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## The marketing view of supply chain quality management practices in the brewery industry in Cameroon

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### Abstract

The rise in the quest for profit maximisation in the 21<sup>st</sup> century has left companies paying greater attention to supply chain issues. This paper sort to examine the effects of supply chain quality management practices from the marketing point of view in the brewery companies in Cameroon. The study made use of primary data collected using a five point likert scale questionnaire administered to 273 respondents selected following a convenience sampling technique from 42 entities making up the supply chains of the four leading brewery companies in Cameroon. The survey method was applied in the data collection process. The principal component analysis was used to select the principal constructs that explain up to 55.9% of the variances of supply chain quality management in the industry while the ordinary least squares technique was

used to analyse the data. The study established that the supply chain quality management practices accounted for up to 51.3% of the variations in the marketing performance of the companies. Precisely speaking continuous improvement & innovation, supplier strategic partnership and customer relationship management were found to each have a significant effect at 1% level while top management commitment was found significant at 5% level. Based on these findings therefore, efforts to improve on the marketing performance of the brewery companies in Cameroon should focus on continuous improvement & innovation, strategic supplier partnership, customer relationship management and top management commitment in that order. If this is done it will improve on the marketing performance of the companies.

**Keywords:** Supply Chain Quality Management, Marketing Performance, Ordinary Least Squares, Brewery Companies, Cameroon

### 1. Introduction

The increase in competitive pressures and the need for customer satisfaction has left companies with no option than adopting varied competitive strategies. Particular here is the insurgence of indirect competition through the supply chains of companies. However, this has often focused on the external environment of an organisation. Efforts have also been made towards the internal environment. This has particularly placed the concept of quality in the lips of every business person be it small or large, national or international. In such a dynamic and rapidly evolving market, efforts to improve quality are not enough; Supplying at the right time, place and cost are also critical for competitive advantage (Chin *et al.*, 2013; Robinson & Malhotra, 2005)<sup>[22]</sup>. Flynn and Flynn (2005)<sup>[11]</sup> realised that the organisations that pursue both quality and supply chain goals achieve competitive advantage. The combination of the two concepts (supply chain management and total quality management) has led to the birth of the new concept: supply chain quality management (SCQM) having both internal and external parameters of competition with the particular aim of having a more satisfied customer.

Today, organisations' marketing activities are experiencing a transition from the traditional supply chain model where quality is built through quality in purchasing to an integrative, competent supply chain quality management model that leads through design and management of an innovative, quality supply chain. This process requires managers to navigate four distinctive stages where emphasis was on supply chain strengths by all members, critical success factors, infrastructure and supply chain climate and continuous improvement respectively (Kuei *et al.*, 2008)<sup>[18]</sup>. To bridge the gaps between these stages, four drivers of supply chain quality are identified: supply chain competence, critical success factors, strategic components, and supply chain quality practices, which is the focus of this paper. The marketing view is preoccupied with the idea of satisfying the needs of the customer by means of the product package as a solution to the customer's problem. Kotler (2000)<sup>[16]</sup> requires that the marketing view of SCQM gets an organisation more effective than competitors in terms of creating, delivering and communicating customer value to its selected target market.

This rest on four main pillars: target market, customer needs, integrated marketing and profitability. These views present a two sided coin comprising the input and the output approaches. The input approach relates to marketing activities leading customer order fulfilment comprising creating, delivering and communicating customer value. The second approach is the output approach which rest of the marketing performance of an organisation. Measures here include customer satisfaction, customer loyalty, sales volume and market share. This paper focuses on the output approach by examining the effect of the varied SCQM practices on customer satisfaction, customer loyalty, sales volume and market share.

The brewery industry in Cameroon has many players ranging from mineral water to largger beer, wine and gins. The main players here are “Brasseries du Cameroun”, “Guiness Cameroun S.A.”, “Source du pays” and Union Camerounaise des Brasseries (UCB). Interestingly enough, all of the companies are privately owned companies where competition is inevitable. Over the years, they have engaged in competitive activities like advertising and sales promotion but without a corresponding increase in their performances. The 21<sup>st</sup> century with the upsurge in technology has resulted to a more sophisticated (complicated) consumer. This has further worsened the competitive stance and hence the performance of the companies. While they all engage in distribution network configuration, information sharing across partners, distribution strategy and managing the trade-offs in logistical activities there exist varied efforts to build competitive advantage customer satisfaction, customer loyalty, market share and the performance of the companies (Biboum & Sigué, 2014)<sup>[4]</sup>.

Guiness Cameroun S.A. for example is focusing on innovation, product quality, employees’ trust and quality assurance. She does this by promoting farmer groups for the production of standard surgum which is her main raw material, institution rigorous inspections checks all through the manufacturing processes, scientific and systematic quality control tools, building stakeholder and employee long term relationships as well as maintaining Deageo’s standard in terms hygiene and sanitation, standardisation of input, manufacturing and output processes. These practices lead one to expecting high customer satisfaction, customer loyalty and sales volume. The output approaches depict themselves in the market share of the company.

UCB on her part applies the Deming’s Plan-Do-Check-Act Quality management system wherein they look at Quality as a state of mind and a new corporate culture that all activities of the company are concerned about. With this in mind, their quality management and food safety approach enable them to strengthen the fundamental principles that guide the company's strategy, ensure uncompromising quality of their products, create an entrepreneurial spirit and skill development of corporate staff, monitor their activities in accordance with the guidelines for improvement and constantly increase the total and lasting customer satisfaction. Here, the issue of the downstream supply chain is still a major concern as it is completely left out of their operations. Also, the context of application is problematic as its main goal is continuous improvement whereas the company focuses on constantly increasing the total and lasting customer satisfaction.

‘Brasseries du Cameroun’ adopts a quality management system based on ISO 9001 V 2015 in managing her relationships with external supply activities while Source du Pays emphasises the Quality of her products, safety and hygiene for staff and customers. The ISO 9001 V 2015 of

Brasseries du Cameroun is an international standard that specifies requirements for a quality management system (QMS). Organisations use the standard to demonstrate the ability to consistently provide products and services that meet customer and regulatory requirements. In line with this practice, ‘Brasseries du Cameroun’ ensures regular supplies of her finished product, speeding up production to meet the constantly high demand, regularly reinventing to come up with product varieties and channels of distribution. However, its implementation requires organisations to regularly reinvent themselves, high ability to innovate and continuously improve their products and processes. Unfortunately, Emmanuel (2018)<sup>[8]</sup> laments the company’s inability to meet the major requirements of ISO 9001 V 2015 leading to expected decline in her consumers’ satisfaction/loyalty, market share and sales volume.

The relationships between the SCQM practices of these companies and the respective marketing outcomes leave much to desire following the fact that ‘Brasseries du Cameroun’ which seems to be less active in her supply chain quality management activities still commands up to 72% share of the market (with a variation of -2%) while ‘Guiness Cameroun S.A.’ (which seems more involved in these practices) controls only 16% of the market (with a variation of +1), UCB controls 11% (with a +1% variation) and all the others command the remaining 1% share of the market (Sylvain, 2018)<sup>[24]</sup>. This is further worsened by the fact that as at December 31, 2018, while all brewers in Cameroon sold a total of 6,500,000 hl (650 million litres) of beer, ‘Brasseries du Cameroun’ alone made a sale of 4,655,000 hl (465.5 million litres) while Guiness Cameroon S. A. and UCB together recorded the remaining 1,845,000 hl (184.5 million litres) of beer sold in Cameroon. Although the figures for ‘Brasseries du Cameroun’ represent a 2.3% fall in sales compared to 2017 and a 1.5% fall in 2016, the general trend has been much in her favour over time. These discrepancies in the relationship between these supply chain quality management practices and the marketing outcomes of these companies leaves one worried about two fundamental research question:

- What are the SCQM practices suitable for competition in the brewery industry in Cameroon?
- What is the effect of these SCQM practices on the marketing performance of the brewery companies in Cameroon?

This paper therefore sets to identify the constructs of SCQM suitable for competition in the brewery industry in Cameroon and also to assess the contribution of these constructs to the marketing performance of the brewery companies in Cameroon.

## 2. Literature review

The confusion found in the SCQM practices in the brewery companies in Cameroon is not a strange happening as even previous studies have failed to establish a clear-cut conclusion on the practices. Both conceptual and empirical developments have failed to establish a clear-cut conclusion on the practices of SCQM suitable for competition in the brewery industry in Cameroon.

### 2.1 Conceptual developments

The conceptual developments of SCQM, reveals a lot of variation in the practices with each author addressing it from his/her own perspective following the particular circumstances facing him/her. While some of them have been very particular, others have been very general. For example

Duong Vu and Nguyen (2018)<sup>[6]</sup> and Amr & Islam (2015)<sup>[1]</sup> have referred to the concept as supply chain management practices although pointing out the constructs mentioned by most of the other authors who have been particular in their views of supply chain quality management.

To begin with, Kuei, Madu & Lin (2001)<sup>[17]</sup> defined the concept by breaking it down into simple equations. In their view, each equation represents the letters that make up SCQM thus:

SC = Production – Distribution Network

Q = Products should be responsive to market demands and able to meet customer satisfaction speedily, accurately and at a profit.

M = The conditions that permits and enhance trust for supply chain quality.

Putting it together, their definition holds that SCQM refers to efforts made to ensure that production should exclude distribution networks and be responsive to the market demands and able to meet customer satisfaction speedily, accurately and at a profit; under conditions that permit and enhance trust for supply chain quality. This definition embodies production efforts geared towards speedy and accurate customer satisfaction at a profit while leaving out distribution networks. This makes their definition wanting as it excludes inbound logistics and the distribution networks which are an integral parts of the external supply chain of any organisation. Without such networks two major challenges surface to an organisation. The first is interruptions in the flow of raw materials due to inefficiencies in the downstream supply chain. The second major issue relates to inefficiencies in delivery of the final product to consumers. This is more particular as it may generate poor customer satisfaction leading to a collapse of the entire supply chain. This does not only defeat the very purpose of the supply chain but also the second part of the definition relating to customer satisfaction and the profit making objective of a firm.

The definition of Ferguson (2000)<sup>[9]</sup> closes this gap by adding that SCQM encompasses all quality management activities associated with the flow and transformation of goods from raw material stage through the end users (finished product) stage along with the flow of all information related to quality. This embodies an unlimited list of all activities that are geared towards the flow of the finished product(s) to the end user of the product(s). This definition seems to completely involve all the actors of the supply chain of an organisation but at the same time leads to an unending list of items directed towards customer satisfaction. In contrast to Porter's (2001)<sup>[21]</sup> value chain (as a supply chain) this definition includes all activities both primary and support activities. This implies an extensive supply chain where an equal amount of attention is directed to all the supply chain activities and thereby making synchronisation and customer satisfaction wanting.

Robinson and Malhotra (2005)<sup>[22]</sup> on their part, defined supply chain quality management as the formal coordination and integration of business processes involving all partner organisations in the supply channel to measure, analyse and continually improve products, services and processes in order to create value and achieve satisfaction of intermediate and final customers in the marketplace. This definition ideally argues that supply chain quality management activities must either be to continually improve products, services and

processes or to create value to achieve satisfaction to the customer. It seems contrary to Porter's (2001)<sup>[21]</sup> value chain analysis which requires organisations to add value by concentrating on the value adding activities although not neglecting the support activities. In much the same way as Ferguson (2000)<sup>[9]</sup>, Robinson and Malhotra (2005)<sup>[22]</sup> establish that a manager may be tempted to pay close attention to all partner organisations in the supply chain in order to create value and achieve satisfaction of intermediate and final customers. This seems to defeat the very purpose of a supply chain as some of these organisations may represent competitors' interest, if not being competitors themselves. In this process, the much valued information will leak to our competitors thereby giving the organisation a competitive disadvantage contrary to the very intentions of SCQM.

We also find relevant, the definition of Lai *et al.*, (2005)<sup>[20]</sup> referring to supply chain quality management as conformance to mutually agreed upon requirements among the partner firms with the aim of improving the performance of the transactions taking place in the chain. We find here that both the supplier and buyer have to agree on specifications, exchanges of information, coordination and control at the inter-organisational level to ensure that product quality is not affected but the objective the supply chain is achieved. This definition seems to be in line with the essence of every supply chain: customer satisfaction. However, care must be taken while integrating these two stakeholders since they have different stakes in an organisation. In building such partnerships, mutual concern between these parties will constitute the value added to a supply chain for the smooth functioning of an organisation.

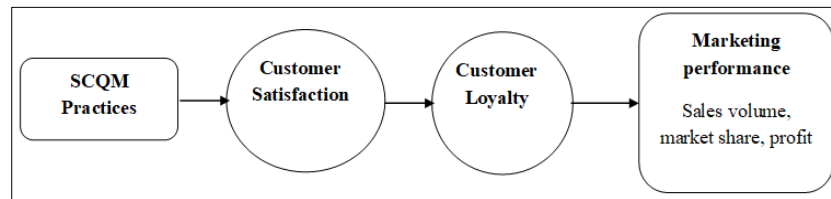
Duong Vu and Nguyen (2018)<sup>[6]</sup> defined SCQM as the set of activities undertaken by an organisation to promote effective management of its supply chain. They went further by highlighting five constructs comprising strategic supplier partnership (that cover the upstream supply chain), customer relationship (covering the downstream sides), information flow across a supply chain and postponement (covering the internal supply chain).

Finally, the definition of Kushwaha & Barman (2010)<sup>[19]</sup> refer to "Supply chain quality management as a set of approaches utilised to efficiently and responsively integrate all channel partners through applying quality management practices across the whole supply chain, in order to enhance trust between channel partners and deliver maximum value to customers". This definition, so far, seems to be the most comprehensive definition of SCQM. This is not only because it captures the partners of the upstream and the downstream supply chain but more importantly because it specifies the application of quality management practices across the entire supply chain to promote/enhance trust between partners of the supply chain and finally emphasises the need to deliver maximum customer value. Their definition highlights the integration of quality management practices along the entire supply chain to ensure trust between channel partners and deliver maximum customer value efficiently. Although the elements of SCQM are not mentioned in this definition, we shall, for the sake of this study, adopt this definition as the most acceptable and comprehensive definition of SCQM while making efforts to uncover the constructs of SCQM.

### 1.1.1 Conceptual model

The following conceptual framework was found helpful for the study:





Source: Designed by author

Fig 1: The conceptual framework of the study

The conceptual model explains that the implementation of SCQM practices efficiently and responsively integrates all channel partners leading to an improvement in the marketing mix variables (product, price, place, promotion, process, physical evidence and people) from the customers' perspective. In a nutshell, it will not only meet customers' expectations but it will enhance trust between channel partners leading to maximum value to customers. This will certainly get the customers satisfied and ready to return to the company for a repurchase. Once customers are loyal to an organisation, the company is sure of not only the short run profitability but the long run as well. This will reflect in the sales volume, market share and the profit of the company, 'ceteris paribus'.

## 2.2 Empirical developments

From the perspective of empirical studies, developments have been made by Jatturong *et al.*, (2019) <sup>[15]</sup> when they examined the mediating effect of competitive advantage on the relationship between SCM and Performance on the food industry in Thailand. More so, this is the first work found in this perspective. They made use of strategic supplier partnership (SSP), customer relationship (CR), information sharing (IS), information quality (IQ) and Postponement (POS) to capture SCM practices in a competitive atmosphere to establish that supply chain management practices are the major tools that boost up business processes in a way that enhances the capacity of the firm for better performance and also that competitive advantage has a positive mediating effect on the relationship between the practices of SCM and organisational performance.

The second empirical contribution found helpful here is the work of El-Tohamy & Al Raoush (2015) <sup>[7]</sup> who dwelled on the impact of applying total quality management principles on the internal supply chain of hospitals in Jordan. They used leadership commitment to quality, customer focus, continuous improvement, teamwork, employee involvement and education & training as constructs of internal supply chain quality management in a multiple linear regression model to reveal that internal SCQM is a strong predictor of hospital performance. Also, Amr & Islam (2015) <sup>[1]</sup> have made a contribution by including supply chain integration, complexity management, aligning strategy and supply chain, IT with process improvement, and operational innovation as constructs of supply chain quality management in the Egyptian market. They analysed primary data from a five point Likert scale questionnaire in a regression model to shed light on the necessity for companies to optimise supply chain performance effectiveness in terms of customer service and responsiveness which are directly linked to financial metrics. On their part, Heena & Darshana (2015) <sup>[14]</sup> attempted to know the CSFs of QM implementation in the internal supply chain and its effect on quality performance of manufacturing facilities working in Gujarat- India. Although they concluded that 36.1% improvement in quality performance can be attributed to QM practices on the internal supply chain of the organisation they failed to point out the CSFs of QM in the

internal supply chain of the manufacturing companies.

The next contribution is that of Shafiq (2015) <sup>[23]</sup> who included top management commitment, resources, organisational culture, managers' awareness of quality management, broad quality objectives, leadership about quality management, communication, organisational structure, focus on short-term profits and inconsistency between quality initiatives and strategic initiatives in a study to identify the issues faced by the textile companies of Pakistan during the implementation of Quality Improvement Initiatives (QIIs) in their internal supply chains.

Generally speaking, while critical success factors, infrastructure, continuous improvement, systems-based approach and processes have gained attention globally, integration and coordination of the production, marketing, and financial functions have gained attention in Africa. The disparity is not any different in Cameroon as emphases have been on Inventory, production and distribution. Particularly in the brewery industry, efforts have rested on quality control, warehousing and inventory management and distribution. It is evident that the question relating to the practices of SCQM suitable for use in a competitive atmosphere is yet to draw a conclusive stance from both an international and national point of view. This leads to two working hypotheses for this work:

1. **H01:** There are no standard supply chain quality management practices suitable for competition in Cameroon
2. **H02:** The supply chain quality management practices applicable in Cameroon do not have a significant effect on the market share of the manufacturing companies in Cameroon.

## 3. Methodology

### 3.1 Data Collection

The study made use of primary data collected from employees of the companies that make up the supply chains of the top four brewery companies in Cameroon. This included their employees as well as the employees of the entities making up their upstream and downstream supply chains. A total of 42 entities were involved in the survey. Primary data was collected with the help of a five point Likert scale questionnaire scoring responses from 1 – strongly disagree, 2 - disagree, 3 – neutrality, 4 – agree to 5 – strongly agree. The variables of the study were captured in the questionnaire, each with five response items. The fifth of the items was carefully designed to indicate inconsistency in the choices of the respondents. The questionnaire was broken into two parts: Section A and B. Section A comprised of the demographic information of the respondents. Interestingly enough, this section included a question testing respondents' awareness of supply chain quality management practices in their respective companies. This was to ensure that only valid responses were included in the analyses. Section B of the questionnaire covered all the variables of supply chain quality management as well as the measures of the marketing performance of the four main brewery companies included in

the study. This included the respondents' perception about market share, relative sales volume and the sales growth rate. The convenience sampling technique was used due to challenges involved in using the probabilistic sampling techniques. 10 questionnaires were distributed to the workers of each of these companies making a total of 420 questionnaires. Out of these, 273 valid responses were retained for analysis giving a response rate of 65%. This was

found better than the minimum accepted response rate (60%) for a survey study established by Fincham (2019) <sup>[10]</sup>.

### 3.2 Variables and their measurements

Based on the conceptual and the empirical developments the list of supply chain quality management practices and marketing performance put together were presented on table 1:

**Table 1:** Variables of SCQM in the literature

S/N	Variables	Measurement	Source
1	Top Management Commitment	Top management developing and communicating integrated quality plan and encouraging supply chain stake holder involvement	Kushwaha & Barman (2010) <sup>[19]</sup>
2	Supplier Quality Management	Established long-term co-operative relations with suppliers, participating and feedback on supplier activities	
3	Customer Focus	Customer satisfaction survey, collecting customer complaint and treating with top priority	
4	Process Management	Aligning processes with the overall strategy of the company and planning and monitoring of the performance processes	
5	Employee Training and Human Relations	Encouraging employees to accept education and training and human relations	
6	Quality Data and Reporting	Common quality reporting system, and standard datelines for reporting and feedback	
7	Supplier Strategic Partnerships	Reliance on high quality suppliers, long term relationship with suppliers and supplier improvement programs	
8	Customer Relationship Management	Interaction with customers to set reliable and responsiveness standards	
9	Information Sharing	Sharing proprietary information with supply chain partners, informing supply chain partners of changing needs of customers	
10	Postponement	Deliberates action to delay customers' orders fulfillment	
11	Process and System Design	Considering customer requirements in designing processes and systems, supply chain partners' participation in process and system design.	
12	Benchmarking	Engagement in benchmarking of competitors' supply activities	Anupam, Himangshu & Fredric (2008) <sup>[3]</sup>
13	Sustainability	Integrating environmental and financial practices into the supply chain lifecycle and optimising end-to-end operations	Ana, Paulo & Maria (2014) <sup>[2]</sup>
14	Stakeholder Involvement and Commitment	Cross-functional teams or quality circles and stakeholders involvement in quality-related activities	
15	Continuous Improvement and Innovations	Accurate and efficient database for improvement, inspection, process control and improvement.	
16	Marketing performance	Market share, relative sales volume and sales growth rate	Hacioglu & Gök (2013) <sup>[13]</sup> , Gao (2010) <sup>[12]</sup>

Source: compiled by author

### 3.3 Model of Analysis

To facilitate the analyses of the data, the responses of the various items were simulated into a single score for each variable and for each respondent using the mean thus:

$$\text{Arithmetic mean} = \frac{\text{Sum of items}}{\text{No. of items}} \quad (1)$$

After this, the data was then analysed in relation to the objectives of this paper. This followed thus:

#### 3.3.1 Identification the constructs of SCQM suitable for the brewery industry in Cameroon using the Principal Component Analysis (PCA)

$$KMO = \frac{(\sum \sum r^2_{ij})}{(\sum \sum r^2_{ij} + \sum \sum a^2_{ij})} \quad (2)$$

Where: -  $a^2_{ij}$  is the partial correlation  $i^{th}$  and the  $j^{th}$  items,  
-  $r^2_{ij}$  represents the covariance of the  $i^{th}$  and the  $j^{th}$  items

-  $r > 0$  and  $r < 1$ , the higher the value of  $r$  the better the variables loading.

$$\text{Eigen value: } AV = \lambda V \quad (3)$$

Where: **A** is an n-by-n or "square" matrix, **v** is a nonzero n-by-1 vector, and  $\lambda$  is a scalar (the corresponding Eigen value) and  $-\lambda > 1$ .

#### 3.3.2 The contributions of the suitable constructs of SCQM on the marketing performance of the companies using the ordinary least squares regression technique

Considering that the analysis in relation to this objective employed a time series model, the incidence of multicollinearity was tested using the correlation structure of the independent variables. Also, the Glejser's statistic was used to test for heteroschedasticity in the results, the F statistics tested for linearity of the variables, and the Kolmogorov-Smirnov statistic was used to test for normality of the variables. The data was then analysed using the OLS regression model adopted to assess the contributions of SCQM on the marketing performance of the companies because it is the best linear unbiased estimator of the parameters of the study. The following regression model was used in the analysis

$$MKGPerf = f(SCQM)$$

$$MKGPerf = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + \dots + a_nx_n + e \quad (4)$$

Where; apriori:  $a_1 > 0$ ,  $a_2 > 0$ ,  $a_3 > 0$ , ...,  $a_n > 0$  and  $X_1$ ,  $X_2$ ,  $X_3$ , ...,  $X_n$  are the constructs of SCQM suitable for the brewery

industry in the South West Region of Cameroon.

#### 4. Findings of the study

The reliability of the questionnaire was examined using the Cronbach's Alpha and the results presented on table 2:

**Table 2:** Reliability Statistics of the questionnaire

No. of Items	Initial testing		Second testing	
	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
273	0.567	0.616	0.729	0.772

Source: Computed by author using SPSS 20

Based on the information on table 2, it was found that the Cronbach's Alpha of 0.567 was situated between 0.5 and 0.6. Values of the Cronbach's Alpha within this range are considered to be poor and so unacceptable (Mohsen and Reg, 2011). For this reason, the different items of the study were examined closely to identify inconsistency in the responses and also to improve on the suitability of the items and the overall consistency.

After improving the items with low reliability, it was reasonable to repeat the test. This gave a Cronbach's Alpha of 0.729 and 0.772 based on standardised items in the questionnaire. As a rule of thumb, Mohsen and Reg (2011) found that values greater than 0.7 are acceptable for analysis. This value was therefore found acceptable, hence making the questionnaire acceptable for the study. Furthermore, an examination of the items of the questionnaire showed that all the questions, on the average, were acceptable for the study as their individual item statistic were all lower than the Cronbach's Alpha.

#### 4.1 The standard supply chain quality management practices suitable for competition in the brewery industry in Cameroon

Having ensured an acceptable level of consistency in the items of the questionnaire, it was administered and the data examined for the few constructs of supply chain quality management to include in the model that helped provide answers to the burning questions that have precipitated this study. It could be observed that the brewery companies in Cameroon make use of a varied set of supply chain quality management practices.

The Principal Component Analysis was a technique used to reduce the larger set of variables into a smaller set of 'artificial' variables, called 'principal components', which account for most of the variances in the original variables. The results of the principal component analysis in appendix 2 of this work let us to extracting the parameters on table 3 for examination:

**Table 3:** Principal Component Analysis

S/N	Variables considered	Kaiser-Meyer-Olkin Measure	Bartlett's Test of Sphericity (Sig.)	Component Matrix
1	TMC	0.559	0.000	0.595
2	CII			0.518
3	IS			0.449
4	SSP			0.483
5	CRM			0.415
6	PM			-0.448
7	QD&R			
8	BENMKG			
9	SUSTBLTY			
10	ET&HR			
11	SRM			
12	CF			
13	P&SD			
14	PPT			
15	SIC			

Source: Computed by author using SPSS 20

Table 3 showed the output of the principal component analysis of the fifteen (15) constructs of supply chain quality management examined. Out of these, it was clear that many of the variables were interacting with one another and certainly the possibility of distorting the overall results of this study. Furthermore, the correlation matrix in the results showed that no two of the variables measure (approximately) the same thing. This meant that all the variables were appropriate for examination to select a few that account for most of the variations of the dependent variables. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy of 0.6 met the minimum standards of Bruin (2006). To confirm this fact, the Bartlett's Test of Sphericity with a p value of 0.000 led us to rejecting the idea that the correlation matrix was an identity matrix. Conducting the principal component analysis

successfully requires that the matrix should not be an identity matrix. This led to examining the output of the principal component analysis.

The principal component analysis took off by examining the communalities in the results with particular attention on the extraction coefficient. This parameter was found important following its ability to indicate the proportion of each variable's variance that can be explained by the principal components. Variables with high values are well represented in the common factor space. Bruin (2006) recommends values greater than 1.00 for the extraction sum of squared loadings. In this study the extraction sum of squared loadings of the fifteen variables were examined and seven variables found to meet this criterion. This indicated that the seven variables could be good to capture 60.05% of variations in

the dependent variable which is good for social science studies of this sort (IDRE Statistical Consulting, 2009). However, the extraction sum of squared loadings at this point in time could not show the seven variables indicated. This made it important to introduce the component matrix into the analyses. This showed that six of the variable could be considered as they had coefficients greater than 0.3 as IDRE Statistical Consulting (2009) advocated. However, Process Management was found to be negative. The component matrix (level 1) therefore revealed five of the variables of supply chain quality management included in the study. These variables, by this finding, proved to be the variables accounting for the highest variations in the dependent variable. Hence top management commitment, continuous improvement and innovations, information sharing, customer relationship management and strategic supplier partnerships

were confirmed to be the most useful for this study.

#### 4.2 The effect of supply chain quality management practices on the marketing performance of the brewery companies in Cameroon

A thorough and scientific assessment of the marketing view of supply chain quality management practices in the brewery industry in Cameroon initiated descriptive as well as inferential analyses. The results of these assessments were presented in the following sections.

##### 4.2.1 Descriptive analysis

Based on the outcome of objective one above the SCQM variables (practices) found suitable for competition in the brewery industry in Cameroon were as presented in table 4.

**Table 4:** Descriptive Statistics

SCQM practices	N	Minimum	Maximum	Mean	Std. Deviation
TMC	273	2.00	5.00	3.7200	0.51884
PM	273	1.00	5.00	3.1212	0.60098
SSP	273	1.60	5.00	3.5750	0.69327
CRM	273	3.00	5.00	3.9944	0.50858
IS	273	2.40	5.00	3.8106	0.38370
CII	273	2.00	5.00	3.7900	0.58457
MKGPerf	273	2.20	5.00	3.7756	0.61028

Source: computed by author using SPSS 20

From the table, CRM seemed to have been the most responsive construct of SCQM. This is because the mean score was 3.9944. This was in contrast to PM which recorded a mean score of 3.1212. This was also found convincing following the fact that the scores for PM ranged from 1.00 to 5.00 while scores for CRM ranged from 3.00 to 5.00. This implies that all the respondents who participated in the study, at the worst, were neutral to the companies' interaction with customers to set to set reliable and responsiveness standards. Furthermore, majority of the respondents who responded to these questions were in alliance with the companies' interaction with customers to set to set reliable and responsiveness standards. While the rest of the variable showed mean scores above 3.00, MKTPerf also recorded a high score above 3.00. To confirm these opinions, the standard errors were further examined. The standard errors for all the variables gave values less than 1.00. This indicated that variations in these responses were quite minimal. The least variation in the opinions was recorded with IS whose mean score was 3.8370. This made it, seemingly, the most responsive SCQM practice applicable for marketing performance in the brewery industry in Cameroon. However it was not clear, at this juncture, if the SCQM practices found valid actually affected the marketing performance of the companies.

##### 4.2.2 Inferential analysis

Further concerns about the effect of SCQM practices on the marketing performance of the companies were revealed by conducting an ordinary regression analysis. This was in line with the following OLS regression model:

$$\text{MKGPerf} = a_0 + a_1\text{TMC}_1 + a_2\text{CII}_2 + a_3\text{SSP}_3 + a_4\text{IS}_4 + a_5\text{CRM}_5 + a_6\text{PM}_6$$

Where MKGPerf is the respondents' perception of the marketing performance,

TMC is Top Management commitment,

CII is Continuous Improvement and Innovations,

SSP is Strategic Supplier Partnership,

IS is Information Sharing,

CRM is Customer Relationship Management and

PM is Process Management.

Also,  $a_1, a_2, a_3, a_4, a_5, a_6 > 0$

The above model was found suitable following the fact that it is the best unbiased estimator of the mean. However, the model presents flaws which, if present, weaken its capacity to reveal the effect of each of the explanatory variables on the dependent variable. These include multicollinearity, abnormality and heteroschedasticity in the data. To build confidence and hence determine the extent to which decision makers can rely on the findings, the data was examined for the possible flaws as follows:

##### 4.2.2.1 Test for multicollinearity using correlation coefficients

The test of multicollinearity was found important following that our study adopted a multiple regression model with many explanatory variables. The incidence of multicollinearity limits the precision of the estimated coefficients, which weakens the statistical power of the regression model making the p-values not to be trusted in the statistical inference. In this study, multicollinearity was examined using the Pearson's correlation coefficient presented on table 5.



**Table 5:** Correlation Structure between the Constructs of SCQM

SCQM practices		TMC	PM	SSP	CRM	IS	CII
TMC	Pearson Correlation	1	-0.112*	0.350**	0.276**	0.147**	0.514**
	Sig. (2-tailed)		0.045	0.000	0.000	0.009	0.000
	N	273	320	320	320	320	320
PM	Pearson Correlation	-0.112*	1	-0.070	-0.105	-0.095	-0.134*
	Sig. (2-tailed)	0.045		0.213	0.060	0.091	0.016
	N	273	320	320	320	320	320
SSP	Pearson Correlation	0.350**	-0.070	1	0.367**	0.040	0.489**
	Sig. (2-tailed)	0.000	0.213		0.000	0.474	0.000
	N	273	320	320	320	320	320
CRM	Pearson Correlation	0.276**	-0.105	0.367**	1	0.072	0.436**
	Sig. (2-tailed)	0.000	0.060	0.000		0.197	0.000
	N	273	320	320	320	320	320
IS	Pearson Correlation	0.147**	-0.095	0.040	0.072	1	-0.003
	Sig. (2-tailed)	0.009	0.091	0.474	0.197		0.959
	N	273	320	320	320	320	320
CII	Pearson Correlation	0.514**	-0.134*	0.489**	0.436**	-0.003	1
	Sig. (2-tailed)	0.000	0.016	0.000	0.000	0.959	
	N	273	320	320	320	320	320
*. Correlation is significant at the 0.05 level (2-tailed).							
**. Correlation is significant at the 0.01 level (2-tailed).							

Source: Computed by author using SPSS 20

The correlation structure on table 5 revealed that there was a weak correlation between any two of the supply chain quality management practices held for analysis in the study. The strongest correlation was noticed between TMC and CII with a correlation coefficient of 0.514. Although the 0.514 correlation coefficient indicated a moderate relationship between TMC and CII, the work of Carsten (2013) [5] indicated that only thresholds of correlation coefficients between predictor variables of  $|r| > 0.7$  is an appropriate indicator for when collinearity begins to severely distort model estimation and subsequent predictions. This was enough conviction of the absence of multicollinearity in the results. However, some interesting relationships were found that gave an insight into the efforts of management in relation to supply chain quality management. For example, the relationships between TMC and each of SSP, CRM, IS and

CII were all significant at 1% level of significance. These all presented positive relationships meaning that there was significant effort by top management towards strategic supplier partnerships, customer relationship management, information sharing and continuous improvement and innovations. The same was found between supplier strategic partnerships and each of customer relationship management and continuous improvement and innovations.

#### 4.2.2.2 Test of Normality

Normality is the extent to which the given data set follows a normal distribution and therefore provides a basis upon which the results of the study can be generalised. In this work, normality was tested using both the Kolmogorov-Smirnov and the Shapiro-Wilk statistics presented on table 6.

**Table 6:** Test of Normality

Main constructs	Variables	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Supply chain quality management practices	TMC	0.102	273	0.000	0.975	273	0.000
	SSP	0.101	273	0.000	0.985	273	0.002
	CRM	0.127	273	0.000	0.955	273	0.000
	IS	0.120	273	0.000	0.971	273	0.000
	CII	0.166	273	0.000	0.937	273	0.000
	PM	0.174	273	0.000	0.921	273	0.000
Marketing Performance	MKGPERF	0.118	320	0.000	0.973	320	0.000

Source: Computed by author using SPSS 20

From table 6 values of the Kolmogorov-Smirnov statistic were found greater than 0.05 for all the variables moved forward for the study. This finding confirmed that all the variables were normally distributed. The same conclusion could be arrived at working with the Shapiro-Wilk test as seen on the table. Further analysis of the data was the only option as this indicated a high chance that the results could well be generalised.

#### 4.2.2.3 Test for Heteroschedasticity using Glejser's test

The test for heteroschedasticity was also found important for

the study. This is because when the data set is heteroschedastic, it breaks the assumption of best linear estimator of the regression model and thereby weakening its capacity to show the effect of each of the explanatory variables on the dependent variable. This makes the tests of hypothesis (like t-test, F-test) no longer valid due to the inconsistency in the co-variance matrix of the estimated regression coefficients. In this study, heteroschedasticity was tested using Glejser's test. The results were presented on table 7.



**Table 7:** Glejser Statistic Test for Heteroschedasticity

	TMC	SSP	CRM	IS	CII	PM	T2MKT
t	0.407	0.286	-0.93	-0.29	1.508	-0.47	-0.983
Sig	0.685	0.775	0.354	0.769	0.133	0.641	0.326

**Source:** Computed by author using SPSS 20

The Glejser's test for heteroschedasticity using SPSS holds that a result is heteroschedastic when the significance of the absolute t value for any variable is less than 0.05. Similarly, when the values are greater than 0.05, it indicates that the data is homoschedastic. The results of the Glejser statistic presented on table 7 above showed that all the significant values of the variables were greater than 0.05. This showed that our data was free of heteroschedasticity and hence free of standard errors. Therefore, inferences obtained from data analysis did not give justifiable evidence to suspect for biasness in the estimates. These diagnostic tests conducted

led to examining the effect of SCQM practices on the marketing performance of the companies.

#### 4.2.2.4 The regression results

The data for the respective variables found suitable for SCQM practices in the brewery companies in Cameroon were then examined following by their unstandardised and standardised coefficients, their t statistics, the overall F statistic, the Adjusted R square and their respective levels of significances. These parameters were as presented on table 8 thus:

**Table 8:** Parameter estimates for the effects of SCQM practices on the marketing performance of the brewery companies in Cameroon

Coefficients <sup>a</sup>						
Model variables		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
SCQM practices	(Constant)	0.107	0.359		0.299	0.765
	TMC	0.120	0.055	0.102	2.190	0.029
	PM	-0.042	0.040	-0.042	-1.049	0.295
	SSP	0.250	0.041	0.284	6.167	0.000
	CRM	0.175	0.053	0.146	3.284	0.001
	IS	0.070	0.064	0.044	1.096	0.274
	CII	0.394	0.054	0.378	7.292	0.000
Overall results	ANOVA	F Statistic			56.899	
		Sig.			0.000	
	Model Summary	Adjusted R Square			0.513	
		Std. Error of the Estimate			0.42610	

a. Dependent Variable: MKTPerf

**Source:** computed by author using SPSS 20

From the table, the constant term in the analysis was +0.107, indicating a positive relationship between all other SCQM practices not included in the model and the marketing performance of the brewery companies in Cameroon. The corresponding t statistic of 0.299 was found to be insignificant at up to 10% (with critical value of 1.645) level of significance for the study. This implies that all the other SCQM practices not included in the model could only lead to an insignificant effect on the marketing performance of the companies at even 10% error margins. This could therefore not be advisable to consider when implementing SCQM practices with the intention to improve on the market performance of the brewery companies in Cameroon. Having seen this, attention was then paid on the SCQM practices involved in the study.

To begin with, top management commitment had a positive value to the tune of 0.102. This indicated that a 1 unit increase or decrease in top management's commitment towards customer satisfaction will lead to a 0.102 unit increase/decrease in the marketing performance of the brewery companies in Cameroon. Considering that the t value of 2.190 was found to be higher than the critical value at 5% (1.960) but lower than the critical value at 1% (2.576) level of significance for a two tail test, we settled on the fact that top management's commitment to efforts towards customer satisfaction did have a significant effect on the marketing performance of the companies at 5% level of significance. Furthermore, process management was also examined with amazing results as most of the parameter estimates were negative. The negative value of the standardised coefficient for example revealed that process management had an

inverse effect on the marketing performance of the companies. Ideally, a unit improvement in the process management led to a 0.042 unit fall in the marketing performance of the companies. Also being negative, the t value of process management was less than the critical value at all the levels (1%, 5% and 10%) of the study. This led to the conclusion that process management had an insignificant effect on the marketing performance of the brewery companies in Cameroon.

In a similar manner, supplier strategic partnerships, customer relationship management and continuous improvement and innovations all revealed positive effects on the marketing performance of the companies following their positive parameters. Precisely speaking, a unit increase in each of the three practices (supplier strategic partnerships, customer relationship management and continuous improvement and innovations) led to 0.25, 0.175 and 0.395 unit increases in the marketing performance of the companies respectively. The corresponding t values of 6.167, 3.284 and 7.292 respectively were all greater than the critical value at 1% level of significance for a two tail test. This only meant that supplier strategic partnerships, customer relationship management and continuous improvement and innovations each had a significant positive effect on the marketing performance of the brewery companies in Cameroon. Last but not the least was information sharing. It also had positive parameters thereby indicating a positive relationship with the marketing performance of the companies. The t value was however less the critical value at all the levels of the study thereby revealing an insignificant positive effect on the marketing performance of the companies. In the results present

therefore, process management and information sharing revealed insignificant effect on the marketing performance of the companies although process management had a negative effect and while information sharing had a positive effect even after allowing a 10% error margin in each case. Top management commitment, supplier strategic partnerships, customer relationship management and continuous improvement and innovations each revealed strong evidence to indicate a significant effect on the marketing performance of the companies at 1% level of significance for a two tail test. This however, led to examining the overall results of the study.

The suitability of the model was tested using the Fisher statistic. It showed a value of 56.899. This calculated value was well above the critical value at 1% (2.86) level of significance of the study. This indicated that the model was significantly suitable in analysing the effects of the SCQM practices retained for the study on the marketing performance of the companies. With this confidence, the overall result was then examined by looking at the adjusted R squared on table 8 above. This value was 0.513 (or 51.3%). This meant that 51.3% of variations in the marketing performance of the brewery companies in Cameroon could be explained by the SCQM practices retained for the study. Also, 48.7% of such variation could only be explained by other factors not included in the model. This could include, but not limited to, other SCQM practices not included in the model.

#### 4.3 Discussion of the findings

The findings presented above indicate that supply chain quality management has a significant effect on the marketing performance of the brewery companies in Cameroon at 1% level of significance, accounting for 51.3% of the variations in the marketing performance. This result is in line with the expectations of the study except for process management which was found to have an insignificant negative effect on the marketing performance of the companies at even 10% level of significance. Although positive, information sharing also revealed an insignificant effect on the marketing performance of the companies at all levels of the study. The significant variables were continuous improvement & innovations and supplier strategic partnership.

These findings led to the rejection of the null hypothesis at the expense of the alternative hypothesis that supply chain quality management actually has a significant effect on the marketing performance of the brewery companies in Cameroon. In fact, the findings revealed that supply chain quality management could explain 51.3% of the variations on the marketing performance of the companies. Efforts to improve on the marketing performance of the companies can therefore focus on the supply chain quality management practice of the companies. These specifically include continuous improvement & innovations, supplier strategic partnerships, customer relationship management and top management commitment in that order.

In relation to previous studies, the findings of this work are not completely strange. From a general standpoint, the findings were similar to the findings of Duong Vu & Nguyen (2018)<sup>[6]</sup> although they made use of a composite index for performance comprising market share, return on investment, the growth of market share, the growth of sales, growth in return on investment and profit margin on sales. This finding also supported the findings of Jatturong *et al.*, (2019)<sup>[15]</sup> in terms of the general results. Also, they made use of supplier strategic partnerships, customer relationship management and information sharing to capture supply chain quality management. Conversely, our present study included top

management, and continuous improvement and innovations while Jatturong *et al.*, (2019)<sup>[15]</sup> rather made use of postponement. However, this followed the significance of the loading factors of the variables in our study. Also in relation to the measures of performance included in their study, our present study presents differences with the study of Jatturong *et al.*, (2019)<sup>[15]</sup> who captioned organisational performance but failed to precisely bring out the measures of organisational performance found interesting in their study. Our present study makes this very clear by emphasising the marketing performance of the companies captured in line with respondents' perception towards the companies' market share, relative sales volume and sales growth rate. The main worry now is on the implications of these results from a marketing perspective.

#### 4.4 The marketing implications of the results

Generally speaking, this work finds that efforts to increase the marketing performance of the brewery companies in Cameroon will rely on the supply chain quality management practices to the tune of 51.3%. Specifically, management must make efforts towards continuous improvement and innovations, strategic supplier partnerships and customer relationship management in that order. Some amount of attention can also be directed towards top management commitment. In terms of continuous improvement and innovations management must endeavour to put in place an accurate and efficient database for inspection, process control and improvement. Strategic supplier partnerships include ensuring reliance on high quality suppliers, building long term relationship with such suppliers and establishing suitable supplier improvement programs. Customer relationship management on its part include interaction with customers to set reliable and responsiveness standards along the companies' supply chain.

From a marketing perspective, the findings in relation to continuous improvement and innovations implies that to improve on the marketing performance of the companies, efforts must be directed towards improving the products. Management must continuously think and come up with new product features to make the product not only user friendly but also useful to other segments of the market (potential consumers). There must also be continuous effort made in the direction of improving promotional strategies, the people and the overall manufacturing process. This may be in terms constantly searching for and implementing up-to-date technology and methods of production to increase production efficiencies.

#### 5. Conclusion and implications of the results

In terms of theory building, the findings of this work have also made remarkable contributions in the context of supply chain management. These include scientifically outlining the supply chain quality management practices suitable for the brewery industry in Cameroon. These are top management commitment, continuous improvement and innovations, information sharing, supplier strategic partnerships, customer relationship management and process management. Efforts to build a theory on supply chain quality management in relation to the marketing performance can then establish relationships within these constructs especially continuous improvement and innovations, strategic supplier partnerships and customer relationship management.

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## 7. Conflict of interest

I hereby certify that we have no affiliations with or involvement in any organisation or entity with any financial or non-financial interest in the subject matter or materials discussed in this manuscript.

## 8. References

1. Amr Y, Islam E. Investigating the Impact of Supply Chain Practices on the Financial Performance of Active Firms in Egyptian stock Market. *International journal of supply chain management*. 2015; 4(4):28-42.
2. Ana CF, Paulo S, Maria Do SC. Quality Management and Supply Chain Management Integration: A Conceptual Model, *Proceedings of the 2014 International Conference on Industrial Engineering and Operations Management*, Bali, Indonesia, 2014, 773-780.
3. Anupam D, Himangshu P, Fredric WS. Developing and validating total quality management constructs in the context of Thailand's manufacturing industry. *Benchmarking: An International Journal*. 2008; 15(1):52-72.
4. Biboum AD, Sigué SP. Conflict in Supplier-Retailer Relationships in the Brewery Industry in Cameroon. *Journal of African Business*. 2014; 15(2):75-84.
5. Carsten FD. Collinearity: A review of methods to deal with it and a simulation study evaluating their performance. *Nordic Society Oikos, Ecography*. 2013; 36:27-46.
6. Duong Vu XQ, Nguyen HH. Supply Chain Management Practices, Competitive Advantages and Firm Performance: A Case of Small and Medium Enterprises (SMEs) in Vietnam. *Journal of Modern Accounting and Auditing*. 2018; 14(3):136-146.
7. El-Tohamy, AE-MA, Al Raoush AT. The impact of applying total quality management principles on the overall hospital effectiveness: an empirical study on the HCAC accredited governmental hospitals in Jordan. *European Science Journal*. 2015; 11(10):63-76.
8. Emmanuel DET. 'Depius 70 ans le groupe SABC s'engage dans la responsabilite societale', 2018. Accessed (online) at <https://lesbrasseriesducameroun.com>, June 23, 2019.
9. Ferguson BR. Implementing Supply Chain Management. *Production & Inventory Management Journal*. 2000; 41(2):64-67.
10. Fincham JE. Response Rates and Responsiveness for Surveys, Standards, and the Journal. *American Journal of Pharmaceutical Education*. 2019; 72(2):43. Doi: 10.5688/aj720243
11. Flynn B, Flynn E. Synergies between supply chain management and quality management: Emerging implications. *International Journal of Production Research*. 2005; 43(16):3421-3436.
12. Gao Y. Measuring marketing performance: A review and a framework. *The Marketing Review*. 2010; 10(1):25-40. DOI: 10.1362/146934710X488924
13. Hacıoglu G, Gök O. Marketing performance measurement: Marketing metrics in Turkish firms. *Journal of Business Economics and Management*. 2013; 14(S1):S413-S432.
14. Heena SO, Darshana SS. Does TQM Lead To Improvement In Quality Performance In Manufacturing Firms? Some Empirical Evidence. *International Journal of Research, Granthaalayah*. 2015; 3(9):129-142. Accessed online at: [Http://www.granthaalayah.com](http://www.granthaalayah.com), September 24, 2017.
15. Jatturong P, Pornpanna L, Chairit T, Kittisak J. Mediating Role of Competitive Advantage on the Relationship of Supply Chain Management and Organisational Performance on the Food Industry of Thailand. *International Journal of Supply Chain Management*. 2019; 8(4):216-226.
16. Kotler P. *Marketing Management*, Upper Saddle River, New Jersey: Prentice Hall, 2000.
17. Kuei CH, Madu CN, Lin C. The relationship between supply chain quality management practices and organisational performance. *International Journal of Quality & Reliability Management*. 2001; 18(8):864-872.
18. Kuei C, Madu CN, Winch J. Supply chain quality management: A simulation study. *Information and Management Sciences*. 2008; 19:131-151.
19. Kushwaha GS, Barman D. Development of A Theoretical Framework of Supply Chain Quality Management. *Serbian Journal of Management*. 2010; 5(1):127-142.
20. Lai HK, Cheng TCE, Yeung ACL. Relationship Stability and Commitment to quality. *International Journal of Production Economics*. 2005; 96(3):397-410.
21. Porter ME. *The value chain and competitive advantage. Understanding Business Processes*. Routledge, 2001.
22. Robinson JR, Malhotra MK. Defining the concept of supply chain quality management and its relevance to academic and industrial practice. *International Journal of Production Economics*. 2005; 96(18):315-337.
23. Shafiq M. Issues in the Implementation of Total Quality Management: An Empirical Evidence from the Textile Companies of Pakistan. *Technical Journal, University of Engineering and Technology (UET) Taxila, Pakistan*. 2015; 20(S2):192-203.
24. Sylvain A. Cameroon: Beer consumption, Agrobusiness, 2018. Accessed (online) at: <https://www.businessincameroon.com>, August 20, 2019.
25. Thoo Ai C, Abu BAH, Amran R, Low HH. The Impact of Supply Chain Integration on Operational Capability in Malaysian Manufacturers, *Procedia: Social and Behavioral Sciences*. 2013; 130:257-265.