

# The Effects of Supply Chain Platforms on The Competitiveness and Performance of Small and Medium-Sized Enterprises in Cameroon

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**Abstract:** *Of our days, with the opening of borders, the companies compete very aggressive for the flow of their products in a market, where only the companies well organized can afford a good share of the market. The survival of such and such company necessarily passes through the improvement of performance and competitiveness of organizations in general, and small and medium-sized enterprises (SMES) in particular. It is in this perspective that the establishment of the platform of the supply chain management can provide considerable benefits to SMES on their competitors. The Cameroonian SMES and some businesses in the countries on the path of development are however, faced with problems in the implementation of the SCM platform related to lack of direction and resources. In this logic, this research paper examines the effect of certain factors (SCM platform) directly on the competitiveness and the performance of SMES in Cameroon in term of costs reduction. The three factors, which are Logistics synchronization, Information sharing with SC partners and Use of modern technologies examined, appeared most relevant. For the improvement of the performance and the competitiveness, the authors use certain measures as Customer satisfaction, internal business parameters, Innovation and growth, Finance. 134 Cameroonians SMEs were selected. The data was collected between December 2017 and March 2018. The results are analyzed using standard statistical and econometric tools (correlation and regression analysis) to test our research hypothesis. Our result showed that SCM platform play an important role in competitiveness and performance of SMEs in terms of customer satisfaction (H1); SCM platform play an important role in competitiveness and performance of SMEs in terms of Internal business parameters (H2); SCM platform play an important role in competitiveness and performance of SMEs in terms of Innovation and growth (H3); SCM platform play an important role in competitiveness and performance of SMEs in terms of Finance (H4).*

**Keywords:** *Supply Chain Management, Competitiveness and Performance, Cost Management, Small and Medium-sized Enterprises in Cameroon.*

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## I. INTRODUCTION

### Research Background

Considered long ago to be a strategic value because of its importance, competitiveness has become a key element in the fact that it is a source of progress, potential improvements for all types of companies. It is a notion that aims to motivate those responsible, helping to achieve the objectives of the organization. Nowadays, with the opening of borders, companies compete very aggressively for the disposal of their products in a market where only well-organized companies can afford a good market. The survival of such a company necessarily involves improving their performance and therefore competitiveness. The organization of local businesses must allow the setting up of quality products and services in order to reduce costs and intervene quickly in the market. Indeed, to deal with increasingly complex situations, such as competition, competitiveness and cost reduction, companies must develop tools such as collaboration, partnerships, platforms, synergies to meet the requirements of stakeholders as customers. In an increasingly complex, demanding and unstable competitive environment, companies need to be flexible, responsive and adaptable. These skills are obtained through a thorough knowledge and as complete as possible of the elements that constitute their external and internal environments, customers, competitors, and employees, suppliers, know-how and the State.

## **II. Research Problem**

Despite the different programs and other initiatives of companies and other social partners, the objectives are far from being achieved, results remain mixed, there is a low competitiveness of export products (coffee, cocoa, fruit and vegetables) Consumption less demanded on the world market. When entry and exit barriers are high, the profit potential is high, but is usually accompanied by more risk. Although entry is discouraged, failed businesses will remain and fight in the industry<sup>[2]</sup>. The objective is to promote partnerships and strategic alliances between the different actors in order to make them competitive. This is the problem statement that we want to look at, which is "we want to measure the effect of SCM platforms and see the impact on the competitiveness and performance of small and medium-sized enterprises in Cameroon.

This will allow companies to develop actions of attractions of their customer since they will have the same base of their cost of supply. It is desirable for a Collaboration Strategy to ask the various entities to provide the list of their supplier in order that an analysis be made above in order to determine the similar products that may be used for the renegotiation with the suppliers. Retailers in the platforms will find a significant gain because they will not bear the charges related to lower level suppliers. Every company wants to have its supplier, want to make its own purchase, and want to set up its own advertising like other stakeholders without considering costs on its competitiveness.

## **III. Research Questions**

In other words:

- What is the contribution of logistics synchronization on the competitiveness and performance of SMEs?
- What is the impact of information sharing with the SC partners on the competitiveness and performance of SMEs?
- What is the appreciate Use of modern technologies on the competitiveness and performance of SMEs?

## **IV. Objective of the Study**

Our main objective is to analyze the effects of supply chain platforms (in terms of cost reduction) on the competitiveness and performance of small and medium-sized enterprises in Cameroon. More specifically, and according to current practices, it will be:

- To show the contribution of logistics synchronization on the competitiveness and performance of SMEs;
- To evaluate the impact of information sharing with the SC partners on the competitiveness and performance of SMEs;
- To appreciate Use of modern technologies on the competitiveness and performance of SMEs;

## **V. Contribution of the Study**

On a practical level, importance can be the solution or the solutions that the results of this research can bring to some of the concerns of everyday life such as group advertising, partnerships, creation of platforms; Moreover, this study can, by its results:

- pushing companies or any organization to integrate the management of supply chain and benefit from services rendered;
- encouraging some companies that operate in similar or non to work in partnership; organize themselves into associations to benefit from group strategies;
- identify and analyze management issues that affect the achievement of development objectives in Africa in general and Cameroon in particular. In order to concentrate the depth of our research, we wanted to limit the present study only in the cases of Cameroon on companies that practice procurement or intend to do so. These companies come from different sectors such as construction and Electronics. The present study is structured around five sections, which are sections 1, introductory includes the Research Background, research problem, research questions, objectives and contribution of the study are dealt with in the context of the study. Section 2, review of the literature, will allow us to explain the key concepts to our analysis and to give the elements that make it possible to identify the competitiveness of the organizations; section 3 deals with the methodology of research. We present the choice of reference structures as well as the techniques of sampling and analysis of the data; section 4 describes the results of the study and the related discussions; finally, section 5 presents the conclusion and recommendations of the study.

This chapter presented the research problematic in relation to the research hypotheses set out in order to achieve the objectives and its treatment process.

## **VI. LITERATURE REVIEW**

This chapter will allow us to explain the key concepts to our analysis and to give the elements that make it possible to identify the competitiveness of the organizations.

### **Theoretical Foundation of SCM**

<sup>[3]</sup> defined the management of the supply chain as the development of a strategy to organize, control and motivate the resources involved in the flow of services and materials within the supply chain."<sup>[4]</sup> shows the relationship between the practices of Supply Chain Management (SCM), and the reactivity of the Supply Chain (SCR) and examines the relationship with the competitive advantage (CA). Several aspects of the supply chain such as the integration of the chain, the sharing of information, the management of the service to the customer, the geographical proximity; and the capabilities of JIT according to <sup>[5]</sup> on the one hand and the strategic outsourcing, partnerships with suppliers, the relationship with the customer, the sharing of information, and the modularity of the product <sup>[6]</sup> on the other hand have been underlined.

Each element of the production and the supply of raw materials up to the final customer are connected in the supply chain <sup>[8]</sup>. <sup>[9]</sup> Uses the Construction to address the problems relating to the supply chain. <sup>[7]</sup> defines the chain of supply such as the network of organizations involved, by upstream and downstream linkages, in the different processes and activities, which produce the value in the form of products and services between the hands of the ultimate customer. The competition is no longer between the organizations, but between the supply chains, to ensure a competitive advantage and improve the performance of the Organization, it must be effective, it is sufficient to conceptualize and develop five dimensions of practice such as the strategic suppliers of partnership, the relationship with the customer, the level of the exchange of information, the quality of the exchange of information, and the adjournment<sup>[10]</sup>. The planning of the supply chain of the administration of the request made in the face of activities in order to minimize the mismatch of skills and thus create and capture of the value in most of the organizations is an effort <sup>[11]</sup>. <sup>[12]</sup> the creation of value in the electronic trade passes through the exploitation of the business opportunities based on the efficiency, complementarities, the locking and the novelty. The management of the logistics chain is defined in a its long-term relationship where the participants can collaborate, share information and work together to plan and even change their business practices to a better performance of the supply chain <sup>[13]</sup>. The supply chain has an impact on the overall value and this through the potential role of customers, competitors and suppliers in the increase of the performance of the supply chain.<sup>[14][15]</sup> More and more businesses realize that the costs and the traditional accounting methods may enter into conflict with the initiatives that they implement.

The supply chain can be defined as a network or set of documents, information and treatment services of all elements with links to the characteristics of the supply, the processing and the application <sup>[16]</sup>. For <sup>[17]</sup>, the supply, production and distribution are the three traditional stages of the supply chain, and each of the steps can be of several facilities in various locations by the diversity of chains of mounting in several countries.<sup>[18]</sup>, It define the management of the supply chain as the planning of the organization, implementation, the motivation and the effective control of all activities involving the transport, processing and storage of raw materials as well as the inventory of work in progress and finished products of the original providers, by warehouses, production facilities, shops and other intermediaries from the end customers in order to meet the requirements of the customer and to obtain a competitive advantage by adding value to the products / services.

In order to obtain a sustainable competitive advantage, the equipment and the information must circulate in the supply chain and this chain must integrate all these activities <sup>[19]</sup>. The management of the supply chain is therefore intended to position the organization to ensure that all contributors of this chain benefit from effective management based on the pillar of trust and communication. Each member should understand how it influences the entire chain <sup>[20]</sup>. The manufacturer, suppliers, carriers, the warehouses, the wholesalers, the retailers, intermediaries and customers who supply services or products on a market constitute a supply chain. In its process of evolution, ranging from the raw material to finished products, the product passes several successive transactions business-to-business. All parties are involved directly or indirectly in the satisfaction of the client request <sup>[21]</sup>.

## **Theoretical Review**

We are going to explain the key concepts in this section\

### **Competitiveness and Performance**

The competitiveness of the supply chain is gaining in importance for the reason that the organizations will survive in this global competition, if they are sufficiently competitive both from the chain as well as from the point of view of the satisfaction of clients<sup>[22]</sup>. For<sup>[23]</sup> the competitiveness of enterprises go through the planning of the load, the planning of routes and the design of the distribution network. They must therefore deflect the elements that have an impact on the management of the supply chain, such as the re-engineering of globalization and outsourcing. For<sup>[24]</sup> the competitiveness of a supply chain is its ability of the chain to offer value to the customer and obtain a competitive advantage. For<sup>[25]</sup> the price variations can cause changes in sales and profitability much more important than expected from consumers thanks to the knowledge of the attributes of the product and competitive prices. <sup>[26]</sup> Businesses interact with partners in the supply chain in order to help

each other to manage costs more effectively. The efficient and effective use of supply chains allow products to be designed and delivered in the right quantities, at the right place at the right time in a cost-effective manner<sup>[27]</sup>. For<sup>[28]</sup> the competitiveness of a country in the long term determines its economic growth. Since we cannot speak of competitiveness without referring to the performance, the concept of performance raises our days of tremendous passions and controversy in the field of the managerial thinking. For<sup>[29]</sup> the performance of an organization is judged on its "ability to produce results considered as acceptable".

### **Cost Management**

The reduction of costs is among the most cited in the objectives of management of the supply chain so that companies focus increasingly their attention on their partners in the supply chain so that suppliers and customers can achieve new frontiers of the competitiveness and profitability<sup>[19]</sup>.<sup>[30]</sup> defines the supply chain as a set of all activities associated with the flow and transformation of products of an entity from raw materials called extraction, up to the end user by the consumer, as well as the flow of information. This management of the logistics chain characterized by the management of documents and information flows in relation with the management of relations, which allows the integration of activities thanks to the improvement of relations in the supply chain, in order to obtain a sustainable competitive advantage. For what is the management of costs, several authors have given guidelines on this subject<sup>[31]</sup> shows that the impact of the organizational management in the supply chain affects the cost of management of the chain. <sup>[32]</sup> uses the notion of the supplier and the customer in the coordination of programs for the reduction of the costs to show how collaboration can be performed during the design of the product and manufacturing.<sup>[33]</sup> defines the management of costs as a set of all units or measures or controls, which aim to influence the behavior of cost structures as well as the costs of early. This management of costs within the value chain passes through an evaluation, a planning and a control.

According<sup>[34]</sup>, the father of the discipline for which "Management control is the process by which managers get the assurance that resources are obtained and used effectively and efficiently to achieve the objectives of the organization". It is obvious of our days that the grouping of consumers tend to refer to the price of goods on the market in relation to the brand linked to these goods in consideration of the margin of price which may be more important for products related to the mark<sup>[35]</sup>. The Internet has played a considerable role in the reduction of costs in the sense that it has enabled consumers to make price comparisons of various goods and to modify their behavior of purchases<sup>[36]</sup>.

### **Small and Medium-sized Enterprises in Cameroon**

The SMEs are small and medium-sized enterprises in Cameroon governed by the law N ° 2010/001 of 13 APRIL 2010. The very small-abbreviated company (TPE) is a company employing no more than five (05) persons; The Small Enterprises Abbreviated (PE) is an enterprise that employs between six (06) and twenty (20) people; the average enterprise in abbreviation (ME) is an enterprise employing between twenty-one (21) and one hundred (100) persons. SMEs are increasingly participating in the global trading network and participating in many interrelated supply chains<sup>[37]</sup> SMEs have significant impacts on supply chain performance and can play the role of suppliers, distributors, producers and customers<sup>[38]</sup>. SMEs typically focus their activities on specific niche markets through their unique skills in the supply chain. They can compete in the supply chain for competitive positions in terms of low-cost operations or value-added operations (for example, the development of new products and services)<sup>[39]</sup>. High organizational flexibility and rapid decision-making enable SMEs to benefit from the competitive advantages of large companies and to collaborate effectively with other SMEs.

### **The importance of the SCM platform and relationship with the variables**

A platform is a set of components, modules or common parts from which a stream of derivative products can be created and launched effectively, well again, a platform is a set of standard components around which the buyers and sellers to coordinate their efforts. Customers can affect the activity of the platforms by increasing the volume of demand, and allow for the amortizes its costs and be more competitive<sup>[40]</sup>. Using the platforms, companies are seizing new opportunities for growth and change their way of doing business. When the groups of users generally the producers and consumers share the market and generate the value for one another, they entail mutual benefits that generate economies, increase the profit; Reduces costs<sup>[41]</sup>

## **VII. RESEARCH METHODOLOGY**

In this chapter, we will present the method of data collection, the variables, the model and the process of analysis.

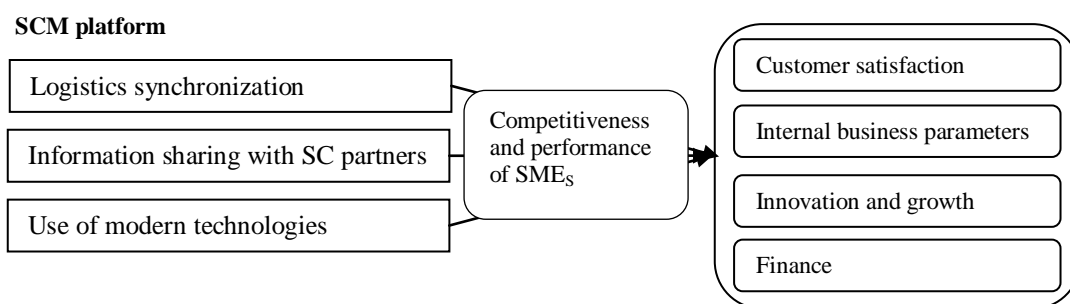
### **Hypothesis**

This research paper focuses on an empirical study for the identification of the SCM platform and its implementation in order to reduce the costs related to SCM and evaluate their effects on the performance and competitiveness of Cameroonian SMEs. Four elements of the SCM platform are retained in the literature review and other consultants. Their effect has been studied on different measurement variables; these variables are

Customer satisfaction, internal business parameters, Innovation and growth, Finance of Cameroonian SMEs. Based on these elements, the study tried to test the following four-research hypothesis:

- **H1:** There is a significant relationship between SCM platform and competitiveness and performance of SMEs in terms of customer satisfaction;
- **H2:** There is a significant relationship between SCM platform and competitiveness and performance of SMEs in terms of Internal business parameters;
- **H3:** There is a significant relationship between SCM platform and competitiveness and performance of SMEs in terms of Innovation and growth;
- **H4:** There is a significant relationship between SCM platform and competitiveness and performance of SMEs in term of Finance;

To study the effect of the various elements on the performance and competitiveness of Cameroonian SMEs, several have studied different frameworks of literature that were not adapted to our study. The design of the framework for the study of the effect of different variables on the performance and the competitiveness Cameroonian SMES with a view to reducing the costs related to SCM is made in consideration of BSC Model. According to the approach by the BSC, moreover very widespread, the identification of SCM platform has led to the implementation of different categories of variable as well developed in the figure 1. The following model modifies and elaborates as shown in figure 1 is the most used for the study and is our conceptual framework



**Figure1 Conceptual framework**

**H1: There is a significant relationship between SCM platform and competitiveness and performance of SMEs in terms of customer satisfaction:**

With the growing use of information systems integrity and enabling technologies, it is now possible to create supply chains homogeneous linking suppliers to clients in order to eliminate the poor performance of the suppliers, the unpredictable demands of clients and an uncertain economic environment. A supply chain integrated presents a net benefit on the competitiveness of individual firms<sup>[42]</sup>.

Businesses turned to the future collaborate with suppliers, customers and even competitors; share information and knowledge to create a supply chain collaborative capable to compete. This increased competition has more of an effect on small and medium-sized enterprises (SMES) due to the external pressure as possible to clients of large size and the internal pressure of the limited resources of most of the SMES<sup>[42]</sup>

**H2: There is a significant relationship between SCM platform and competitiveness and performance of SMEs in terms of internal business parameters:**

The technologies offer new opportunities for management and can be applied strategically in several ways: acquire a competitive advantage; improve the productivity and the performance<sup>[43]</sup>.

The income earned by a company's moon during a fixed period is its profit, while profitability refers more to the operational efficiency of a company to make profits on its sales. Improve the network of supply improves the competitiveness, the performance and the efficiency of the firms.

A good management of the supply chain involves, responding to the needs and requirements of suppliers and customers; as well as other financial obligations and short-term trade to maturity this fosters; a good relationship between the directorate, its suppliers and its customers, which allows to obtain raw materials, at an affordable price and sales to customers at a good price that lead to the profitability of the company<sup>[44]</sup>.

The Profitability was one of the essential conditions to survive on the market requires businesses to be competitive on the world markets while defending the market share of their global competitors, which has the effect of increasing the complexity of supply chains and improve the level of service.

**H3: There is a significant relationship between SCM platform and competitiveness and performance of SMEs in terms of Innovation and growth:**

To establish close partnerships with suppliers and customers, SMES could better achieve the technological innovations, which improves their competitiveness. The exchange of computerized data has been widely used to transfer information between suppliers and customers in a chain of supply. The coding to bar is still widely used to ensure the marking of parts and products. The new technologies provide a security to businesses and consumers enormous economic benefits. The importance of a better monitoring of the logistics of products, the improvement of the efficiency of the processing of the information, the improvement of safety, the reduction of counterfeits, the speed of the quotation and the commands, the improvement of customer relationships and a better control of supplies <sup>[45]</sup>. The technology allows to transform the strategic position of the enterprise, saving time, costs, to allow consumers to streamline, identify, book and buy products while allowing organizations to manage their competitiveness <sup>[43]</sup>.

The use of information technology to share different data between buyers and suppliers creates an information-based supply chain. This form of cooperation in the supply chain is becoming more and more widespread and allows companies to focus on the management of their basic skills and innovation <sup>[46]</sup>.

**H4: There is a significant relationship between SCM platform and competitiveness and performance of SMEs in term of Finance:**

A company can obtain several strategic benefits by using the technologies, establish barriers to entry, affect the communication costs, differentiate products, ensure the competitive prices, decrease of the cost of supply and the relaxation of the offer, and increase as well as the profit <sup>[45]</sup>.

Companies that succeed in the technology benefit from a reduced competition and an improvement of sales when their products are known to the public, and have a sustainable competitive advantage in terms of the capacity to exploit the opportunities <sup>[47]</sup>.

**Data Collection**

The survey used in this study was conducted among 134 Cameroonians SMEs. These SMEs were selected from directories available at Inter-managerial Committee of Cameroon (ICC), Cameroon Chamber of Commerce, Industry, Mines and Crafts, Cameroon Manufacturers' Union, and Ministry of Small and Medium Sized Enterprises (MSMSE) through office meeting and plant visit by making an appointment with the management. The data was collected between December 2017 and March 2018. Most of the SMEs were located in urban areas. From the total responding SMEs, 32.6 percent were from construction sector, 26.1 percent from the electronics sector, and 41.3 percent from the services sector. The questionnaire contained two sections: Section I focused on performance and competitiveness in Cameroonian SMEs based on criteria of balanced score card approach, and Section II focused on SCM platform. Data was obtained using structured questionnaires. The selection of this tool has been guided by the nature of data and the objective of the study.

The Management Committee of SMES has identified a set of 150 companies from their database having a link with the supply chain. An email has been sent to the different companies as well as the questionnaire for their propose an interview date in order to be able to collect the primary data from each of them. After a week, the mails were again sent to companies that had not answered and the total of the companies that responded was 134. At this stage, the response rate was 89.33%. The data have been collected from each company in Assistant those who had not finished to fill out the questionnaire. This data collection was based on a search involving face-to-face interviews. Sometimes, depending on the objectives of the study, the researcher must rely on logic and a judgment in order to define its target population. The entire population may be concerned if it is sufficiently small. In our case study, the population is large for the researcher to attempts to survey all of its members. The Management Committee has used the methods of sampling for SMES, and in particular the convenience sampling.

The high response rate allows us to believe in a generalization of the sample to the population. The sample is not representative of the population therefore does not allow the generalization of this sample to this population <sup>[48]</sup>. It is a limitation.

**Measurement of Variables**

For the measurement of the SCM platform, 17 items were considered in three independent variables and adapted from Wisner (2003); all these items have measured by a 5 point Likert scale, ranging from a 1 = very low to 5 =very high. Moreover, for the measurement of the competitive and performance level, we used six factors in four dependent variables proposed by <sup>[49]</sup>: i) Customer satisfaction, measured by a scale of 6 items; ii) Innovation and growth, measured by a scale of 6 items; iii) Internal business parameters, measured by a scale of 4 items and iv) Finance, measured by a scale of 6 items.

**Data Analysis and Presentation**

The multiple regression models are used to analyze the relationship. Consequently, the model of multiple regression (MR model) has been applied to test the relationship between the independent variables (information sharing with SC Partners, Logistics synchronization, use of modern technology) and the dependent variables (Customer Satisfaction, Innovation and growth, internal business parameters, Finance). The results of the data collected are analyzed by the SPSS software 23 and presented in tables. The equation below has been used in the development of our model of research:

$$Y = \alpha + \beta X + \varepsilon$$

$$CS = \alpha_1 + \beta_1 ISC + \beta_2 LS + \beta_3 UMT + \varepsilon$$

$$IG = \alpha_1 + \beta_1 ISC + \beta_2 LS + \beta_3 UMT + \varepsilon$$

$$IBP = \alpha_1 + \beta_1 ISC + \beta_2 LS + \beta_3 UMT + \varepsilon$$

$$F = \alpha_1 + \beta_1 ISC + \beta_2 LS + \beta_3 UMT + \varepsilon$$

Y (dependent variable): Variables Predicted: The variable whose behavior can be explained or influenced by other factors.

X is the vector of the independent and control variables; Predictors that we suppose to influence the dependent variable.

Beta Coefficient (s): An estimate of the magnitude of the impact of changes in the predictor on the predicted

variable.

$\varepsilon$  the error term

CS): Customer satisfaction, (IG): Innovation and growth, (IBP): Internal business parameters, (F): Finance, (ISC): Information sharing with SC partners, (LS): Logistics synchronization, (UMT): Use of modern technology, e: error term.

### **Reliability Analysis and Validity**

For this research paper to assess the reliability and validity of the measures the scales used in the theoretical model, we conducted a confirmatory factor analysis, using the method of principal components to extract of factors with eigenvalues greater than 1 in the SPSS software 23. The Varimax rotation is used to facilitate the interpretation of the matrix of factor. Kaiser-Meyer-Olkin and Bartlett's test of sphericity used to validate the use of the factorial analysis. In addition, the reliability of the measurement scales proposed have been analyzed from the Cronbach alpha values<sup>[50]</sup>. The value of the scale reaches the recommended level of 0.7 for the Cronbach alpha values<sup>[51]</sup>.

We have eliminated five questions on a total of 22 questions for this, which was of the SCM Platform. These questions had a coefficient of Cronbach alpha less than .70<sup>[52]</sup> We have associated this problem to the small number of indicators used to measure this variable and probably to the size of the sample which should be greater than that used<sup>[53]</sup>. In addition, factorial loads main use principal components method and eigenvalues greater than 1 is high at 0.6<sup>[52]</sup>. Our variables showed factors loadings above this threshold. Except a variable "development of reliable suppliers" has been deleted because it was below the recommended value.

This chapter presented the methodology of research and data collection in relation to the research hypotheses set out in order to achieve the objectives set and the different tests.

## **VIII. FINDINGS AND DISCUSSIONS**

This chapter allow us to describes the results of the study and the related discussions

### **Descriptive Statistics**

The result in table 1 showed that the most important factor Information Sharing with SC partners (ISC) with mean values of 2.61, Standard deviation of .822), followed by Logistics synchronization (LS) (mean values of 2.49 and Standard deviation of .545), Use of modern technologies (UMT) (mean values of 2.40and Standard deviation of .577).Information Sharing with SC partners (ISC) is the important SCM platform, close partnerships with their suppliers and customers could better achieve product, process and technology innovations, improve coordination and responsiveness of the SC is very important.

Logistics could help SMEs in optimizing their transportation and warehousing costs. Customer's orders and the services of the organization can be effectively connected by a good logistics system.

The other SCM platform such as use of modern technologies (Internet, websites...) help in better management of information. Coefficient Skewness of Use of modern technologies (UMT) 1.104 indicated that Use of modern technologies (UMT)has not been fully established among the organization. Skweness and Kurtosis are within +2 to -2 (PISA, 2006).

**Table1 Descriptive statistics**

SCM platform	rank	Mean	Std. Deviation	Skewness	Kurtosis
Information Sharing with SC partners (ISC)	1	2.61	.822	.831	-1.007
Logistics synchronization (LS)	2	2.49	.545	.485	-.931
Use of modern technologies (UMT)	3	2.40	.577	1.104	.246

**Correlations Matrix**

Pearson correlation analysis was conducted to examine the relationship between the variables. The main research propositions in this study is to show the relationship between the SCM platform and competitiveness and performance of SMEs. Table 2 represent the Pearson correlation results of dependent and independent variables. This analysis show that:

- SCM platform for supply chain implementation have significant correlation with competitiveness and performance of SMEs in terms of customer satisfaction, thereby supporting the first hypothesis (H1), this implies that SCM platform can significantly improve the competitiveness and performance of SMEs.
- SCM platform for supply chain implementation have significant correlation with competitiveness and performance of SMEs in terms of internal business parameters, thereby supporting the second hypothesis (H2), this implies that SCM platform can significantly improve the competitiveness and performance of SMEs.
- SCM platform for supply chain implementation have significant correlation with competitiveness and performance of SMEs in terms of innovation and growth, thereby supporting the third hypothesis (H3), this implies that SCM platform can significantly improve the competitiveness and performance of SMEs.
- SCM platform for supply chain implementation have significant correlation with competitiveness and performance of SMEs in terms of Finance, thereby supporting the fourth hypothesis (H4), this implies that SCM platform can significantly improve the competitiveness and performance of SMEs.

**Table2 Correlation and regression Matrix of Variables**

	CS	IG	IBP	FI	ISC	LS	UMT
Information Sharing with SC partners <b>ISC</b>	<b>.566**</b>	<b>.662**</b>	<b>.686**</b>	.652**	1		
Logistics synchronization <b>LS</b>	<b>.475**</b>	<b>.522**</b>	<b>.538**</b>	.439**	.541**	1	
Use of modern technologies <b>UMT</b>	<b>.538**</b>	<b>.680**</b>	<b>.684**</b>	.647**	.634**	.330**	1
Prob F	0.000	0.000	0.000	0.000			

Notes: \*\* Correlation is Significant at the 0.01 level (2-tailed)

- A multiple regression was run to predict CS as dependent variable from ISC, LS and UMT as independent variable. These variables statistically significantly predicted CS, F= 30.888, p < 0.001, R2 = 0.645. All three variables added statistically significantly to the prediction, p< 0.05. The regression model is a good fit of the data. From the table 2, our value of 0.645 means that independent variables explain 64.5% of the variability of our dependent variable. This implies that in addition to these independent variables, other factor related to SCM platform play a significant role in competitiveness and performance of SMEs in Cameroon in terms of customer satisfaction.

- A multiple regression was run to predict IG as dependent variable from ISC, LS and UMT as independent variable. These variables statistically significantly predicted IG, F= 62.871, p < 0.001, R2 = 0.769. All three variables added statistically significantly to the prediction, p< 0.05. The regression model is a good fit of the data. From the table 2, our value of 0.769 means that independent variables explain 76.9% of the variability of our dependent variable. This implies that in addition to these independent variables, other factor related to SCM platform play a significant role in competitiveness and performance of SMEs in Cameroon in terms of innovation and growth.

- A multiple regression was run to predict IBP as dependent variable from ISC, LS and UMT as independent variable. These variables statistically significantly predicted IG, F= 69.624, p < 0.001, R2 = 0.785.



All three variables added statistically significantly to the prediction,  $p < 0.05$ . The regression model is a good fit of the data. From the table 2, our value of 0.785 means that independent variables explain 78.5% of the variability of our dependent variable. This implies that in addition to these independent variables, other factor related to SCM platform play a significant role in competitiveness and performance of SMEs in Cameroon in terms of internal business parameters.

- A multiple regression was run to predict F as dependent variable from ISC, LS and UMT as independent variable. These variables statistically significantly predicted IG,  $F = 48.501$ ,  $p < 0.001$ ,  $R^2 = 0.727$ . All three variables added statistically significantly to the prediction,  $p < 0.05$ . The regression model is a good fit of the data. From the table 2, our value of 0.727 means that independent variables explain 72.7% of the variability of our dependent variable. This implies that in addition to these independent variables, other factor related to SCM platform play a significant role in competitiveness and performance of SMEs in Cameroon in terms of finance.

- **Multicollinearity:** We used the literature review of <sup>[54]</sup> to test if the multi collinearity is present between the independent variables. The correlation coefficients that we have calculated have a common threshold value suggested of 0.7 between the independent variables, which indicates an absence of multi collinearity. Table 2 shows that the correlation coefficients between our independent variables are lower than this level. In addition, the multi-collinearity can also be reached if the maximum variance inflation factor (VIF) is higher than the threshold value of ten <sup>[54]</sup>, all of the variables in the model have a value below this threshold (max VIF = 4.65), which indicates an absence of multi collinearity.

- The Variance Inflation Factor (VIF) is widely used as a measure of the degree of multi collinearity of the independent variable with other independent variables in a regression model. The Rule of 10 associated with the VIF is the more often regarded as a sign of multi collinearity. The VIF tells us how much the variance is higher when the independent variables are correlated that when they are uncorrelated. By contrast, if these VIF were high in relation to the threshold, the multi-collinearity should be eliminated by the reduction of one or several variables, or combine two or more independent variables in a single element <sup>[55]</sup>

#### **Coefficients of MR Model**

Table 3 reveals that model 1 has coefficient  $\beta > 0$ ,  $t > 0.05$ , so hypothesis 1 implies that SCM platform positively and significantly affects the competitiveness and performance of SMEs in terms of customer satisfaction. Thus, for each unit increase respectively of the Information Sharing with SC partners, Logistics synchronization, Use of modern technologies, there is at least respectively .241, .244 and .304 unit of increase of the competitiveness and performance of SMEs. As a result, Information Sharing with SC partners and Logistics synchronization, Use of modern technologies are significant predictors of results in competitiveness and performance of SMEs.

Also, model 2 has coefficient  $\beta > 0$ ,  $t > 0.05$ , so hypothesis 3 implies that SCM platform positively and significantly affects the competitiveness and performance of SMEs in terms of innovation and growth. Thus, for each unit increase respectively of the Information Sharing with SC partners, Logistics synchronization, Use of modern technologies, there is at least respectively .254, .239 and .44 unit of increase of the competitiveness and performance of SMEs. As a result, Information Sharing with SC partners and Logistics synchronization, Use of modern technologies are significant predictors of results in competitiveness and performance of SMEs.

It is the same for the model 3, coefficient  $\beta > 0$ ,  $t > 0.05$ , so hypothesis 2 implies that SCM platform positively and significantly affects the competitiveness and performance of SMEs in terms of Internal business parameters.

Thus, for each unit increase respectively of the Information Sharing with SC partners, Logistics synchronization, Use of modern technologies, there is at least respectively .287, .243 and .422 unit of increase of the competitiveness and performance of SMEs. As a result, Information Sharing with SC partners and Logistics synchronization, Use of modern technologies are significant predictors of results in competitiveness and performance of SMEs.

Table 3 reveals that model 4 has coefficient  $\beta > 0$ ,  $t > 0.05$ , so hypothesis 4 implies that SCM platform positively and significantly affects the competitiveness and performance of SMEs in terms of Finance.

Thus, for each unit increase respectively of the Information Sharing with SC partners, Logistics synchronization, Use of modern technologies, there is at least respectively .333, .129 and .393 unit of increase of the competitiveness and performance of SMEs. As a result, Information Sharing with SC partners and Logistics synchronization, Use of modern technologies are significant predictors of results in competitiveness and performance of SMEs.

**Table3 Regression Results**

<i>CSM platform</i>	<b>Model 1: CS<sup>a</sup></b>			<b>Model 2: IG<sup>a</sup></b>			<b>Model 3: IBP<sup>a</sup></b>			<b>Model 4: FI<sup>a</sup></b>		
	<i>constant</i>	$\beta$	<i>t-values</i>	<i>constant</i>	$\beta$	<i>t-values</i>	<i>constant</i>	$\beta$	<i>t-values</i>	<i>constant</i>	$\beta$	<i>t-values</i>
<b>ISC</b>	.196	.241	2.480	.213	0.254	3.126	0.244	0.287	3.645	0.27	0.333	3.804
<b>LS</b>	.299	.244	3.058	.302	0.239	3.582	0.311	0.243	3.763	0.158	0.129	1.802
<b>UMT</b>	.353	.304	3.513	.526	0.44	6.073	0.509	0.422	6.001	0.456	0.393	5.05

<sup>a</sup>. Dependent Variable: CS, IG, IBP, FI

This chapter presented the analysis of the data in relation to the research hypotheses set out in order to achieve the objectives set.

## **IX. CONCLUSIONS**

This research work provides justifications for a framework that identifies 3 key factors with effect of the SCM platform plat-form on the competitiveness and performance of SMES. Three research questions:

- What is the contribution of logistics synchronization on the competitiveness and performance of SMEs?
- What is the impact of information sharing with the SC partners on the competitiveness and performance of SMEs?
- What is the appreciate use of modern technologies on the competitiveness and performance of SMEs? For the purposes of investigating these issues, instruments for the assessment of these effects have been developed and tested in the use of, statistical tests which the regressions and correlations, validity. The results showed that the SCM Platform plays a significant role in the competitiveness and performance of SMES

In the framework of our study, we have not taken into account the comparative advantages of the establishment of the SCM platform with those countries having applied. Another, the data are difficult to obtain this, which allows restricting the variables to use. In addition, Information Sharing with SC partners, Logistics Synchronization and Use of Modern Technologies have a positive and significant effect on the competitiveness and performance of SMEs. As a result, companies let their suppliers know what they expect from them at all times and they keep each other informed of events or changes that may affect the other party. Suppliers receive relevant information that can help them. Similarly, Logistics Synchronization has been shown to have a positive and significant effect on the competitiveness and performance of SMEs. Companies have noted joint development work with suppliers. The study shows that Use of technologies modern has a positive and significant effect on the competitiveness and performance of SMEs. With Use of technologies modern, suppliers, the company and customers are interconnected. This study can be replicated with a larger and more representative sample. It is also recommended as future research that this study be replicated in different sectors of activity and in different parts of the country. In addition, it would be interesting to know if the observations observed are also valid for other companies.

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