of the operations it carries out.
- It is necessary to pay attention to the suppliers, especially with regard to their databases, flexibility of operations and delivery.
- Institutions must pay attention to the logistics component, which includes packaging, storage, and transportation of products
- The dimensions of supply chain management in which the Biskria Cement Company operates are represented in managing relationships with customers and logistics. Therefore, the corporation must pay attention to managing relations with suppliers and be fully aware of everything related to them.
- The institutions must pay attention to transportation, diversify means of transportation, and choose between the most effective ones to ensure the arrival of its products.

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