



**JIMMA UNIVERSITY**  
**MBA PROGRAM, COLLEGE OF BUSINESS AND ECONOMICS**  
**DEPARTMENT OF MANAGEMENT**

**THE EFFECT OF SUPPLY CHAIN MANAGEMENT ON ORGANIZATIONAL**  
**PERFORMANCES**  
**A CASE STUDY IN BGI ETHIOPIA**

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**A Thesis Submitted to the School of Graduate Studies of Jimma University**  
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**Master of Business Administration (MBA)**

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**Addis Ababa, Ethiopia**

## **DECLARATION**

I declare that the research Report entitled “**The effect of supply chain management on organizational performance, a case study on BGI ETHIOPIA.**” submitted to Research and Postgraduate Studies’ Office of Business and Economics College is original and it has not been submitted previously in part or full to any university.

BLEN MESFN

Date: 31/08/2020

# CERTIFICATE

We certify that the Research Report entitled “ The effect of supply chain management on Organizational performance, a case study on BGI ETHIOPIA ”

Was done by Mrs. BLEN MESFIN for the partial fulfillment of master’s degree under our Supervision.

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# TABLE OF CONTENTS

|   |           |
|---|-----------|
| ACKNOWLEDGMENT .....                                    | i         |
| ACRONYMS.....   | ii        |
| LIST OF TABLES .....                                    | iii       |
| LIST OF FIGURES .....                                   | iv        |
| ABSTRACT.....   | v         |
| 1.1 Background of the study.....                        | 1         |
| <b>CHAPTER ONE INTRODUCTION .....</b>                   | <b>1</b>  |
| 1.2 Background of the company.....                      | 4         |
| 1.3 Statement of the Problem.....                       | 6         |
| 1.4 Research hypotheses .....                           | 8         |
| 1.5 Objective of the study.....                         | 8         |
| 1.5.1 General objective.....                            | 8         |
| 1.5.2 Specific objective .....                          | 9         |
| 1.6 Significance of the study .....                     | 9         |
| 1.7 Scope of the Study .....                            | 9         |
| 1.8 Limitation of the study.....                        | 10        |
| 2. Theoretical Review .....                             | 11        |
| <b>CHAPTER TWO: LITERATURE REVIEW .....</b>             | <b>11</b> |
| 2.1 The Concept of Supply Chain.....                    | 11        |
| 2.1.1 Supply chain management over views .....          | 12        |
| 2.1.2 Supply Chain Management Practices.....            | 14        |
| 2.1.2.1 Strategic Supplier Partnership.....             | 16        |
| 2.1.2.2 The customer relationships .....                | 17        |
| 2.1.2.3 Level of information sharing: .....             | 18        |
| 2.1.2.4 Lean System.....                                | 19        |
| 2.1.2.5 Innovation .....                                | 20        |
| 2.2 Supply chain integration.....                       | 20        |
| 2.3 Competitive Advantage .....                         | 22        |
| 2.4 Organizational performance .....                    | 22        |
| 2.5 Information Sharing.....                            | 23        |
| 2.5.1 Types of shared information in supply chain ..... | 24        |
| 2.6 Information technology .....                        | 25        |

|  |           |
|--|-----------|
| 2.7 Supply chain management practices and organizational performances .....      | 26        |
| 2.8 BGI Ethiopia Supply Chain.....   | 27        |
| 2.8 Empirical Studies.....   | 28        |
| 2.9 Conceptual framework .....   | 33        |
| <b>CHAPTER THREE: RESEARCH METHODS .....</b>                                     | <b>35</b> |
| 3.1 Research design .....  | 35        |
| 3.2 Research Population .....  | 35        |
| 3.3 Sample Frame .....   | 36        |
| 3.4 Sample size .....  | 36        |
| 3.5 Data Source and Instruments .....  | 37        |
| 3.6 Method of data analysis .....  | 38        |
| 3.6.1 Quantitative Data Analysis.....  | 38        |
| 3.6.2 Qualitative Data Analysis.....   | 40        |
| 3.7 Reliability and Validity of the Study .....                                  | 40        |
| 3.8 Ethical Considerations .....   | 40        |
| <b>CHAPTER FOUR: RESULT AND DISCUSSION .....</b>                                 | <b>42</b> |
| 4.1 Response Rate.....   | 42        |
| 4.1.1 Demographic Characteristics of the Respondents.....                        | 42        |
| 4.2 Descriptive Analysis .....   | 51        |
| 4.2.1 Validity and Reliability Test .....  | 51        |
| 4.2.2 Descriptive statistics on Aggregated Variables.....                        | 52        |
| 4.2.2.1. Descriptive analysis on Independent Variables (SCMP) .....              | 53        |
| 4.2.2.1.1. Strategic Suppliers' Partnership (SSP):.....                          | 53        |
| 4.2.2.2.2. Customer Relationship (CRS).....                                      | 54        |
| 4.2.2.2.3. Level of Information Sharing (LIS).....                               | 55        |
| 4.2.2.2.4. Level of Information Quality (LIQ).....                               | 57        |
| 4.2.2.2.5. Internal Lean Practices (ILP):.....                                   | 58        |
| 4.2.3. Descriptive Analysis on Competitive Advantage of the Firm.....            | 59        |
| 4.2.3.1: Descriptive Analysis of Competitive advantage on Price/cost (CAP).....  | 59        |
| 4.2.3.2: Descriptive Analysis of Competitive advantage Quality (CAP).....        | 60        |
| 4.2.3.3: Descriptive Analysis of Competitive advantage of CAD .....              | 62        |
| 4.2.3.4: Descriptive Analysis of Competitive advantage time to market (CAT)..... | 63        |
| 4.2.4 Descriptive Analysis on Organizational Performance (OP).....               | 64        |
| 4.3 Inferential Analysis.....  | 65        |

|  |           |
|--|-----------|
| 4.3.1 Correlation between SCM practices and Organizational Performance (OP).....                             | 65        |
| 4.3.2 Regression analysis between supply chain management practices (SCMP) &                                 | 67        |
| 4.3.2.1 Regression Analysis Model Summary .....  | 67        |
| 4.3.2.2 Analysis of Variance between (OP) and (SCMP) .....   | 68        |
| 4.3.2.3 Coefficients of Regression Analysis .....  | 69        |
| 4.3.2.4 Findings based on Research Questions.....  | 70        |
| 4.3.3: Correlation matrix between construct of Competitive advantage and Organizational<br>Performance ..... | 73        |
| 4.3.4 Regression Analysis between Competitive Advantage (CA) and Organizational<br>Performance.....          | 75        |
| <b>CHAPTER FIVE, SUMMERY, CONCLUSION AND RECOMMENDATION .....</b>  | <b>80</b> |
| 5.1 Summary of the Findings.....   | 80        |
| 5.2 Conclusion .....   | 83        |
| 5.3 Recommendation .....   | 84        |
| 5.4 Limitation and Implications for Further Research.....  | 85        |
| References .....   | 87        |
| <b>ANNEXES</b>   |           |

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## **ACRONYMS**

BGI - Brasseries Glaciers Internationals

SCM – Supply chain management

SCMP - Supply chain management practices

SCEM – Supply chain event management

TQM - Total quality management

FGP – Factory gate pricing

SSP – Strategic supplier partnership

CRS - customer relation ship

LIS – Level of information sharing

LIQ - Level of information quality

ILP - Internal lean practices

OP - Organizational performances



## LIST OF TABLES

|   |    |
|---|----|
| Table 3.1 Research Population .....   | 34 |
| Table 3.2. Sample size determination .....  | 35 |
| Table 4.1 Sex and Age of the Respondents .....  | 40 |
| Table 4.2 Job title and work experience of the respondents in the company.....  | 49 |
| Table 4.3 Reliability Test table.....   | 51 |
| Table 4.4 Descriptive Characteristics on the grouping Variables .....   | 52 |
| Table 4.5: Descriptive statistics on strategic supplier Partnership.....  | 53 |
| Table 4.6: Descriptive statistics on Customer Relationship.....   | 55 |
| Table 4.7: Descriptive statistics on Level of information sharing (LIS).....  | 56 |
| Table 4.8: Descriptive Statistics on Level of information Quality .....   | 57 |
| Table 4.9: Descriptive Statistics on Lean Practice.....   | 59 |
| Table 4.10: Competitive advantage of the company in terms of Price/cost .....   | 60 |
| Table 4.11: Competitive advantage of the company in terms of Quality .....  | 61 |
| Table 4.12: Competitive advantage of the company in terms of Delivery dependability.....  | 62 |
| Table 4.13: Competitive advantage of the company in terms of time to market .....   | 63 |
| Table 4.14: Descriptive statistics of organizational performance (OP) .....   | 64 |
| Table 4.15: Correlation matrix between constructs of SCM practices and OP .....   | 66 |
| Table 4.16: Summary of Regression Model .....   | 68 |
| Table 4.17: Analysis of ANOVA for the regression between organization performances (OP)<br>And supply chain management practices (SCMP) ..... | 69 |
| Table 4.18: Coefficient table for Regression Model.....   | 69 |
| Table 4.19: Correlation matrix between construct of Competitive advantage and<br>Organizational performance .....                             | 73 |
| Table 4.20 Model Summary (Measure of Goodness of Fit) .....   | 75 |
| Table 4.21 Analysis of ANOVA.....   | 76 |
| Table 4.22: Regression Analysis between competitive advantage and organizational performance<br>.....   | 76 |
| Table: 4.23 Summary Result of Hypotheses Testing .....  | 78 |

## LIST OF FIGURES

|  |    |
|--|----|
| Fig 2.1 supply chain stages .....  | 12 |
| Fig 2.3 Arc of integration.....  | 20 |
| Figure2.4 Research framework from S. Li et al. / Omega 34 (2006) 107 – 124and modified by<br>The researcher..... | 31 |
| Fig 4.1 Educational Background of the respondents .....  | 49 |
| Fig 4.2 department/ work unit distribution of the respondents.....   | 50 |

## **ABSTRACT**

*The main purpose of the study is to examine the effects supply chain management practices on organizational performance of BGI ETHIOPIA. Effective supply chain management (SCM) has become a potentially valuable way of securing competitive advantage and improving organizational performance since competition is no longer between organizations, but among supply chains. So, this research paper tried to assess the gap in between the SCMP and organizational performance and evaluate the role of supply chain management practice on organizational performance and determine the relationship between supply chain management practices with competitive advantage and organizational performance of the company. Data for the study is collected from employee of the company and from different distributor agents by using questioner and also from primary and secondary sources. And for this study probability sampling particularly stratified sampling technique is used and the target population is divided in different strata. Correlation findings of the study were that supply chain management practices had a positive effect on various parameters of performance. Like (strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, postponement) have significant and positive impact on organizational performance and from Regression Analysis between SCM practices with organization performance of the company three variables, customer relationship, level of information sharing, and level of information quality had strong significant influence on organizational performance of BGI Ethiopia. Strategic supplier partnership, and lean practice had no significant influences on organizational performance of the case company. And this paper recommends that BGI Ethiopia must improve the involvement of its suppliers in solving the problems, company is expected to evaluate and determine its customer expectation and encourage its customers to seek pertinent assistance and the company to be competitive enough and to sustain in a changing market and remain profitable, BGI Ethiopia would need to re-evaluate their supply chain practices such that they keep pace on the market*

**KEYWORD:** *Supply chain management, Organizational Performance, supply chain management practice, competitive advantage*

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

A supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request. The supply chain includes not only the manufacturer and suppliers, but also transporters, warehouses, retailers, and even customers themselves. Within each organization, such as a manufacturer, the supply chain includes all functions involved in receiving and filling a customer request. These functions include, but are not limited to, new product development, marketing, operations, distribution, finance, and customer service (Chopra & Meindl, 2001)

The concept of Supply Chain Management (SCM) is based on two core ideas. The first is that practically every product that reaches an end user represents the cumulative effort of multiple organizations. These organizations are referred to collectively as the supply chain. And the second idea is that while supply chains have existed for a long time, most organizations have only paid attention to what was happening within their “four walls.” Few businesses understood, much less managed, the entire chain of activities that ultimately delivered products to the final customer. The result was disjointed and often ineffective supply chains

The current competitive scenario supply chain management assumes a significant importance and calls for serious research attention, as companies are challenged with finding ways to meet ever-rising customer expectations at a manageable cost. To do so, businesses must search out which parts of their supply-chain process are not competitive, understand which customer needs are not being met, establish improvement goals, and rapidly implement necessary improvements. Previously manufacturers were the drivers of the supply chain - managing the pace at which products were manufactured and distributed. Today, customers are calling the shots, and manufacturers are scrambling to meet customer demands for options/styles/ features, quick order fulfilment, and fast delivery. (Aziz & Sherzod, 2014)

In past, managers were trying to improve performance of organization based on what had been defined within the framework of their duties merely. But supply chain managers should consider that how much organizational strategies, as used by the managers of the organization, and will affect on chain participators? Because, it is possible that effort to maximize performance of organization may diminish negative effect on performance of supply chain and may increment its competitive advantage. Supply chain performance will be maximized only when we select an intra-organizational strategy, based on which, all members are cooperating with each other for maximizing chain value. Thereby, additional cost and time of one part is restored by the other part and chain performance and eventually, performance of the organization will be increased. But if each of chain members carried out their duties to maximize value of unit of their activity, the result of this activity will merely increase unnecessary costs (Chopra & Meindl, 2001)

Organizational Performance Management and Measurement is one of the most popular terms in today's public sector management terminology. The idea of managing organizational performance is being widely accepted and adopted all over the world. It spread rapidly from the private sector to the public sector in the developed world and has recently found its way in many developing countries. New initiatives and legislations continue to be issued as a sign of governments' insistence on following the new focus on performance orientation. Performance is referred to as being about doing the work, as well as being about the results achieved. It can be defined as the outcomes of work because they provide the strongest linkage to the strategic goals of an organization, customer satisfaction and economic contributions. The term "Performance Management and Measurement" refers to any integrated, systematic approach to improving organizational performance to achieve strategic aims and promote an organization's mission and values. In that sense Organizational Performance Management is quite different than individual Performance Management which specifically targets the personal performance of an employee although the latter comprises an essential part of the overall organizational performance framework. In fact, a Performance Management system aims at improving the results of people's efforts by linking these to the organization's goals and objectives. It is, ideally, the means through which employees' performance can be improved by ensuring appropriate recognition and reward for their efforts, and by improving

Communication, learning and working arrangements. Many Performance Management systems Borrow from or utilize some of the new approaches such as “Balanced Scorecard”, “Total Quality

Management (TQM), best practice “Benchmarking”, or Business Process Re-engineering (BRP). Performance Measurement must be considered as part of the overall Performance Management system and can be viewed as the process of quantifying the efficiency and effectiveness of actions. It is common practice in 3 public sector performance management literature to talk about the three Economy, Efficiency, and Effectiveness. A good performance measurement approach should consider measuring and assessing the three

Previous studies suggest that effective SCM practices have a direct impact on the overall financial and marketing performance of an organization (Shin et al., 2000). Indeed, SCM practices is expected to increase an organization’s market share, return on investment and improve overall competitive positions. For instance, (Tan et al, 1998) asserted that customer relations and purchasing practices impact the effectiveness of SCM strategy and lead to financial and market performance. Froehlich and (Westbrook, 2001) on the other hand suggested that companies with broader supply chain integrations with suppliers and customers showed the largest performance improvement in business achievements. SCM practices impact not only overall organizational performance, but also competitive advantage of an organization. They are expected to improve an organization’s competitive advantage through price/cost, quality, delivery dependability, time to market, and product innovation.

The brewery industry sector in Ethiopia is at growing stage. As a result of which, the industry is attracting multinational business companies with different mode of entry. Consequently, the number of beer manufacturing companies is increasing from time to time following the growing demand of beer in the country. As a result, the competition for these substitute products seems tough and aggressive promotional and marketing efforts are becoming high. Following the reports of international organizations like IMF and World Bank on the development and the fast-economic growth of the country, direct foreign investment is increasing, and the government of Ethiopia also

Companies are entering this brewery industry through acquisition of the state – owned breweries and building new ones with huge investment in the country. The brewery industry currently supplying For local consumption due to growing demand of beer in the country, but it has a great potential to expand its production and enter the export business. Some of them have already started to export and some still planning to export beers. The state- of- the - art supply chain management plays unreplaceable role as a competitive weapon in such a highly competitive and growing brewery industry. Thus, managing the supply chain in this business environment has a major impact on performance of all parties involved in the chain. Despite the role of supply chain management as a competitive tool, the supply chain operational excellence in the brewery in Ethiopia is under researched and there is knowledge gap how well is the performance supply chain management practice in Ethiopia. Consequently, this thesis focused on investigating the performance of supply chain management practice in the case brewery companies located in Addis Ababa in terms of its collaboration and integration with their suppliers and customers, supply chain reliability, responsiveness, flexibility and supply chain operational cost.

The beer industry has been through much change in recent years with numerous entrants in the better beer segment and consolidation among larger brewers. BGI, Dashen, Heineken, Meta, Raya, Habesha and Zebidar are the seven beer companies operating in Ethiopia which collectively run 11 factories. Four giant liquor and two wineries also make part of Ethiopia's growing beverage industry. Since the industry is extremely competitive pursuing effective supply chain management is the best methodology to reduce costs, increase customer satisfaction, better utilize assets, and build new revenues. (Greg, 2016)

## **1.2 Background of the company**

It all started in 1922. Mussie Hal, a Belgian national of Ethiopian descent established St. George Brewery after concluding an agreement with the monarchy. Mr. Hal bought 20,000 square meters of land near the present-day Mexico Square in Addis Ababa. Soon after, with archaic machinery, 137 workers and raw materials imported from abroad, the factory started brewing and production of St. George Beer. Production capacity did not exceed 200-300 bottles per day during that period. And 1936, after the occupation of Addis Ababa, the Italians took over St. George Brewery. After

the instalment of new machineries and the expansion of production facilities and work force, the brewery was able to expand production and started to meet the increasing demand for “modern” Beer. With the Italians at the helm, production reached three to four thousand bottles of beer per day and the first draft beer was introduced packaged in wooden casks.

St. George Brewery’s ownership was assigned to the private domain of Emperor Haile Selassie I And four other individuals after the expulsion of the Italian occupying forces in 1941. During the 40’s and 50’s, beer drinking became popular among locals and St. George Beer became the undisputed champion in Ethiopia. This led to a major overhaul and expansion of the brewery to meet the growing demand. Throughout the 60’s and 70’s St. George Beer’s popularity grew steadily along with the brewery’s product portfolio with the additions of new brands like St. George Stout Beer, which was the first dark or Stout beer produced in Ethiopia, and Pilsner Beer, a blond Lager variety.

St. George Brewery was nationalized and handed over to The Ministry of Finance in 1974 when the military junta “Dergue” came to power. In 1975, St. George Brewery’s old maltery was revived to process locally sourced malt. Its expansion and modernization were completed in 1977, enabling it to satisfy its own malt needs and supply the surplus to other breweries. In addition to improving and modernizing its brewing methods, preparation of fresh yeast also started during this period, greatly improving the taste of St. George Beer. In the late 70’s, the iconic brand name St. George Beer and the St. George logo was replaced with “Addis Beer”, until it was revived again in the late 90’s when BGI Ethiopia took over ownership.

St. George Brewery resumed operation without much change except few reshufflings and replacements to top management after the fall of the Dergue regime in 1991. Towards the end of 1997, BGI – the brewery and beverage production wing of Castel Group – was established as BGI Ethiopia P.L.C. to facilitate private investments in the brewery sector, which was the first of its kind in Ethiopia. In the town of Kombolcha (Wollo), BGI Ethiopia established the first privately owned brewery by acquiring 47 Hectares of land and The Kombolcha

Brewery was officially inaugurated, producing two brands: Bati Beer, which was a mainstream local brand, and Castel Beer, an international premium brand. In conjunction with operating its own brewery and producing its own beer brands, BGI Ethiopia purchased the historic St. George Brewery and the iconic St. George Beer brand in December 1998. After privatizing the St. George Brewery.



Corporate social responsibility schemes, which were non-existent in the industry at the time. Several product innovations were also introduced, including the first pasteurized draft beer. Throughout the 2000's, several expansion and modernization projects continued on the two breweries (Addis and Kombolcha) increasing their combined production capacity from 500,000 Hl. to 1,400,000 Hl. In June 2011, BGI Ethiopia inaugurated its third and largest state of the art brewery in the town of Hawassa. BGI Ethiopia also continued to expand its product portfolio by introducing the Amber beer brand in 2012, which was and still is the first of its kind in the country. By mid-2012, BGI Ethiopia has also ventured into the winemaking business, building and operating the first privately owned winery and vineyard in Zipway town with an initial investment of 22 Million

### **1.3 Statement of the Problem**

The concept of SCM has received increasing attention from academicians, consultants and business managers alike. Many organizations have begun to recognize that SCM is the key to building sustainable competitive edge. Despite this increased attention, the literature has not been able to offer much way of guidance to help the practice of SCM (Perona, 2004).

The brewery industry is extremely competitive and faces new opportunities and challenges. Changing consumer demands and preferences require new ways of maintaining current customers and attracting new ones. In most beer markets, there has been a steady shift towards premium brands that offers health benefits. As a result, there is a focused switch by brewers from mainstream brands to premium brands to enhance their growth prospects. This in turn has resulted in an increasing need to have an efficient supply chain network and to reduce operating expenses.

However, the relationship of SCM with performance cannot be regarded as conclusive (Cousins et al., 2006). Despite the increase of empirical research in the last few years, (Priscila , 2011) important differences in research design undermine comparability: lack of consensus about the definition and dimensionality of the SCM practice(s), use of different units of analysis, and different approaches to performance measurement. In addition, most studies used no probabilistic samples, mainly of American and European companies; limiting generalization to emerging economies, there is large evidence that cultural, social and economic aspects of each country do influence the link between SCM and performance (Harland, et al, 2006)

The effort to achieve generalization of the causal relationship between SCM and performance calls for empirical confirmation in diverse environments, especially emerging economies. As far as the knowledge of the researcher is concerned, there is no empirical study that is conducted in SCM practices and firm's performance (i.e. from perspectives of strategic suppliers' partnership, customer's relationships, Level and quality of information sharing on organizational performances) which incorporate upper and down streams on brewery companies in Ethiopia particularly on BGI Ethiopia. Therefore, since the effort to achieve generalization of the causal relationship between SCM practices and Organizational performance calls for empirical confirmation in diverse environments, especially emerging economies, this paper is to contribute to the debate by testing the relationship between SCM practices and organizational performance in the case company.

Recent evidence indicates that leading edge companies are shifting their quality emphasis from inspection to designing quality into products, accompanying this with process control and process improvement efforts (Greene, 1993). These initiatives, particularly when implemented concurrently with managing the supply base, are cited as strategic practices to achieve competitive advantage. Other practices associated with quality improvement mirror those embodied in the evaluation criteria for awards such as the Baldrige and Deming awards (Black and Porter, 2006). These include strategic quality planning and senior management leadership.

There have been several studies of SCM implementations among manufacturing firms (Sandberg, 2007) and large retailer organizations (Sandberg & Abrahamsson, 2010) that have established the importance of SCM. Locally, (Kyengo, 2012) researched and found out that the overall performance of the organization (Nation Media Group Ltd) is greatly influenced by the capacity of the firm to deliver products to the widely dispersed customers on timely basis because even a one hour late delivery will affect the sales level and this can only be remedied by having effective supply chain structures. (Mwingi & Andebe 2011) undertook research and found that sharing promotional information between retailers and manufacturers is useful especially in the international market. These studies have not fully explored the impact of SCM practices on an organization's performance.

As a business organization BGI Ethiopia's primary objective is to generate optimal profit. When we are talking about profit, it's obvious that the company should maintain its cost low and raise its quality as per the expectation of its customers. If the company fails to minimize its costs and keeps

its customers satisfied, there will be a simple shift of customers to other similar products that leads to low profit. And for the company to fulfil its objective, the SCM plays a vital role in minimizing costs and producing a quality product that exceeds customer's expectation. Complex supplier's relationship and dynamic market make the supply chain management activity complicated.

So, this point are assumed the major challenges to be faced by the supply chain management of BGI Ethiopia is directly affecting its competitiveness in the market. Therefore, the problems of this study were to determine the effect of supply chain management practices and its relationship with the organizational performance. And, there is additional demurrage cost for the company, planning and decision making is hard and time taking and in county wise problem like that of unwanted demurrage payment in dollar and unmanageable order follow up of items and spare parts and others.

## **1.4 Research hypotheses**

Hypothesis 1. Regarding the effect of SCMP on Organizational performance of the company

*Ha1: Strategic supplier partnership has significant positive effect on organizational performance*

*Ha2: Customer relationship has significant positive effect on organizational performance*

*Ha3: Level of information sharing has significant positive effect on organizational performance*

*Ha4: Level of information quality has significant positive effect on organizational performance*

*Ha5: Level of Lean practice has significant positive effect on organizational performance*

Hypothesis 2. Regarding the effect Competitive advantage on organizational performance of the company

*H2a: Competitive advantage Price/cost has significant positive effect on organizational*

*H2b: competitive advantage quality has significant positive effect on organizational performance*

*H2c: Competitive advantage Delivery dependability has significant positive effect on organizational performance*

*H2d: Competitive advantage time to market has significant positive effect on Organizational performance*

## **1.5 Objective of the study**

### **1.5.1 General objective**

The general objective of this research is to determine the effect of supply chain management practice on organizational performance

### **1.5.2 Specific objective**

- Investigating the practice of supply chain management in BGI Ethiopia Evaluating the role of supply chain management practice on organizational performance
- Determining the relationship between supply chain management practices with operational performance and organizational performance of the company
- Determining how competitive advantage of BGI Ethiopia affect the Organizational Performance of BGI Ethiopia.
- Assessing the gap in between the SCMP and organizational performance of BGI Ethiopia

### **1.6 Significance of the study**

The goal of any business establishment was to remain in business profitably through production and sale of products or services. Without optimal profits business/firm cannot survive so this research paper will help BGI ETHIOPIA to establish the effect of supply chain management on organizational performance. And, will show how the supply chain management is crucial for the profitability of the company .The understanding and experiencing of supply chain management is an important requirement for improving profitability as well as to sustain in the global race of competition (Childhouse, et al., 2003).

And this paper will also show how the lack of uncoordinated supply chain management will bring unwanted coast to the company and take undefined period. And also, Unwanted container demurrage payment in dollar which is hard for our country Ethiopia, Additional payment in dollar at sea port because of overload containers and Unmanaged container follow-up which leads to unwanted rental payment for containers The findings of this study will also be used as a reference point by other researchers for further research on the same field. They can also use the findings as a secondary source of information

### **1.7 Scope of the Study**

Supply chain management (SCM) is the broad range of activities required to plan, control and execute a product's flow, from acquiring raw materials and production through distribution to the final customer, in the most streamlined and cost-effective way possible. But it is difficult and

unmanageable to conduct the study in all areas that summarizes SCM in terms of time, finance, and research manageability. Therefore, the scope of this study is delimited to SCM practices and organizational performance.

And, the study will be delimited to organizational and operational performance which incorporate market share, return on investment, the growth of market share, the growth of sales, growth in return on investment, profit margin on sales and overall competitive position). The study is also delimited to the company's point of reference towards strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing. In terms of competitive advantage, the study was delimited to (price/ cost, quality, delivery dependability and time to market) the area of the study is also delimited to the case company BGI Ethiopia Addis Ababa branch. But, further clarification from other site would have a significant effect on the comprehensiveness of the study. And for the study both qualitative and quantitative analysis was used. Although there are different methods and practices of supply chain management, this study analyzed on the effect of SCMP (strategic supplier partnership, customer relationship, information sharing, internal lean practice and quality of information sharing) on Organizational performance. Moreover, the study analyzed organizational performance using right place, right time, right quantity delivery and flexibility to meet customer's requirements. Time wise, the study covered from St Gorge beer factory being owned by BGI ETHIOPIA.

### **1.8 Limitation of the study**

It is very difficult to cover entire domain of supply chain just in one study. The research sample will not incorporate all the supply chain participants namely: the suppliers and customers due to time and financial constrained so that it couldn't be generalized/applied to the complete chain of the company under investigation. On the other hand, constructs of SCM are not only limited to SCM practices selected in this study.

# CHAPTER TWO

## LITERATURE REVIEW

### 2. Theoretical Review

#### 2.1 The Concept of Supply Chain

Several authors have defined supply chain management. (Simchi & Kaminsky, 2000) define supply chain management as “the integration of key business processes among a network of interdependent suppliers, manufacturers, distribution centers, and retailers in order to improve the flow of goods, services, and information from original suppliers to final customers, with the objectives of reducing system-wide costs while maintaining required service levels”. The Council of Supply Chain Management Professionals (CSCMP, 2004) defines SCM as: “SCM encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities, including coordination and collaboration with suppliers, intermediaries, third-party service providers, and customers”. (Cooper & Pagh, 1997) define SCM as the management and integration of the entire set of business processes that provides products, services and information that add value for customers.

SCM is a discipline in the early stages of evolution (Gibson & Cook, 2005). SCM gives a concrete form to the so called “business ecosystem idea” and provides a framework of processes for firms to engage in co-existence rather than competition (Bechtel & Jayaram, 1997). Consultants proposed the term and educators proposed the structure and theory for executing SCM. The term "supply chain management" first appeared in 1982 (Oliver & Webber, 1982). Around 1990, academics first described SCM from a theoretical point of view to clarify the difference from more traditional approaches and names (such as logistics), to managing material flow and the associated information flow (Cooper et al., 1997). The term supply chain management has grown in popularity over the past two decades, with much research being done on the topic (Ashish, 2007) a typical supply chain may involve a variety of stages, including the following:

- Customers
- Retailers
- Wholesalers/distributors

- Manufacturers
- Component/raw material suppliers

Each stage in a supply chain is connected through the flow of products, information, and funds. These flows often occur in both directions and may be managed by one of the stages or an intermediary.

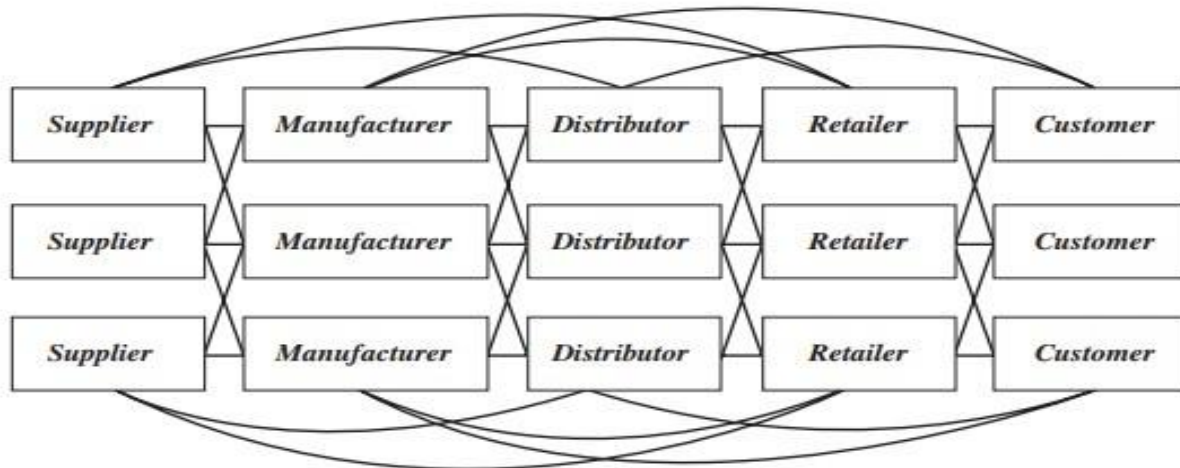


Fig 2.1 supply chain stages

### 2.1.1 Supply chain management over views

The term supply chain management arose in the late 1980s and came into widespread use in the 1990s. Prior to that time, businesses used terms such as logistics and operations management. While reference to supply chain management can be traced to the 1980s, it was in the 1990s that the term supply chain management captured the attention of senior level management in numerous organizations. For some scholars, the concept of supply chain management (SCM) can be traced back to just before the 1960s of the systems theories. However, increased study of the field began in the 1980s, with a dramatic increase in the publication rate since 1990 (Wisner *et al.*, 2005; (Oliver & Webber, 1982). Supply Chain Management was defined by different scholars & association as follows;

A supply chain is a network that includes vendors of raw materials, plants that transform those materials into useful products, and distribution centers to get those products to customers. Known also as the value chain, it is the sequence, which involves producing and delivering of a product or service (Zailani & Rajagopal, 2005). The supply chain encompasses organization and

flows of goods and information between organizations from raw materials to end-users (Handfield & Nichols, 2002). The supply chain is a meta-organization built up by independent organizations that have established interorganizational relationships and integrated business processes across the

borderlines of the individual firms. A supply chain can also be characterized as a borderless organization (Picot *et al.*, 2000), a value net (Bovet & Martha, 2000), a virtual supply chain (Chandrashekar & Schary, 1999), an interactive firm (Johansen & Riis, 2005), a multi-organization/single-site coordinated operations network (Rudberg & Olhager, 2003), or /and extended enterprise (Davis & Spekman, 2004; (Boardman & Clegg, 2001) as cited in the work of (Halldorson *et al.*, 2007). Supply Chain Management is the integration of key business processes from end user through original suppliers that provides products, services, and information that add value for customers and other stakeholders (Lambert *et al.*, 1998). The supply chain is a network of autonomous or semi-autonomous business entities involved, through upstream and downstream links, in different business processes and activities that produce physical goods or services to customers.

A supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request. The supply chain includes not only the manufacturer and suppliers, but also transporters, warehouses, retailers, and even customers themselves. Within each organization, such as a manufacturer, the supply chain includes all functions involved in receiving and filling a customer request. These functions include, but are not limited to, new product development, marketing, operations, distribution, finance, and customer service (Chopra & Meindl, 2007) Successful supply chain management coordinates and integrates all of business activities in to a seamless process. It embraces and links all of the partners in the chain. Supply chain Managements (SCM) framework consists of three major and closely related elements; business processes, management components and structure of the supply chain (Lambert *et al.*, 1997) as quoted in (Gupta & Sahay, 2007).

According to (John *et al.*, 2006) Supply management consciousness is accelerating up the corporate agenda and there does appear to be some evidence for this. For example, many companies have appointed supply chain directors and there has been talk of competition between supply chains rather than simply competition between individual firms (Christopher, 1998). Perhaps even more prevalent



has been the trend towards the conscious examination and rationalization of supplier networks and the development of “collaborative” or “partnership” relationships between buyers and suppliers (Balakrishnan, 2004). Such initiatives have come to be of strategic significance by general managers rather than simply tactical gains by functional specialists (Storey, 2002). The meaning of supply chain management is given by (Christopher, 2011) and defines supply chain management as “the management of upstream and downstream relationships with suppliers and customers in order to deliver superior customer value at less cost to the supply chain. Thus, the focus of supply chain management is upon the management of relationships in order to achieve a more profitable outcome for all parties in the chain. This brings with it some significant challenges since there may be occasions when the narrow self-interest of one party must be subsumed for the benefit of the chain as a whole.” He continued, “whilst the phrase ‘supply chain management’ is now widely used, it could be argued that it should really be termed ‘demand chain management’ to reflect the fact that the chain should be driven by the market, not by suppliers. Equally the word ‘chain’ should be replaced by ‘network’ since there will normally be multiple suppliers and, indeed, suppliers to suppliers as well as multiple customers and customers’ customers to be included in the total system” (Christopher, 2011). The basic objective of supply chain management is to “optimize performance of the chain to add as much value as possible for the least cost possible”. In other words, it aims to link all the supply chain agents to jointly cooperate within the firm to maximize productivity in the supply chain and deliver the most benefits to all related parties (Finch, 2006). Furthermore, (Mentzer, 2001) the significant importance of SCM as “the systematic, strategic coordination of the traditional business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long term performance of the individual companies and the supply chain as a whole”.

### **2.1.2 Supply Chain Management Practices**

‘SCM practices’ is defined as “the set of activities undertaken by an organization to promote effective management of its supply chain” (Li *et al.*, 2006.). Li *et al.*, proposed ‘SCM practices’ as a multi-dimensional construct that includes both upstream and downstream sides of the supply chain. (Donlon, 1996) considered outsourcing, supplier partnership, information sharing, cycle time compression, and continuous process flow, as SCM practices. (Tan *et al.*, 1998) used quality, purchasing, and customer relations to represent SCM practices, in their empirical study. Alvarado

and (Kotzab, 2001) focused on interorganizational system use, core competencies, and elimination of excess inventory through postponement, as SCM practices. Using factor analysis, (Tan *et al.*, 2002) identified: supply chain integration, information sharing, customer service management, geographic proximity, and JIT capability, as the key aspects of SCM practice. (Lee, 2004) in his case study-based research identified five practices at the supply chain level that are a key to creating supply chain responsiveness as cited by (Elsabet, 2017). These are; outsourcing, strategic supplier partnerships, customer relationships, information sharing, and product modularity. Chen and (Paulraj, 2004) used long-term relationship, cross-functional teams, supplier base reduction, and supplier involvement. (Min & Mentzer, 2004) identified long-term relationship, information sharing, vision and goals, risk and award sharing, cooperation, process integration, and supply chain leadership underlying the concept of SCM. (Li *et al.*, 2006) identified strategic supplier partnership, customer relationship, information sharing and postponement as key SCM practices. This study adopts the same practices (viz: strategic supplier partnership, customer relationship, and information sharing) as sub-constructs for the SCM practices construct. According to (Fawcett *et al.*, 2007), Supply chain management involves a design of a seamless value adding processes across boundaries of an organization so that it will be able to meet real need of the customer. The design and implementation impose a lot of complex problems and challenges in the process of execution of supply chain management. These major problems must be first well identified in order to proactively come up with problem solving mechanisms. Hence, (Fawcett *et al.* 2007) have listed the supply chain design and management problems as; Poor coordination of effort, Incompatible information systems, Long cycle times, communication problems, customer service issues, excessive waste and environmental degradation, relatively high inventory for the level of customer service achieved and lower than optimal profits. Looking on how to handle such SCM challenges, resource-based theory has adequately explained the development of core competencies that can be used to handle these challenges and hence design better supply chain management practices (Barney *et al.*, 2000).

These practices, in turn, improve the competitive position of a firm as cited by (Hailemickael, 2017). SCM has been supported as a strategic level concept in prior literature (Bowersox *et al.*, 1999) (Cooper *et al.*, 1997), with a “multi-firm focus” on creating competitive advantage “by maximizing the total value delivered to end-customers” (Defee & Stank, 2005.). Supply chain responsiveness

focuses on not just creating value but maintaining the value or customer service level by being responsive to any turbulence or uncertainty on both sides of the value chain (i.e. supply as well as demand). (Hailemickael, 2017) identified four aspects of SCM practices; the Internal-External Success Factors, buyers' Partnership, Information Communication and Customer relationships that are used as determinants of firms' competitiveness on Sesame Seed Exporter Members of Ethiopia Commodity Exchange. (Wendesen, 2015) used four SCM practices i.e. suppliers' partnership, customer relationship, environmental issues and information communication to show their impact on the future competitiveness of cement firms in Ethiopia. The results show that the efforts that cement factories in Ethiopia exerted in implementing these SCM practices was very low which depleted their competitive position. (Sambas & Jacob, 2008) used the SCM practices proposed by (Tan, 1999) to study the impact of supply chain practices on competitive position of MNEs in Malaysia. The results show that efforts in: (1) improving customer satisfaction, (2) selecting the right suppliers, (3) improving the efficiency of operations and (4) implementing the right quality practices have significant impact on the competitive position of the company. (Li *et al.*, 2005) developed a valid and reliable instrument to measure SCM practices. The same instrument has been adopted in this study. Thus, the literature depicts SCM practices from different perspectives with a common goal of improving organizational performance through creating competitive advantage. In reviewing and consolidating the literature, four distinct dimensions of SCM practice that are perceived to lead to supply chain responsiveness, have been identified. These are strategic supplier partnership, customer relationship, level of information sharing and Lean system.

#### **2.1.2.1 Strategic Supplier Partnership**

Supplier integration is defined as “The long-term relationship between the organization and its suppliers. It is designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant ongoing benefits”. Supplier integration characterized by various aspects and activities such as information sharing, coordination, trust, shared technology, integrated processes, long-term contracts, assisting suppliers to improve production processes, fostering quality improvements, investing in supplier's assets, including suppliers in new product development, improving supplier's overall capabilities, risk and reward sharing, and shared gains from development efforts (*Dyer et al*,

1998), (Bahjat. *et al*, 2014). As such, integration results in improved decision making, enhanced knowledge sharing, aligned capabilities, built learning routines, and increased performance of SC partners. Trust enhances the degree of commitment between the two parties, reduces transactional costs, improves cooperation, enhances the satisfaction of the two parties, decreases the formal contracts, and reduces conflicts (Bahjat. *et.al*, 2014). Supplier and customer relationship is defined as a set of firms' activities in managing its relationships with customers and suppliers to improve customer satisfaction and synchronize supply chain activities with suppliers, leverage suppliers' capacity to deliver superior products to customers. This is due to the ultimate objective of SCM is to deliver products to the satisfaction of end customers (Tan, 2001). The growth of mass customization & personalized service is leading to an era in which relationship management with customers is becoming crucial for corporate survival (Wines, 1996) as cited by (Assefa, 2011). Strategic supplier partnerships usually occur with a few major suppliers who are willing to contribute responsibility for the success of the product. Strategically aligned organizations can work closely together & eliminate wasteful time & effort (Balsmeier *et al.*1996). An effective supplier partnership can be critical component of leading-edge supply chain (Noble, 1997).

### **2.1.2.2 The customer relationships**

The customer relationships include the complete range of practices that are employed for the purpose of managing customer complaints, building long term relationships with customers & improving customer satisfaction (Tan *et al.* 1998) , (Clay *et al.* 1999)as cited by (Assefa ,2011).

Close customer relationship allows a company to be more responsive in fulfilling customers' demand and differentiate its product from competitors, sustain customer loyalty, & dramatically extend the value it provides to its customer through improving customer satisfaction by proactively seeking customers' needs and requirements. The ability to build a close relationship with customers will bring companies into a long-lasting competitive edge (Bowersox *et. al.*, 1999).

SCM suggests that firms need to integrate with their suppliers and customers to achieve both financial and non-financial growth objectives (Tan, 2001) as cited by (Assefa, 2011).Comprises the entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer

satisfaction. Someone consider customer relationship management as an important component of SCM practices, as pointed out by them, committed relationships are the most sustainable advantage because of their inherent barriers to competition. The growth of mass customization and personalized service is leading to an era in which relationship management with customers is becoming crucial for corporate survival. Good relationships with supply chain members, including customers, are needed for successful implementation of SCM programs. Close customer relationship allows an organization to differentiate its product from competitors, sustain customer loyalty, and dramatically extend the value it provides to its customers (Karimi & Rafiee, 2014). Focusing and maintaining the customer relationship will enable the organizations to be more responsive towards customers' needs and will result creating greater customer loyalty, repeat purchase and willing to pay premium prices for high quality product (Carr & Pearson, 1999). The significance of relationships with customers and their impact on the performance and competitive position of a company are well established (Lummus & Vokurka, 2003; Power, 2005; Spekman, (Kamauff, & Myhr, 2002). Companies have restructured and reengineered to increase organizational effectiveness in satisfying customers (Hailemichael, 2017).

### **2.1.2.3 Level of information sharing:**

Information sharing has two aspects: quantity and quality. Both aspects are important for the practices of SCM and have been treated as independent constructs in the past SCM studies. Level (quantity aspect) of information sharing refers to the extent to which critical and proprietary information is communicated to one's supply chain partner. Shared information can vary from strategic to tactical in nature and from information about logistics activities to general market and customer information (Metzer & Zecharia 2000) as cited by (Li *et al*, 2006). Many researchers have suggested that the Key to the seamless supply chain is making available undistorted and up-to-date marketing data at every node within the supply chain (Li et al 2006). By taking the data available and sharing it with other parties within the supply chain, information can be used as a source of competitive advantage. According to (Lalonde, 1998) information sharing is considered as one of five building blocks that characterize a solid supply chain relationship.

Sharing of information is one of five building blocks that characterize a solid supply chain

relationship. According to Stein and Sweat as cited in (Karim & Rafiee, 2014), supply chain partners who exchange information regularly are able to work as a single entity. Together, they can understand the needs of the end customer better and hence can respond to market change quicker (Karim & Rafiee, 2014). In this study, information sharing in supply chain is conceptualized as the extent of sharing business knowledge formally or informally with supply chain partners. Also it is associated with the amount of information shared among supply chain partners in downstream and upstream side of the supply chain and also the information intensity. Quality of information sharing includes such aspects as the accuracy, timeliness, adequacy, and credibility of information exchanged. While information sharing is important, the significance of its impact on SCM depends on what information is shared, when and how it is shared, and with whom. Literature is replete with example of the dysfunctional effects of inaccurate/delayed information, as information moves along the supply chain. Divergent interests and opportunistic behavior of supply chain partners, and informational asymmetries across supply chain affect the quality of information. It has been suggested that organizations will deliberately distort information that can potentially reach not only their competitors, but also their own suppliers and customers. It appears that there is a built-in reluctance within organizations to give away more than minimal information since information disclosure is perceived as a loss of power. Given these predispositions, ensuring the quality of the shared information becomes a critical aspect of effective SCM. Organizations need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion (Li *et al.*, 2006). As cited by (Banchiyrgu , 2017).

#### **2.1.2.4 Lean System**

According to (Ferry ,2007) the principle of lean operations refers to “moving towards the elimination of all waste in order to develop an operations that is faster, more dependable, produces higher quality products & services &, operates at low cost,” (Slack *et al.*, 2004). Lean systems focus on elimination of all kinds of waste (Finch, 2006). The types of waste are defined as below. Waste is any activity that is not value producing for the business. The types of waste below form the core philosophy behind lean systems, as identification of the problem is the first step in solving it (Finch, 2006).

### **2.1.2.5 Innovation**

The term innovation plays a significant character in enhancing the quality and performance of an organization (Mone *et al.*, 1998). It refers to the organizational efforts that give the advantage to the organization in long-range (Maalouf, 2018). One of the prior studies reveals that organizations maintain their strong positions in the existing market due to permanent investment in innovation and innovation must be executed in business process as well as in technology (Pisano, 2015). Despite this, innovation is an important element for enhancing organizational performance but various organizations fail to perform well even due to innovation because they do not know exact guidelines that how to use that technology and due to lack of formal rules and procedures (Maalouf, 2018). The following hypotheses are proposed for the current study:

## **2.2 Supply chain integration**

The nature of a supply chain is that it is usually a network which consists of several participating firms as its member. For a global supply chain, the network stretches many parts of the world, and the participating member firms of the network can be an independent company in any country around the world. Supply chains are therefore voluntarily formed ‘organizations’ with fickle loyalties and often antagonistic relations in between the member firms. Communication and on investment, profit margin on sales and overall competitive position are adapted as organizational performance measures in this study

Supply chain integration therefore can be defined as the close internal and external coordination across the supply chain operations and processes under the shared vision and value amongst the participating members. Usually, a well-integrated supply chain will exhibit high visibility, lower inventory, high capacity utilization, short lead-time, and high product quality (low defect rate). Therefore, managing supply chain integration has become one of the most common supply chain management approaches that can stand up to the global challenges.

However, there is no supply chain that is strictly 100% integrated, nor anyone that is strictly 0% integrated. It is about how much the supply chain is integrated from a focal company's point of view. To illustrate this degree of difference in supply chain integration, Frohlich and (Westbrook, 2001) suggested a concept of 'Arc of Integration' (Figure 3). A wider arc represents more integration which covers larger extent of the supply chain, and a narrow one for a smaller extent. The issue about supply integration is particularly important when the supply chain is formed by the members around the globe.

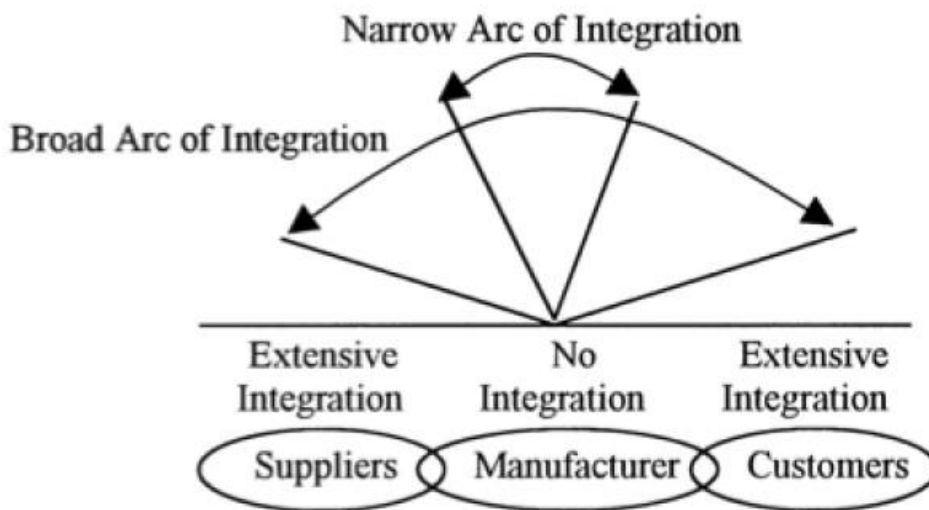


Fig 2.2 Arc of integration



## **2.3 Competitive Advantage**

Competitive advantage is the extent to which an organization can create a defensible position over its competitors (McGinnis & Vallopra 1999). It comprises capabilities that allow an organization to differentiate itself from its competitors and is an outcome of critical management decisions (Tracey *et al.*, 1999). The empirical literature has been quite consistent in identifying price/cost, quality, delivery, and flexibility as important competitive capabilities. In addition, recent studies have included time-based competition as an important competitive priority. Research by (Stalk, 1988) and (Vesey, 1991), identifies time as the next source of competitive advantage. Based on prior literature, (Koufteros *et al.*, 1997), describe a research framework for competitive capabilities and define the following five dimensions: competitive pricing, premium pricing, value-to-customer quality, dependable delivery, and production innovation. These dimensions are also described by (Tracey, 1999). Based on the above, the dimensions of the competitive advantage constructs used in this study are price/cost, quality, delivery dependability, product innovation, and time to market.

## **2.4 Organizational performance**

Organizational performance (OP) is referred to phenomena of how well enterprises obtain their desired goals. There are various studies available in the past on OP but still, there is no universal definition that can be used to measure OP. Some of the researchers use financial performance to measure OP. Some others use non-financial performance to measure the performance of an organization. In the current study, we are using financial and market factors to measure OP (Yamin *et al.*, 1999)

A number of prior studies have measured organizational performance using both financial and market criteria, including return on investment (ROI), market share, profit margin on sales, the growth of ROI, the growth of sales, the growth of market share, and overall competitive position (Vickery *et al.*,1999), (Stock *et al.*, 2000) and (Li *et al.*, 200). In line with the above literature, the same items will be adopted to measure organizational performance in this study. Market share, return on investment, the growth of market share, the growth of sales, growth in return on investment, profit margin on sales and overall competitive position are adapted.

## 2.5 Information Sharing

Information sharing serves as an essential approach for the survival of enterprises and enabler of supply chain integration. Nowadays, with the advancement in information and communication technology, information sharing has become more conceivable. Furthermore, information sharing in supply chains has become more efficient by the global introduction of long-term cooperation and coordination which leads ultimately to the improvement of companies' competitive advantages. There is a lack of information sharing within companies nowadays, which results in inefficiency of coordinating actions within the units in the company or organization. The purpose of this study is to investigate and overview the effectiveness of information sharing in supply chain management, to increase the efficiency of the organizational performance in the manufacturing sector. This study elaborates the benefits and barriers of information sharing leading to enhanced supply chain integration among enterprises, as a result. (Zahra *et al.*, 2000)

Manufacturing sector plays an essential role to enhance economic development. To survive in today's global economy, manufacturers need to rethink their approach to cooperation and hence should provide ways to 300 Zahra Lotfi *et al.* / *Procedia Technology* 11 (2013) 298 – 304 share up-to-date information within the enterprises. (Nunes *et al.*, 2006) However, providing the software and hardware alone is not enough. The members should have the willingness to participate in information sharing activities. (Rosen & Blackburn, 2007) Nowadays, enterprises do not operate alone; they have now been networked to many other partners. (Mourtzis, 2011)

Information sharing means distributing useful information for systems, people or organizational units. To enhance the results of information sharing, organizations should answer four main questions: First we ask what to share, then whom to share it with, then how to share, and finally when to share. The quality of answers will help to avoid redundancy, reduce sharing costs and improve responses. (Sun, 2005) The term 'Information Sharing' can also be referred to as 'Knowledge Sharing' or 'Information Integration'. There exists a myriad of information in a supply Chain, such as, logistic, business, strategic, tactical and many more.

The impact of information sharing on supply chains has become more significant with recent advances in Information Technology (IT). Furthermore, some investigations have been conducted

to focus on the impact of information sharing on product quality. However, there is still room for further studies to clarify exactly how and what information should be shared and the beneficial effects on quality improvement. (Tsung, 2000) Coordination and integration in supply chain management (SCM) have long been the concerns of the academic community as well as the business world. To survive in today's economy, supply chain partners need to improve their competitive advantages by information sharing. (Zha X, 2005).

### **2.5.1 Types of shared information in supply chain**

There are many different types of information that can be shared within a supply chain, including logistics, business, strategic, tactical and soon. Some familiar types of Information may be categorized as:

- 1) Inventory Information;
- 2) Sales Data;
- 3) Sales Forecasting;
- 4) Order Information;
- 5) Product Ability Information;
- 6) Exploitation Information of New Products; and
- 7) Other Information.

Partners like to share Inventory Information the most. Sharing this avoids going out of stock and stock repetition. It also reduces the total stock level and stock cost allowing more accurate forecasts and decisions to be made. Sales data sharing can eliminate order blow-ups, represent true customer demand, and decrease the loss caused by shortage or excess of innovative products. Members in a supply chain make forecasts independently. By sharing sales forecasts better predictions are made which may enhance the competitive advantages of the supply chain. Sharing order information would lead to a quick determination of the bottleneck in a supply chain, enhancing the quality of customer services. The flow of product ability information may assist the deceleration of the possible shortage gaming behavior and avoid potential causes of the bullwhip effect. Information about new products can be shared to allow receiving a timely supply of goods from suppliers when the manufacturers obtain the real demand from retailers. There also exist other types of Zahra Lotfi et al. / *Procedia Technology* 11 (2013) 298 – 304 301 information such as quality information, status

messages on freightage technique progress information, function parameters of supply chain, plan, etc.(Zha x , 2005)

## **2.6 Information technology**

Information technology (IT) plays an important role in an efficient supply chain management. IT brings people and information together. With the progress of networking technology, nowadays information can be accessed in different locations. Especially through the World Wide Web, people can easily access the abundance of data from different locations around the world. (<http://citeseerx.ist.psu.edu>)

The primary goal of IT in the supply chain is to link the point of production with the point of delivery or purchase. The idea is to have an information trail that follows the product's physical trail. This allows planning, tracking, and estimating lead times based on real data. Any party that has an interest in the whereabouts of the products should be able to have access to this information (David *et al.*, 2000).

To make an intelligent supply chain decision, the availability of information regarding the status of products and material is essential. Furthermore, in addition to tracking products across the supply chain, the system also needs to alert diverse systems to the implications of this movement. For instance, if the delay happens in delivery, the appropriate systems need to be notified so the organization can make the proper adjustments by either delaying the schedules or seeking alternative sources. One important issue here is having a single-point-of-contact. The new generation of IT can achieve this goal. 10 For many firms, IT also provides a competitive advantage. (David *et al.*, 2000).

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## **2.7 Supply chain management practices and organizational performances**

(Delaney *et al.*, 2006) point that organizational performance can be evaluated by quality service and products, satisfying customers, market performance, service innovations, and employee relationships. On the other hand, (Hoque *et al.*, 2000) in their study of organizational performance based on balanced scorecard, stated that organizational performance can be appraised by return of investment, margin on sales, capacity utilization, customer satisfaction and product quality. In the same way, (Greene *et al.*, 2007) identified that return on investment, sales and market growth, and profit are important factors that can be measured by organizational performance. In all these performance measures, SCM practices have a positive relationship or generally affects the level of organizational performance.

A strong customer leads to improved marketing and financial performance (Greene *et al.*, 2007) As customers begin to demand that the products and services that they purchase be eco-friendly, it is important that manufacturers generate intelligence related to these 22 changing customer demands. A manufactured product that remains unsold in inventory, because it does not satisfy customer demand is blatantly environmentally unfriendly. A company's customer relations practices can

affect its success in managing the supply base as well as its performance (Turner, 1993). A key element of successful supply base management involves downstream integration of customers as well as the management of upstream suppliers. Each entity in the supply chain is a supplier as well as a customer. When a customer driven corporate vision is implemented simultaneously with effective TQM and supply base management practices, it can produce a competitive edge in a number of different ways. These include increases in productivity, reductions in inventory and cycle time, increased customer satisfaction, market share and profits.

(Chong & Ooi, 2008) assert that a good organized and executed SCM will make it possible for companies to decrease their inventories, have better customer service, and diminish costs as well as aid fast inventory turns. One of the biggest advantages of SCM in the situation of short-term objectives is increasing productivity and decreasing inventory and reducing lead time. Based on long term objectives, this factor has significant role in increasing company's market share and having outside integration of the SCM. (Li *et al.*, 2006).

(Carr & Smeltzer 1999) have documented how firms with strategic purchasing are able to foster long-term, cooperative relationships and communication, and achieve greater responsiveness to the needs of their suppliers. Although other factors, such as restructuring and governance, and transaction cost economizing are also important for understanding strategic purchasing and its linkage to supply management, they are beyond the scope of this investigation. Strategic purchasing fosters communication, which is critical to achieving effective integration throughout the supply chain. Effective communication contributes to the development and maintenance of inter-organizational routines that have been documented to enhance a firm's capability for effectively managing strategic alliance (Zollo *et al.*, 2002)

## **2.8 BGI Ethiopia Supply Chain**

BGI plc is a member of Castel Group which its head office is based in France, established in 1997 in Kombolcha. BGI Ethiopia was the first private Owen brewery in Ethiopia by acquiring 47 Hectare of land. Initially BGI started manufacturing and distributed to Ethiopian Market two brands (Bait and Castel beer). During that period the main competitor in the market was St. George Beer. In 1998 BGI Ethiopia plc Owned St. George beer factory and then expand its capacity by installing the third factory at Hawassa city mainly for south and east part of Ethiopian market and now BGI ETHIOPIA is also owning tow more factory Raya brewery which was established in 2012 by Raya Share

Company and BGI Ethiopia (60%- 40% share structure) and started operations in 2016.

In 2017 BGI Ethiopia managed to acquire all individual shares and assumed full ownership of Raya Brewery and the other Zebeder Brewery which was established (Jemar, 2012) Industry Share Company (a share company established by prominent local businessmen & women) and the Belgian brewing giant UNIBRA (owners of the SKOL brand) and started operations in 2017. In 2018 Zebidar Brewery & Zebidar Beer joined the BGI brands family when the company acquired the shares in 2012 by Raya Share Company and BGI Ethiopia (60%- 40% share structure) and started operations in 2016. (<http://www.bgiethiopia.com/our%20breweries>)

Currently BGI Ethiopia plc has five brand products of two types each. These are St. George, Castel, raya, zebidar, and panach beer in bottle and draft. BGI Has five factories located in Kombolch Addis Ababa and Hawassa, Raya and wolkite with total production Capacity 4.5M HL of beer. (<http://www.bgiethiopia.com/our%20breweries>)

## **2.8 Empirical Studies**

Some positive results have been found on studies related to supply chain management and its effect on organizational performance. According to (Li *et al.*, 2006), SCMP is referred to a combination of activities undertaken within the organizations to encourage the efficient manage There are some researchers that use various SCMP. For instance, continuous process flow, supplier partnership, cycle time density, share information regarding technology, and outsourcing (Donlon, 1996) and (Choon *et al.*, 2002), introduced 6 elements of SCMP; namely supply chain integration, customer service management, information sharing, geographical propinquity, supply chain characteristics, and just-in-time capability. (Chen & Paulraj, 2004), identified communication, supplier-based reduction, cross-functional teams, long-range association, and supplier involvement in measuring supplier and buyer relationship. (Tan *et al.*, 1998) identified customer relationship, quality, and purchasing to represent SCMP. Hence, literature depicts SCMP in terms of different perspectives but at the end one universal objective that is to enhance OP.

(Lee *et al.*, 2007) explored the relationship between supply chain linkages and supply chain performance in terms of supplier, internal, and customer linkages perspective. Performance of the participating firms (from a wide range of industries) was measured in terms of cost containment and performance reliability. The findings in their study indicate that internal linkage is a primary determinant of cost containment performance. Supplier linkage is a key indicator of performance reliability as well as overall performance. They further identified that E-ordering system, reliable delivery system, and access to inventory information are primary determinants in the cost-containment model. Fast and easy ordering system, reliable delivery system, and user-friendly access to inventory system are primary factors, which determine performance reliability. These findings provide management with strategically important insights that e-ordering and a fast and easy ordering system in customer linkage is primary factors for enhancing SCM cost-containment and reliability performance, and reliable delivery in supplier linkage and user-friendly access to inventory information in internal linkage is key success factors for enhancing SCM performance. Zhou and Bento.

(Zhou & Benton ,2007), studied 125 North American manufacturing firms to investigate the relationship between information sharing and supply chain practice, the influence of supply chain dynamism on information sharing and supply chain practice, and the impact of information sharing and supply chain practice on delivery performance. In their study, three categories of supply chain practice are considered: supply chain planning, just-in time (JIT) production, and delivery practice. A group of supply chain practice is regarded as effective supply chain practice if the selected best practices have been implemented. (Lenny *et al.*, 2007) studied the relationships among SCM practices, operational performance and SCM-related organizational performance. Data for their study was collected from a sample of 203 manufacturing SMEs operating in the manufacture of fabricated metal products and general-purpose machinery within the city of Istanbul in Turkey. SCM practices were found to have direct positive and significant impact on operational performance; in contrast, SCM practices were not found to have a significant and direct impact on SCM-related organizational performance. Their study identifies a set of 12 SCM practices: Close partnership with suppliers, Close partnership with customers, just in time supply, Strategic planning, Supply chain



benchmarking, few suppliers, Holding safety stock, sub-contracting, E-procurement, Outsourcing, third party logistics and many suppliers.

(Kim, 2006), examines the causal linkages among supply chain management (SCM) practice, competition capability, the level of supply chain (SC) integration, and firm performance. He found that, in small firms, the role of SC integration as a critical intervening variable between SCM practice or competition capability and firm performance is highly emphasized, while in large firms, the infrastructural role of SC integration which drives the strong interrelationship between SCM practice and competition capability is stressed. This means that large firms had already achieved considerable levels of SC integration, and, based on such high level of SC integration, closer interrelationship between SCM practice and competition capability and more significant direct effect of these two constructs on performance might be possible.

(Vonderembse *et al.*, 2006) discussed three types of supply chains that are necessary to match three types of products: standard, innovative, and hybrid. They demonstrate that standard products, which tend to be simple products with limited amounts of differentiation, should be produced by a lean supply chain. Lean supply chain employs continuous improvement efforts and focus on eliminating wastes across the supply chain. On the other hand, innovative products which may employ new and complex technology require an agile supply chain. Agile supply chain responds to rapidly changing global markets by being dynamic and flexible across organizations. Hybrid products, which are complex products, have many components and participating companies in the supply chain; therefore, a variety of supplier relationships may be needed, which they refer to hybrid supply chains. Hybrid supply chains combine the capabilities of lean and agile supply chains to meet the needs of complex products.

To will and (Christopher, 2002) suggest that there are three types of supply chain strategies: agile supply chains; lean supply chains; and hybrid supply chains. In their study, a case study was provided to show how a lean and agile supply chain can be successfully combined to have a lean/agile supply chain strategy which they refer to as “hybrid” or “leagile” supply chain. (Naylor *et al.* 1999) uses the term “legality” as an integration of lean and agile paradigms with the aid of a decoupling point in the supply chain. Thus, they provide a personal computer company as a case study to demonstrate how

agility and leanness can be combined successfully within the supply chain to meet customers' requirements.

(Daugherty *et al.*, 1995) found that information availability and customer responsiveness are positively related which resulted in improving firm performance. The need for flexibility originates from customers; since customers ask for variety, quality, competitive prices, and faster delivery. This has forced companies to make design changes quickly and respond faster to customer needs in order to sustain the company's competitive advantage. As a result, companies need to be flexible enough to react to changes in customers' demands (Aggarwal, 1997).

(Mustafa, 2014) conduct study on the supply chain management practices and firm performance in case of awash tannery P.L.C. in Ethiopia according to this research data was collected from employees of awash tannery company and the research conceptualizes and develops five dimensions of SCM practice (strategic supplier partnership, customer relationship, level of information sharing quality, quality of information sharing and internal lean practice) and it test the relationship between SCM practices operational performance and organizational performance and the research found out that there is strong relationship between SCM practices operational performance and organizational performance and shows that SCM practice have an influence both on operational performance and organizational performance and it finds out that operational performance has also an influence on organizational performance

(Banchiyrgu, 2017) conduct study on the relationship of SCM practices and organizational performance in Horizon Addis Tyre S.C. and describe five dimensions of SCM practices and found all the constructs of supply chain management namely customer relation, level and quality of information sharing and internal lean practice have strong significant and positive relationship with the case company's performance and strategic supply partnership have positive relationship with the case company's organizational performance.

## **Research gaps**

There are a lot of paper and articles written on the effect of supply chain management on organizational performance but despite the research has been done a lot of time that's scholarly research has been limited in contributing to the practice of SCM. There is also a lack of studies and researches on SCM in relation to the practices that manufacturing firms in developing countries like us. And the currents papers only focus one on one thing for examples on upstream or downstream side of the supply chain,

## 2.9 Conceptual framework

Conceptual framework is a hypothesized model identifying the concepts under the study and their relationships. The Conceptual framework of the study adopted from modified by the researcher is Illustrated on the following diagram.

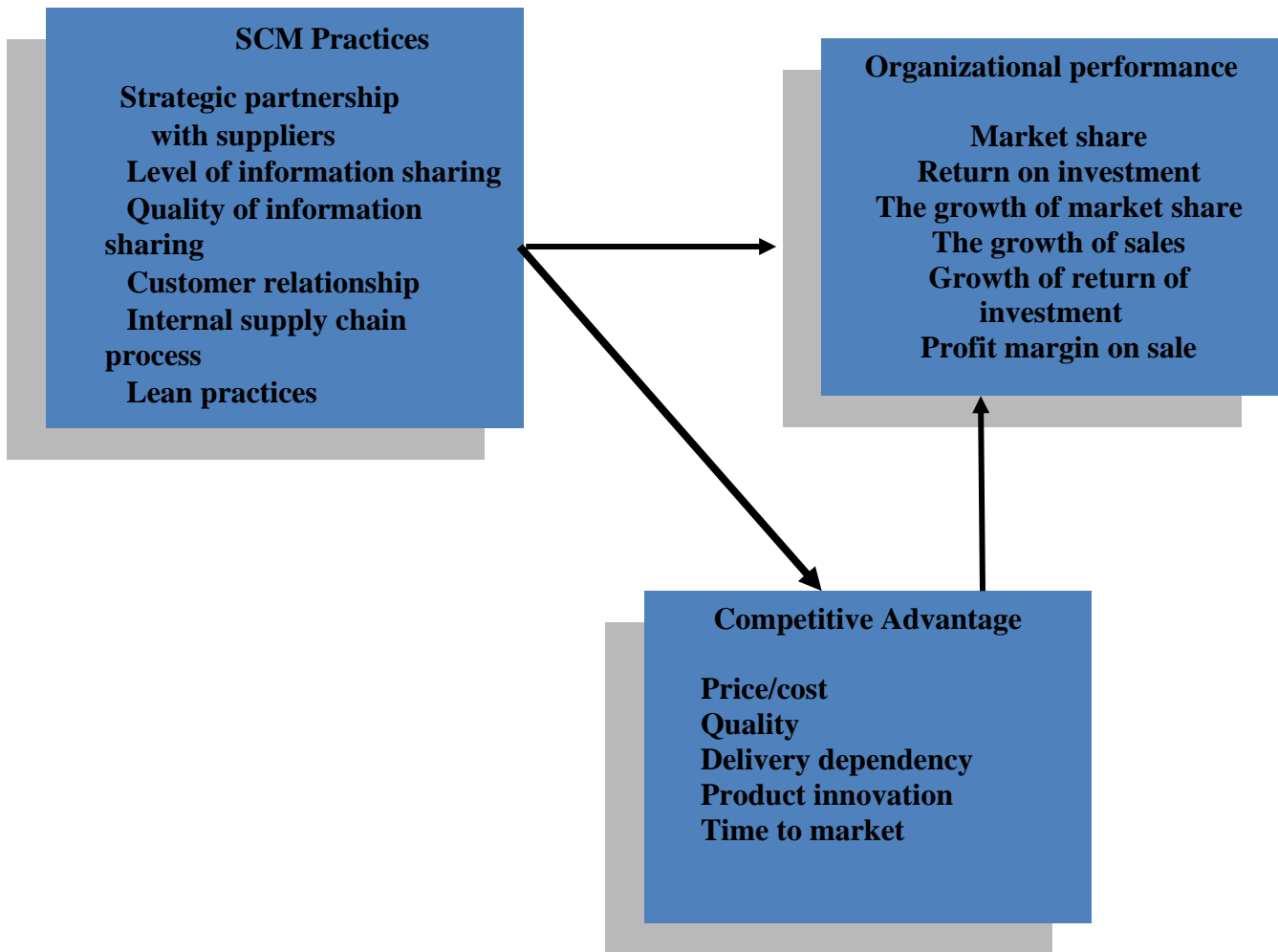


Figure 2.5 Research framework from S. Li et al. / Omega 34 (2006) 107 – 124 and modified by the researcher

According to the above framework, SCM practices represents the independent variable (IV), competitive advantage represents the mediating variable (M) and the organizational performance represents the dependent variable (DV). In the conceptual framework, the independent variables which are believed to have impact on the performance of the selected company are strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and internal lean practices. Whereas, the operational performance is considered as dependent variable

The previous empirical studies conducted by (Ibrahim & Hamid, 2012), (Karimi & Rafiee, 2014), (Li, et al., 2006), (Mustefa, 2014), (Mutuerandu, 2014), (Suhong, Li, *et al.*, 2004), (Yohannes, 2014), (Wagnera, et al., 2012) and (Fantazy & Kumar , 2010) has showed that the higher level of supply chain practices implementation can lead to enhanced operational performance

# **CHAPTER THREE**

## **RESEARCH METHODS**

The major purpose of the study is to identify the effect of supply chain management in organizational Performances. This part of the study presents research methodology. It contains data source, sample and sampling techniques, data gathering tools, validity and reliability and method of data analysis

### **3.1 Research design**

This study was conducted to investigate SCM practices based on fundamental theories, principles of actual performance of the case company's key business activities. Accordingly, the case company's existing SCM practices and the challenges that prohibit its effectiveness were evaluated. That means the purpose of the research is to find out the underlying facts and /or actual circumstances existing within the case company about SCM practices and describing the facts. Therefore, for the study descriptive research type, was used for both qualitative and quantitative data analysis. And in order to show the cause and effect relationship between supply chain and organizational performance the paper used explanatory research design

### **3.2 Research Population**

The target population of this research paper were divided in to two parts. This are employee of the company and distribution agent of BGI Ethiopia. And for this study probability sampling particularly stratified sampling technique is used and the target population is divided in different strata. The target population for the study was classified into eight strata based on the departments and section in the firm which is directly related with SC of the organization. Then the samples were selected from each stratum according to their proportion to the total population. The departments considered as strata, from which data were collected, are production department, administration, supply chain department, finance department, information technology, quality control department, and warehousing, marketing and sales department. In addition to employees all agent distributors will also be considered as respondents.

### **3.3 Sample Frame**

As the study area is delimited to the case company i.e., BGI Ethiopia Addis Ababa branch, the target population for the study was sampled from BGI of Addis Ababa.

The data obtained from BGI HR office shows, currently the total number employee in the study period were 1005 where 950 permanent and the remaining 55 temporary employees. However, as it is depicted on the table 3.1 under, only 438 employees will be targeted for this study, and the remaining are rejected since they are out of the concerned department. Accordingly, for the purpose of this study the target population for the study was classified into eight strata based on the departments and section in the firm which is directly related with SC of the organizations illustrated below.

Table 3.1 Research Population

| <b>NO</b> | <b>Respondent</b>               | <b>Population</b> |
|-----------|---------------------------------|-------------------|
| 1         | Cor.Gen. Manager                | 90                |
| 2         | Quality Control                 | 28                |
| 3         | Finance                         | 31                |
| 4         | Supply Chain                    | 10                |
| 5         | Production                      | 84                |
| 6         | Cor. Sales & Marketing          | 123               |
| 7         | Procurement Store technic       | 19                |
| 8         | Sales & Marketing Draft technic | 53                |
| Total     |                                 | 438               |

Source: BGI Ethiopia HR Department (2019)

### **3.4 Sample size**

The sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample. The sample size used in a study is usually determined based on the cost, time or convenience of collecting the data and the need for it to offer sufficient statically power. Once we have the sample frame, now we need to determine the sample size to clearly stipulate the representative respondents.

Table 3.2 Sample size determination

| NO    | Respondent                      | Target Population | Sample Size |
|-------|---------------------------------|-------------------|-------------|
| 1     | Cor.Gen. Manager                | 90                | 27          |
| 2     | Quality Control                 | 28                | 8           |
| 3     | Finance                         | 31                | 9           |
| 4     | Supply Chain                    | 10                | 3           |
| 5     | Production                      | 84                | 25          |
| 6     | Co. Sales & Marketing           | 123               | 37          |
| 7     | Procurement Store technic       | 19                | 6           |
| 8     | Sales & Marketing Draft technic | 53                | 16          |
| Total |                                 | 438               | 131.        |

Source: Own Survey (2019)

Therefore, a sample size of 131 respondents will be drawn from the sample frame using simple stratified random sampling to promote the needs for efficiency and representativeness. This is justifiable by what (Kothari, 2004) stated that a representative sample could be 30% of target population.

In addition employees of BGI, distribution agent of BGI Ethiopia are also considered as target population. There are 6 distribution agents of BGI Ethiopia in Addis Ababa and all the 6 agents of BGI in Addis Ababa are included where each respective managers of the agents will be accessed.

### 3.5 Data Source and Instruments

For the study of this research paper both primary and secondary source is used. Primary data was collected through questioners and interviews. The questionnaire was designed using the variables identified as important for meeting the study objectives. A closed- ended and open -ended questionnaire was administered to the respondents. The questionnaire was used since it was easy to administer and with data to be obtained was easy to analyses, (Mugend & Mugenda, 2003). Secondary data was also used to collect data from existing sources in the organization. The questionnaires were distributed to employees of the company and Agents of BGI Ethiopia and selected supplies. In addition, interviews were also conducted with key informants and managerial stuffs of the company who have a direct operational linkage with SCM. Secondary data collected from company published document and literatures, books and other publications.



### 3.6 Method of data analysis

In this study, both qualitative and quantitative data analysis were applied.

#### 3.6.1 Quantitative Data Analysis

The quantitative data analysis was done using descriptive statistics to compute the central tendency. Accordingly, Descriptive analytical technique was used with the aid of Statistical Package for Social Sciences (SPSS) to analyses the data collected with the use of questionnaires.

The questionnaires were distributed to answer on a five –point like t-type response scale (1 = strongly disagree,

2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). Inferential data analysis was employed by correlational and regression of variables because in this research is intended to investigate the relationship between the independent variable i.e. Supply chain Management with its effect on the dependent variable Organizational performance. And qualitative data was conducted using open ended interview.

#### Model Specification

The Independent Variables/ predictors to be considered in the study are: SCM practices; whereas the Dependent Variable is organizational performance. While operational performance is a mediating variable. Hence in order to predict the effect of the five independent variables (strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing and internal lean practices) on the dependent variable (organizational performance) the study applied multiple (or “multivariate”) regression model. Multiple Regression Analysis refers to a set of techniques for studying the straight-line relationships among two or more variables. Accordingly the following regression model is formulated.

$$Y = \alpha + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + \varepsilon$$

Where:

**y** = **dependent variable** (organizational performance)

**$\alpha$** =constant/the interception point of the regression line and the y-axis

**$b_1, b_2, \dots, b_5$** = the coefficients of the independent variables that were determined.

**$X_1$** = strategic supplier partnership

**$X_2$** =customer relationship

**$X_3$** =level of information sharing

$X_4$ = quality of information sharing

$X_5$ = internal lean practice

$\epsilon$ = error term

## Definitions of Variables

### I. Dependent Variable

**Organizational Performance:** - Refers to how well an organization achieves its market-oriented goals as well as its financial goals. The short-term objectives of SCM are primarily to increase productivity and reduce inventory and cycle time, while long-term objectives are to increase market share and profits for all members of the supply chain.

### II. Independent Variables

#### SCM practices

SCM practices have been defined as a set of activities undertaken in an organization to promote effective management of its supply chain (Adebayo, 2012). This study has used six dimensions of SCM practices include strategic supplier partnership, outsourcing, customer relationship, quality and degree of information sharing and lean practice.

**Strategic supplier partnership:** - is defined as “the long-term relationship between the organization and its suppliers. It is designed to leverage the strategic and operational capabilities of individual participating organizations to help them achieve significant on-going benefits” (Li *et al.*, 2006)

**Customer relationship:** - is the practice of serving the customers for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction (Li *et al.*, 2006).

**Level of information sharing:** - is defined as the extent to which critical and proprietary information is communicated to one’s supply chain partner (Li *et al.*, 2005).

**Quality of information sharing:** - includes such aspects as the accuracy, timeliness, adequacy and credibility of information exchanged in order to make the entire supply chain more competitive and resourceful (Li, 2005).

**Lean practice:** - (Shah *et al.*, 2003) defined lean practices as a multi-dimensional approach that encompasses a wide variety of management practices, including just-in time, quality systems, work teams, cellular manufacturing, supplier management, and so on, in an integrated system

### III. Mediating Variable

**Competitive Advantage:** comprises capabilities that allow an organization to differentiate itself from its competitors and is an outcome of critical management decisions" (Li *et al.*, 2006: 111). For this study the competitive advantage was perceived using four variables i.e. competitive advantage Price/cost, competitive advantage quality, competitive advantage delivery dependability and competitive advantage time to market

#### 3.6.2 Qualitative Data Analysis

The data that are to be collected through interview and open-ended questionnaire will be analyzed qualitatively using narrative form correspondence to the main research questions. As Best, W. and (Kahan, 2003) stated analysis in qualitative study basically involves word argumentations as numerical explanations.

#### 3.7 Reliability and Validity of the Study

(Mugenda & Mugenda 2003) asserts that, the accuracy of data to be collected largely depend on the data collection instruments in terms of validity and reliability. Validity was achieved by having objective questions included in the questionnaire. This was achieved by pre-testing the instrument to be used to identify and change any ambiguous, awkward or offensive questions and technique. Reliability, on the other hand, refers to a measure of the degree to which research instruments yield consistent results (Mugenda & Mugenda, 2003). In this study, reliability analysis was used to test the reliability using Cronbach Alpha to show how best the variables are best suited for the questionnaire. This study addressed content validity through the review of literature and adapting instruments used in previous research

#### 3.8 Ethical Considerations

According to (Leedy & Ormrod 2010), most ethical issues fall into one of the following four categories; informed consent, confidentiality, security and honesty. Therefore, the researcher will consider all these issues in the questionnaire guidelines in the following manner:

***Informed consent:*** all participants shall be briefly informed about the reason of conducting such study therefore enabled them to join with full consent.

***Right to privacy (confidentiality):*** the researcher will keep the nature and quality of participants' performance strictly confidential. No information shall be recorded to link respondents with their responses.

***Security:*** the researcher doesn't expose the participants to unusual stress, embarrassment, or loss of self-esteem.

***Honesty:*** the researcher reported the findings in complete honesty

# CHAPTER FOUR

## RESULT AND DISCUSSION

### Introduction

In this chapter the researcher presented the main findings from which the analysis was made. The researcher analyzed the results with respect to research objectives and research questions from chapter one. The chapter was divided into two major parts; descriptive statistics analysis and inferential statistics analysis. Data analysis for both descriptive statistics and inferential statistics was made possible with the help of Statistical Package for Social Science (SPSS version 20) software.

### 4.1 Response Rate

A total of 136 questionnaires were distributed and 133 were collected from employees and distribution agents which means 97.7% of the questionnaires were returned back and used for the analysis.

#### 4.1.1 Demographic Characteristics of the Respondents

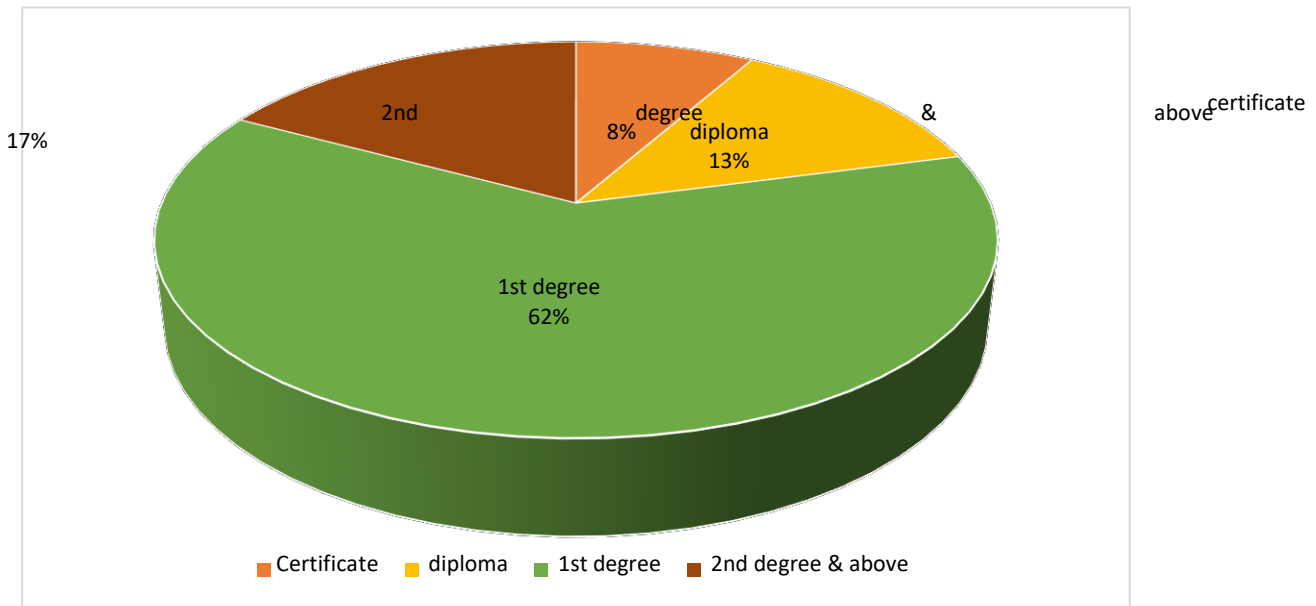
Table 4.1 Sex and Age of the Respondents

| Variables              |                | frequency | percentage |
|------------------------|----------------|-----------|------------|
| Sex                    | Male           | 93        | 69.9       |
|                        | Female         | 40        | 30.1       |
| Age of the Respondents | 20-25 years    | 35        | 26.3       |
|                        | 26-30 years    | 33        | 24.8       |
|                        | 31-35 years    | 43        | 32.3       |
|                        | 36- 40 years   | 14        | 10.5       |
|                        | above 40 years | 8         | 6.0        |

Source: Own Survey (2019)

The above table 4.1 shows the sex and age characteristics of the respondents. The sex distribution of the respondent's shows there are more males than females' respondents in the study. 93(70%) of them were male and the remaining 40(30.1%) of them were female. Pertaining to the age, most of the respondents were found to be young. As 35(26%) and 33(25%) of them were in the age group between 20-25 and 26-30 years respectively while 43(32.3%) of the respondents were in the groups between 31-35 years old. The remaining 14(10%) and 8(6%) were between 36-40 and above40 years old.

Fig 4.1 Educational Background of the respondents



Source: Survey (2019)

As it is depicted on the above figure 4.1 the highest education level attained by most of the respondents was first-degree holders which represents, greater than 62% out of the valid respondents and followed by second degree and above holders which accounts 17%, college diploma holders accounts 13.87%, the rest 8% of them attained certificate level.

Table 4.2 Job title and work experience of the respondents in the company

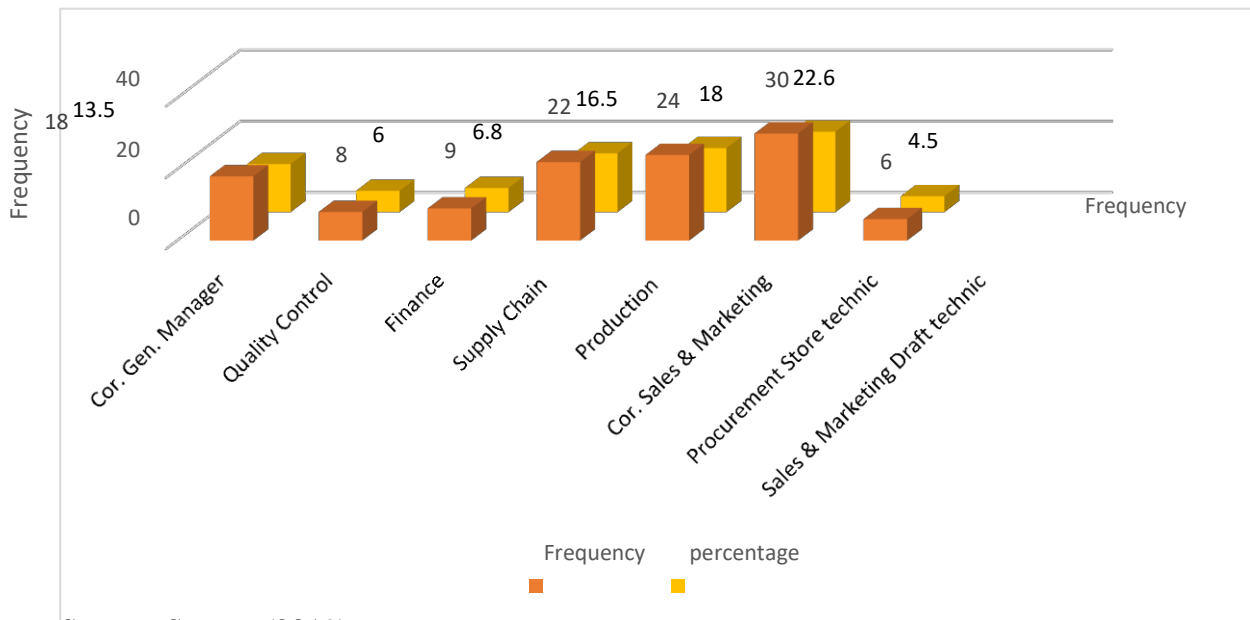
| Characteristics                     | Variables               | frequency | percentage |
|-------------------------------------|-------------------------|-----------|------------|
| Job Title                           | Managerial position     | 11        | 8.3        |
|                                     | Section head            | 25        | 18.8       |
|                                     | Non managerial position | 58        | 43.6       |
|                                     | Other                   | 39        | 29.3       |
| Work experience in the organization | Under 2 years           | 25        | 18.8       |
|                                     | 2-5 years               | 50        | 37.6       |
|                                     | 6-10 years              | 45        | 33.8       |
|                                     | over 10 years           | 13        | 9.8        |

Source: Own survey (2019)

As shown in the above table 4.2 most of the respondents 58(43.6%) were from none managerial position while 25(19%) of them were section heads in the organization. Moreover, 11 respondents

Had managerial position and the remaining 39(29.3%) of them were from different other positions in the company. This shows the respondents have different job position and this will benefit the researcher to obtain as much information and opinion as possible from different employs according to their exposed experience. The above table also portrayed the work experience of the respondents in the organization. Accordingly, most of the respondents 50(37.6%) and 45 (33.8%) have worked between 2-5 and 6-10 years in the company respectively. The remaining 13(10%) of them have more than 10 years of experience in the organization. Only 25(29.3%) have served under 2 years.

Fig 4.2 department/ work unit distribution of the respondents



Source: Survey (2019)

As it is illustrated on the above figure, respondents were selected from seven different work units on the bases of their task proximity and understanding of the subject under study. Accordingly, 30(23%) were from corporate sales and marketing department, 24(18%) from production division, 22(16.5%) from supply chain department, and 18(13.5%) of them were from core general managing staff. The remaining 9(7%) and 8(6%) were from finance and quality control department respectively. The rest 6(4.5%) were from procurement and store technique department. This indicates that the study has tried to include as much representatives as possible who has direct relation to supply chain management practice in the company. This implies that the responses collected from them acquire detail and end to end information for the survey. Therefore, the findings can be generalizable for the company.

## 4.2 Descriptive Analysis

### 4.2.1 Validity and Reliability Test

A pre-test was conducted with 14 respondents before the actual collection of data in order to avoid inapplicable questions, ambiguous wording, and the questionnaires appropriateness. Accordingly, the questionnaires were revised and corrected per the feedback obtained. Moreover, clear instructions were provided at the beginning of the sections. After pre-testing and further revisions, the survey questionnaire was produced in final form and used to collect data.

As stated by (Hair *et al.*, 2007) reliability indicates the extents to which a variable or set of variables are consistent in what it is intended to measure” (Cited by Siddiqi; 2011:20). There are different methods of reliability test, for this study Cronbach’s alpha is suitable. Cronbach’s alpha is the most common measure of reliability.

The following table 4.3 shows the reliability test for each item.

Table 4.3 Reliability Test table

| S/N | Indicators                           | Number of Items | Cronbach Alpha |
|-----|--------------------------------------|-----------------|----------------|
| 1   | Strategic supplier partnership (SSP) | 6               | .791           |
| 2   | Customer relationship (CRP)          | 5               | .791           |
| 3   | Level of information sharing (LIS)   | 7               | .868           |
| 4   | Level of information quality (LIQ)   | 5               | .757           |
| 5   | Internal lean practices (ILP)        | 3               | .740           |
| 6   | Competitive Advantage (CA)           | 18              | .890           |
| 7   | Organizational Performance (OP)      | 7               | .872           |
| 8   | Overall test                         | 51              | .924           |

Source: Own Survey (2019)

As it is portrayed on Table 4.2 above, the Alpha coefficient for the overall scale calculated as a reliability indicator is 0.924. As described by (Andy, 2006) the values of Cronbach’s alpha more than 0.7 is good. The alpha values in this study are far from 0.7 and which are .924. Therefore, it had very good reliability for the questioners.



#### 4.2.2 Descriptive statistics on Aggregated Variables

The Supply chain management practices used in the analysis are supplier relationship, customer relationship, level of information sharing, Quality of information sharing and lean supply chain practices. To address different points under each main category of supply chain practices and operational performance, different question was asked and then it is aggregated in to one variable under each dimension. In addition, all questions as supply chain practice is also grouped to get one SCMP variable. The following table shows the grouped responses result for each variable.

Table 4.4 Descriptive Characteristics on the grouping Variables

| <b>Supply Chain Management Practices (SCMP)</b> | <b>Valid N</b> | <b>Mean</b> | <b>Std. Deviation</b> |
|---|----------------|-------------|-----------------------|
| Strategic supplier partnership (SSP)            | 133            | 3.04        | 1.530                 |
| Customer relationship (CRP)                     | 133            | 3.48        | 1.060                 |
| Level of information sharing (LIS)              | 133            | 3.65        | 0.296                 |
| Level of information quality (LIQ)              | 133            | 3.54        | 1.076                 |
| Internal lean practices(ILP)                    | 133            | 3.01        | 1.730                 |
| Organizational Performance (OP)                 | 133            | 3.63        | 1.004                 |
| Valid N (list wise)                             | 133            |             |                       |

Source: Own Survey, 2019

As shown on the table 4.2, out of the 133 respondents, the mean score is greater than the midpoint of the scale which is 3. Of the five independent variables Level of information sharing has the highest mean (3.65 with SD =0.296) which is followed by 3.54 (SD = 1.076) mean score and standard deviation for level of information quality of the company and customer relationship 3.54 (SD=1.076) and 3.48 (SD=1.060) respectively. However, Strategic supplier partnership and internal lean practices with the suppliers has the lowest, which is 3.04 (SD =1.530) and 3.01(SD = 1.730) respectively. The mean value of the dependent variable (organizational performance of the company) is also above 3.63, SD =1.004. Based on the value of skewness and kurtosis, we can also see the normality of the data distribution. Since this value falls within the normality range i.e. for skewness and kurtosis the data should be within +2 and -2 range. Therefore, the collected data are normally distributed. This implies that in BGI Ethiopia, the results have confirmed that supply chain practices and organizational performance of the company shows above average performance.

## 2.2.1. Descriptive analysis on Independent Variables (SCMP)

### 4.2.2.1.1. Strategic Suppliers' Partnership (SSP):

In order to assess the supplier relationship, the selected employees were requested to respond for six related question in order to assess the strategic partnership of BGI Ethiopia with the suppliers. The questions are focused on criteria based on quality for supplier selection, involvement of suppliers in problem solving; helping suppliers to improve their service quality; joint involvement for continuous improvement programs; inclusion of key suppliers in the planning and goal-setting activities and in new product development processes of BGI Ethiopia and suppliers. The Table 4.3 below shows the responses of each questions asked as strategic supplier relationships.

Table 4.5: Descriptive statistics on strategic supplier Partnership

| SSP Variables   | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---------|------|----------------|----------|----------|
| We consider quality as our number one criterion in selecting suppliers.     | 133     | 3.78 | 1.030          | -.790    | -.185    |
| We regularly solve problems jointly with our suppliers.                     | 133     | 3.18 | 1.260          | -.209    | -1.272   |
| We have been helping our suppliers to Improve their service quality.        | 133     | 2.95 | 1.296          | -.064    | -1.417   |
| We have continuous improvement programs That include our key suppliers.     | 133     | 3.44 | 1.176          | -.241    | -1.211   |
| We include our key suppliers in our planning and goal-setting activities.   | 133     | 3.23 | 1.230          | -.456    | -1.144   |
| We actively involve our key suppliers in new product development processes. | 133     | 3.63 | 1.204          | -.453    | -.994    |
| Valid N (list wise)   | 133     |      |                |          |          |

Source: Own Survey, 2019

As it is indicated on the table 4.3, based on the mean value, the variables for strategic partnership of the company with suppliers vary from the highest 3.78, for the criteria for the selection of the supplier to the lowest (Mean= 2.95 with SD = 1.296) for involving helping suppliers to improve their service quality. The highest respondents' agree on BGI Ethiopia suppliers' selection based on

quality criteria and it involves key suppliers in new product development processes. Moreover, the employees of BGI Ethiopia had Agree and common understanding that the company had considered its key suppliers on continuous improvement program with (mean = 3.44 and SD =1.176). However, they are neutral on solving the problems jointly with the key suppliers (mean = 3.18 and SD =1.260), including inclusion of key suppliers in the planning and goal-setting activities (mean = 3.23 and SD =1.230). The skewness and kurtosis has showed the collected data based on the variables of strategic supplier partnership is normally distributed i.e. it falls between +2 and -2. Therefore, the finding has shown as BGI Ethiopia has to improve the involvement of its suppliers in solving the problems jointly and assist its suppliers to improve their service quality and inclusion of key suppliers in planning and goal-setting activities of the company regularly.

#### 4.2.2.2. Customer Relationship (CRS)

On BGI Ethiopia’s relationship with the customer, respondent was asked five questions. The questions are selected to assess the company’s interaction with customers to set reliability, responsiveness, and other standards, company’s practice of measuring and evaluating customer’s satisfaction and determine future customer expectation, facilitating customers’ ability, and periodically evaluate the importance of the company’s relationship with its customers.

Table: Table 4.6: Descriptive statistics on Customer Relationship

| CRS Variables   | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---------|------|----------------|----------|----------|
| We frequently interact with customers to set reliability, responsiveness, and other standards for us. | 133     | 3.95 | 0.866          | -.025    | -.185    |
| We frequently measure and evaluate customer satisfaction  | 133     | 3.64 | 1.221          | .019     | -1.272   |
| We frequently determine future customer expectations  | 133     | 2.24 | 1.709          | -.189    | -1.417   |
| We facilitate customers’ ability to seek assistance from us.  | 133     | 3.05 | 0.711          | -.414    | -1.211   |
| We periodically evaluate the importance of our relationship with our customer                         | 133     | 3.43 | 1.281          | -.382    | -1.144   |
| Valid N (list wise)   | 133     |      |                |          |          |

Source: Survey data, 2017

Pertaining to BGI Ethiopia customer relationship practice, the employees of BGI Ethiopia has agree and common understanding that the company had frequently interact with customers to set reliability, responsiveness, and other standards (mean = 3.95 and SD =0.866); measure and evaluate its customer satisfaction (mean = 3.64 and SD =1.221); and periodically evaluate the importance of its relationship with customer (mean = 3.43 and SD =1.281). However, they disagreed on the company's practice of determining future customer expectations periodically. And most of remained neutral to the practice of facilitating its customers abilities to seek assistance from the BGI Ethiopia. The skewness and kurtosis value failed between +2 and -2, therefore, the data collected form the respondents are normally distributed.

Using the overall variables of the customer relationship, the findings has showed us BGI Ethiopia has good customer relationship with the customer. However, the company is expected to evaluate and determine its customer expectation and encourage its customers to seek pertinent assistance through different mechanisms like need assessment and the like. In relation to this, (Mbutia, & Rotich, 2014) justifies that Customer relationship is the key element in today SCM practices implementation in any organization. This is because the world today is in the era of massive growth of mass customization and personalized service which had forced organizations to maintain good relationship. With customers for the sake of their survival. Close customer relationship allows an organization to differentiate its products from the competitors, and sustain customer loyalty

#### **4.2.2.2.3. Level of Information Sharing (LIS)**

Information sharing has two aspects: quantity and quality. Both aspects are fundamental for the practices of supply chain. Shared information can vary from strategic to tactical in nature and from information about logistics activities to general market and customer information. With this intention, respondents were asked six questions and their response is displayed on the table 4.5 below.

Table 4.7: Descriptive statistics on Level of information sharing (LIS)

| LIS Variables   | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---------|------|----------------|----------|----------|
| We inform trading partners in advance of changing needs.  | 133     | 3.89 | 1.086          | .026     | -1.356   |
| Our trading partners share proprietary Information with us.   | 133     | 3.47 | 1.196          | -.071    | -1.206   |
| Our trading partners keep us fully informed About issues that affect our business.                              | 133     | 3.37 | 1.362          | -.473    | -1.168   |
| Our trading partners share business knowledge of core business processes with us                                | 133     | 3.02 | 1.244          | -.416    | -1.040   |
| we and our trading partners exchange information that helps the establishment of business planning              | 133     | 3.07 | 1.155          | -.131    | -1.422   |
| We and our trading partners keep each other informed about events or changes that may affect the other partners | 133     | 3.65 | 1.255          | -.296    | -1.332   |
| Valid N (listwise)  | 133     |      |                |          |          |

Source: Own Survey 2019

The result presented in table 4.5 shows that, all the information sharing variables are normally distributed based on the skewness and kurtosis value. Pertaining to the responses of the given, items most respondents agreed to BGI’s practice of prior notification of information to partners with mean value 3.89 and SD 1.086 followed by the practice of keeping informed about events between their company and its trading partners having mean values and standard deviation 3.65 and 1.225 respectively. Moreover, most of the respondents perceived that BGI Ethiopia is fully informed about issues that affect its business by its partners (mean = 3.37 and SD =1.362). However, respondents remain neutral to items as: partners share business knowledge of core business processes with the company; trading partners exchange information that helps the establishment of business planning. The above finding tells us that, BGI Ethiopia has been informed its trading partners on the changing needs, share priority information with the suppliers and fully informed them when any issue are arise which affect the company and its strategic suppliers. In line with this, (Stein & Sweat, 2008)

Asserts that, supply chain partners who exchange information regularly are able to work as a single entity. Together, they can understand the needs of the end customer better and hence can respond to market change quicker. However, BGI Ethiopia do not establish its business planning with its strategic suppliers.

#### 4.2.2.2.4. Level of Information Quality (LIQ)

While information sharing is important, the significance of its impact on SCM depends on what information is shared, when and how it is shared and with whom. Ensuring the quality of the shared information becomes a critical aspect of effective SCM in any organization. In order to assess the quality of information sharing in BGI Ethiopia, five items were provided to respondents and the Result are portrayed on the table 4.6Table 4.8: Descriptive Statistics on Level of information Quality

| LIS Variables   | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---------|------|----------------|----------|----------|
| Information exchange between our trading partners and us is timely.   | 133     | 3.04 | 1.386          | .074     | -1.434   |
| Information exchange between our trading partners and us is accurate. | 133     | 3.15 | 1.227          | -.217    | -1.303   |
| Information exchange between our trading partners and us is complete  | 133     | 3.26 | 1.242          | -.418    | -1.002   |
| Information exchange between our trading partners and us is adequate  | 133     | 2.94 | 1.327          | -.021    | -1.324   |
| Information exchange between our trading partners and us is reliable. | 133     | 3.67 | 1.155          | -.378    | -1.092   |
| Valid N (list wise)   | 133     |      |                |          |          |

Source: Own Survey 2019

As shown above, on the average all variables mean is higher than the middle point and the data collected using the survey questioner are normally distributed as it is indicated by the skewness and kurtosis. The mean ranged from the highest 3.67 for reliable information exchange with the suppliers to the lowest 3.04 for timely information exchange of information. Highest respondents agreed that BGI Ethiopia has complete, adequate and reliable information exchange with the suppliers. However, most respondents do not believe BGI Ethiopia has on time information exchange with its suppliers.

Therefore, in order to improve level of information quality, the company has to work more on accurate and timely information exchange with the suppliers. However proper care must be taken with this issue while releasing the information. Because information is also considered as an asset. Organizations need to view their information as a strategic asset and ensure that it flows with minimum delay and distortion.

**4.2.2.2.5. Internal Lean Practices (ILP):**

As described on the preceding chapters, the term “lean” is used to refer to a system that uses less input to produce at a mass production speed, while offering more variety to the end customers. Elimination of waste is a fundamental idea within the lean system Therefore, to find out the lean practice of BGI Ethiopia, three questions were asked for its employees and the findings are summarized as follows

Table 4.9: Descriptive Statistics on Lean Practice

| LIS Variables   | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---------|------|----------------|----------|----------|
| Our firm reduces process set-up time (time required to prepare or refit equipment/workstation for production) | 133     | 2.36 | 1.270          | -.178    | -1.371   |
| Our firm has continuous quality improvement Programs  | 133     | 3.66 | 1.106          | .140     | -1.308   |
| Our firm produces only what is demanded by customers when needed  | 133     | 2.96 | 1.224          | -.119    | -1.084   |
| Valid N (list wise)   | 133     |      |                |          |          |

Source: Own Survey 2019

As it is depicted on the above table, the highest mean value is observed for the practice of continuous quality improvement programs which is 3.66 with SD = 1.106. However, lowest 2.36 mean is for the reduction of process setup time having mean value 2.36 and Standard deviation 1.270. Moreover respondents were mostly neutral whether BGI Ethiopia produces what is only demanded or not. This implies that, although, BGI Ethiopia provide its product and services whenever needed, the equipment setup time for delivery of services is lower.

In addition, the overall challenges pertaining to effectiveness of SCMP was also assessed through interview. According to the interview held with Section heads, they provided the following reasons as the challenges of implementing SCM effectively and successfully

It has been only three years since the SCM established as an independent department, because of this there is lack of experience in the human power.

The department is facing problems especially with banks to get foreign currency for importation of goods and raw materials.

The maturation of competitiveness in the current beer market creates bargaining power of suppliers.

The supply chain management is highly dynamic. Shortages of raw materials, demand upsides, supplier issues, and intense budget constraints are affecting the effectiveness of implementing SCM in the company.

Moreover, from the interview held with the SCM Manager he noted that “*The Company is viewing the SCM as a key to performance and the engine for growth.* He also confirmed that “*even though it is much harder to achieve organizational performance of the company because of more demanding customers, bargaining power of suppliers and continuing pressure from highly competitive companies in the industry, it’s still possible to achieve growth with appropriate management of supply chain.*” He also added that “*by applying the tools and techniques that SCM offers, the company will have the ability to enhance its performances that leads to its growth.*”

#### **4.2.3. Descriptive Analysis on Competitive Advantage of the Firm**

Competitive advantage is the extent to which an organization is able to create a defensible position over its competitors (McGinnis & Vallopra, 1999). The empirical literature has been quite consistent identifying price/cost, quality, delivery, and flexibility as important competitive capabilities. In addition, recent studies have included time-based competition as an important competitive priority. Accordingly descriptive analysis of the firm’s competitive advantage is carried by taking this variables in to account and presented as follows.

##### **4.2.3.1: Descriptive Analysis of Competitive advantage on Price/cost (CAP)**

In the table 4.9 below respondent’s opinion on the company’s competitive advantage in terms of price/cost was assessed and portrayed accordingly.



Table 4.10: Competitive advantage of the company in terms of Price/cost

| Price/Cost Variables                                      | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---------|------|----------------|----------|----------|
| We can offer prices as low or lower than our competitors. | 133     | 3.37 | 1.276          | -.516    | -.793    |
| Our capacity utilization is very good.                    | 133     | 3.38 | 1.241          | -.718    | -.578    |
| Our Inventory turnover is high.                           | 133     | 3.48 | 1.216          | -.199    | -1.324   |
| We run operation with less Production cost.               |         | 2.82 | 1.381          | -.440    | -1.074   |
| We offer competitive prices                               |         | 3.51 | 1.171          | -.659    | -.443    |
| Valid N (listwise)  | 133     |      |                |          |          |

Source: Own Survey, 2019

As shown on the above table 4.9, The data's collected for the assessment of competitive advantage of the company in terms of price/cost variables of BGI Ethiopia is normally distributed i.e. the skewness and kurtosis values are between +2 and -2. Based on the survey result, there was higher mean value to inventory turnover of the company, offering of competitive price, very good capacity utilization and provision of lower price against the existing competitors with mean value 3.48, 3.51, 3.8 And 3.37 respectively. However on average the respondents' do not agree on the company's run operation with less Production cost. Therefore BGI Ethiopia is expected to carry out its operation with less Production cost.

#### 4.2.3.2: Descriptive Analysis of Competitive advantage Quality (CAP)

Table 4.11 below respondent's opinion on the company's competitive advantage in terms of quality was assessed.

Table 4.11: Competitive advantage of the company in terms of Quality

| Quality Variables                               | Valid<br>N | Mean | Std.<br>Deviation | Skewness | Kurtosis |
|---|------------|------|-------------------|----------|----------|
| We can compete based on quality                 | 133        | 3.72 | 1.304             | -.757    | -.688    |
| We offer products that are highly reliable.     | 133        | 3.87 | 1.196             | -1.017   | -.014    |
| We offer products that are very durable.        | 133        | 3.66 | 1.179             | -.549    | -.974    |
| We offer high quality products to our customer. |            | 4.03 | 1.114             | -1.194   | .495     |
| Valid N (list wise)                             | 133        |      |                   |          |          |

Source: Own Survey, 2019

As it is presented in Table 4.10 the data's collected for the assessment of competitive advantage of the company in terms of quality variables of BGI Ethiopia is normally distributed i.e. the skewness and kurtosis values are between +2 and -2. Based on the survey result, on the average the respondents agree that the company offer high quality products to its customer compete based on quality, offer products that are highly reliable and durable.

Quality is one of the marketer's major positioning tools. Quality has two dimensions level and consistency. The flavor attributes of beer are critical to its overall acceptance by consumers. For product quality consistency, a fine degree of control is required (Bamforth, 2009).

Moreover, interview result also shows that *“the marketing manager of the company said quality product is the key to the company success and because of this everyone is willing to market our products. Once quality product is produced, it will reduce the problems to distribute it and it can distribute through direct and indirect channels.”*

Therefore it is possible to say that the company is competent enough in terms of offering quality product to its customers.

### 4.2.3.3: Descriptive Analysis of Competitive advantage of CAD

Table 4.12: Competitive advantage of the company in terms of Delivery dependability

| Delivery dependability Variables            | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---------|------|----------------|----------|----------|
| We deliver the kind of products needed.     | 133     | 3.57 | 1.129          | -.840    | -.227    |
| We deliver customer order on time.          | 133     | 2.95 | 1.464          | -.221    | -1.493   |
| We provide dependable delivery.             | 133     | 2.88 | 1.297          | -.272    | -1.264   |
| Time to solve customer complaints is short. | 133     | 2.91 | 1.314          | .114     | -1.353   |
| Customer order processing time is short.    | 133     | 3.00 | 1.262          | -.189    | -1.362   |
| Valid N (list wise)                         | 133     |      |                |          |          |

Source: Own Survey, 2019

As it is observed from the perception of the respondents, majority of the respondents stated that company deliver the kind of products needed. However, most of the respondents perceived that BGI Ethiopia is not providing dependable delivery, time to solve customer complaints is not short, it do not deliver customer order on time and also customer order processing time is not short.

Therefore, BGI Ethiopia must deliver customer order on time, provide dependable delivery, and need to minimize time of customers order and solve customer complaints within shorter time. According to interview result with the marketing manager, he has attested that:

*“The company does not sell directly to bars, liquor stores, or grocery stores. It is the responsibility of the distributor to establish the retail relationship. BGI Ethiopia use different agents found in different places to distribute its quality beer to the ultimate customers and it sets different criteria to select the qualified agents.”*

#### 4.2.3.4: Descriptive Analysis of Competitive advantage time to market (CAT)

Table 4.13: Competitive advantage of the company in terms of time to market

| Time to market Variables                                | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---|---------|------|----------------|----------|----------|
| We deliver product to market quickly.                   | 133     | 3.36 | 1.345          | -.397    | -1.082   |
| We have time-to-market lower than industry average      | 133     | 2.99 | 1.305          | -.007    | -1.310   |
| We are first in the market in introducing new products. | 133     | 3.41 | 1.237          | -.443    | -.873    |
| We have fast product development.                       |         | 3.65 | 1.200          | -.691    | -.512    |
| Valid N (list wise)                                     | 133     |      |                |          |          |

Source: Own Survey, 2019

As it is indicated on Table 4.12, skewness and kurtosis shows that the collected data using time to market Variables are normally distributed. The highest mean value is observed for the e fast product development of the company with mean = 3.65 and SD =1.200. In addition most of the respondents agreed that BGI Ethiopia is first in the market in introducing new products and delivering such product to market quickly. However, lowest 2.99 mean and SD 1.305 is for the practice of time-to-market is lower than industry average.

In general, from the above four tables, it is possible to say that BGI Ethiopia has been in state of good position with its competitors. Having a competitive advantage generally suggests that an organization can have one or more of the following capabilities when compared to its competitors: lower price, higher quality or differentiated product.

In addition, an interview was also conducted pertaining to the relation of SCM with the competitive advantage of the company. From the interview held with the supply chain manager, he noted that: *“Currently the competition of the beer industry in Ethiopia became between global companies. Including BGI Ethiopia, companies like Heineken and Diageo are globally operating companies. So, understanding and effectively applying SCM has become an essential prerequisite for staying competitive in the race and enhancing performance. Understanding this in mind BGI Ethiopia is aligning its supply chain activities to get a competitive advantage.”*

#### 4.2.4 Descriptive Analysis on Organizational Performance (OP)

Organizational performance refers to how well an organization achieves its market oriented goals as well as its financial goals (Li *et al.*, 2006) In order to analyze the company's organizational performance, respondents were asked to provide their perception on how well BGI Ethiopia achieves its market-oriented goals as well as its financial goals in the past five years taking in to account: Market share, return on investment, the growth of market share and sales, growth in return on investment, profit margin on sales and overall competitive position.?

Table 4.14: Descriptive statistics of organizational performance (OP)

| OP Variables                    | Valid N | Mean | Std. Deviation | Skewness | Kurtosis |
|---------------------------------|---------|------|----------------|----------|----------|
| Market share.                   | 133     | 3.21 | 1.195          | -.161    | -1.284   |
| Return on investment.           | 133     | 3.42 | 1.269          | -.492    | -.995    |
| The growth of market share.     | 133     | 3.48 | 1.209          | -.398    | -.964    |
| The growth of sales.            | 133     | 3.66 | 1.204          | -.631    | -.818    |
| Growth in return on investment. | 133     | 3.41 | 1.206          | -.424    | -1.163   |
| Profit margin on sales.         | 133     | 3.57 | 1.188          | -.708    | -.689    |
| Overall competitive position    | 133     | 3.31 | 1.350          | -.144    | -1.470   |
| Valid N (listwise)              | 133     |      |                |          |          |

Source: Own Survey, 2019

As it is presented in Table 4.13, The data's collected for the assessment the organizational performance variables of BGI Ethiopia is normally distributed i.e. the skewness and kurtosis values are between +2 and -2. Based on the survey result, on the average the respondents perceived that the organization market-oriented goals as well as its financial goals is increasing with the growth of sales, its profit margin on sales, the growth of market share and return on investment. However, on average the respondents understood items that the company achievement is the same as usual in terms of its market-oriented goals as well as its financial goals is with its market share and overall competitive position.

Therefore, the company has to improve the observed gaps on organizational performance. In today's business environment, competition is constantly getting stronger and tougher. And to stay in the battle field alive, the company should keep its performance consistent for success. Achieving the

competitive advantage and best SCM practice are the major factors that affect the company's organizational performance one way to the other.

### **4.3 Inferential Analysis**

Pertaining to inferential analysis the study used correlation analysis, specifically Pearson correlation to measure the degree of association between different variables under consideration. Regression Analysis was also used to test and predict the effect of independent variable on dependent variable.

#### **The impact of supply chain practices on organizational performances**

In this section, the researcher tried to accomplish the goal of the study through applying Pearson's correlation as it is the most widely used method of measuring the degree of relationship between two variables. Correlation coefficient varies from -1 to +1. Values that are closer to the absolute value of 1 indicate that there is a strong relationship between the variables being correlated whereas values closer to 0 indicates that there is little or no linear relationship.

As described by (Andy, 2006), the correlation is a commonly used measure of the size of an effect: values of  $\pm 0.1$  represent a small effect,  $\pm 0.3$  is a medium effect and  $\pm 0.5$  is a large effect. Hence, the relationship between supply chain management practices and organizational performance was investigated using correlation analysis. This provided correlation Coefficients which indicated the strength and direction of relationship. The p-value also indicated the probability of this relationship's significance.

#### **4.3.1 Correlation between SCM practices and Organizational Performance (OP)**

The correlation table above measures the correlation of the independent variables (SCM) i.e. strategic supplier partnership, Customer relationship, Level of information sharing, Level of information quality and internal lean practice with the dependent variable (Organizational Performance OP). The p-value tells whether the correlation is statistically significant or not.

**Table 4.15: Correlation matrix between constructs of SCM practices and OP**

|     |                     | SSP    | CRP    | LIS    | LIQ    | ILP    | OP     |
|-----|---------------------|--------|--------|--------|--------|--------|--------|
| SSP | Pearson Correlation | 1      | .507** | .000   | .270** | .101   | .468   |
|     | Sig. (2-tailed)     |        | .000   | .999   | .002   | .250   | .434   |
|     | N                   | 133    | 133    | 133    | 133    | 133    | 133    |
| CRP | Pearson Correlation | .507** | 1      | .163   | .220*  | .179*  | .622   |
|     | Sig. (2-tailed)     | .000   |        | .060   | .011   | .039   | .799   |
|     | N                   | 133    | 133    | 133    | 133    | 133    | 133    |
| LIS | Pearson Correlation | .000   | .163   | 1      | .531** | .355** | .782** |
|     | Sig. (2-tailed)     | .999   | .060   |        | .000   | .000   | .000   |
|     | N                   | 133    | 133    | 133    | 133    | 133    | 133    |
| LIQ | Pearson Correlation | .270** | .220*  | .531** | 1      | .364** | .558** |
|     | Sig. (2-tailed)     | .002   | .011   | .000   |        | .000   | .000   |
|     | N                   | 133    | 133    | 133    | 133    | 133    | 133    |
| ILP | Pearson Correlation | .101   | .179*  | .355** | .364** | 1      | .422** |
|     | Sig. (2-tailed)     | .250   | .039   | .000   | .000   |        | .000   |
|     | N                   | 133    | 133    | 133    | 133    | 133    | 133    |
| OP  | Pearson Correlation | .468   | .622   | .782** | .558** | .422** | 1      |
|     | Sig. (2-tailed)     | .434   | .799   | .000   | .000   | .000   |        |
|     | N                   | 133    | 133    | 133    | 133    | 133    | 133    |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Where: Strategic supplier partnership = SSP, Customer relationship = CRP, Level of information sharing = LIS, Level of information quality = LIQ, Internal lean practices = ILP, Organizational Performance = OP  
 Each question in each category of supply chain practice are transformed in to five variables i.e. SSP, CRP, LIS, LIQ, and ILP. For Organizational performance, the collected data using Likert scale type questioners was transformed into OP variable. The finding shows that all supply chain management practice variables coefficients are significant at the 0.01 level. Based on the above output value of sig (2-tailed), in BGI Ethiopia;

All independent variables (SSP, CRP, LIS, LIQ, and ILP) used as supply chain practice and organizational performance have a statistically significant relationship  $r < .001$ ).

The direction of the relationship independent variables and dependent variables are positively correlated, that means these variables tend to increase together.

In general, there is a strong and positive relationship between all independent and dependent variables are observed on the finding. Specifically, for example, the coefficient of the relationship between Level of information sharing and organizational performance ( $r = 0.782$ ). Therefore, if the

Level of information sharing increase the organizational performance of the BGI Ethiopia will increase. The same holds for the other variables i.e. the coefficient organizational performance with Customer relationship ( $r = 0.622$ ), Strategic supplier partnership ( $r = 0.468$ ), the level of information quality ( $r = 0.558$ ), the Lean practice ( $r = 0.422$ ). Therefore, if the companies' strategic supplier relationship, customer relationship, level of information sharing, quality of information sharing, and lean practices increase the operational performance of organizational performance of the BGI Ethiopia will increase proportionately.

#### **4.3.2 Regression analysis between supply chain management practices (SCMP) and Organization performance (OP)**

Regression is a technique that can be used to investigate the effect of one or more predictor variables on an outcome variable. That is, it allows us to make statements about how well one or more independent variables will predict the value of a dependent variable. The parameters model used in this study are estimated using multiple regression analysis.

##### **4.3.2.1 Regression Analysis Model Summery**

A multiple regression model R-squared is determined by pair wise correlations among all the variables, including correlations of the independent variables with each other as well as with the dependent variable. The multiple correlation coefficient (R) is a measure of the strength of the relationship between Y (in this case the Competitive Advantage) and the five predictor variables selected for inclusion in the equation as the supply chain management practices i.e. ILP, SSP, LIS, CRP, LIQ and LP. Large values of the multiple R represent a large correlation between the predicted and observed values of the outcome. A multiple R of 1 represents a situation in which the model perfectly predicts the observed data (Field, 2009).

Adjusted  $R^2$  is a measure of the loss of predictive power or shrinkage in regression. The adjusted  $R^2$  tells us how much variance in the outcome would be accounted for if the model had been derived from the population from which the sample was taken Adjusted R-squared is always smaller than R-squared, but the difference is usually very small unless you are trying to estimate too many coefficients from too small a sample in the presence of too much noise (Field, 2009).



**Table 4.16: Summary of Regression Model**

| Model Summary |      |          |                   |                            |
|---------------|------|----------|-------------------|----------------------------|
| Model         | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1             | .681 | .563     | .542              | .85292                     |

a. Predictors: (Constant), ILP, SSP, LIS, CRP, LIQ

Source: Survey data, 2019

As it is portrayed on table 12 above, the coefficient of determination, the R and the R-square is relatively high witnessing the high explanatory power of the model. In this case as indicated above,  $R = 0.681$ , indicate that there is a strong and positive correlation between the dependent variable (Competitive advantage) and the set of five independent variables (strategic supplier partnership, customer relationship, level of information sharing, level of information quality, internal lean practices).

Moreover, the adjusted  $R^2$  (coefficient of determination) explain 54.2 % of the factor affecting organizational performance as represented by the five independent variables that were studied. Therefore, a further research should be conducted to investigate the other factors (45.8%) that affects organizational performance in the BGI Ethiopia

#### **4.3.2.2 Analysis of Variance between (OP) and (SCMP)**

The most important part of the table is the F-ratio, which is a test of the null hypothesis that the regression coefficients are all equal to zero. Because  $R^2$  is not a test of statistical significance (it only measures explained variation in Y from the predictor Xs), the F-ratio is used to test whether or not  $R^2$  could have occurred by chance alone. In short, the F-ratio found in the ANOVA table measures the probability of chance departure from a straight line.

The ANOVA table 13 below for the selected variables shows the explanatory variables in the regression model are significant in explaining the effect of supply chain management practice on the competitive advantage of the organization. The calculated F value appears larger than the significance value. In other words, the calculated significance value stood below 0.05.

Table 4.17: Analysis of ANOVA for the regression between organization performance (OP) and supply chain management practices (SCMP)

**ANOVA<sup>b</sup>**

| Model      | Sum of Squares | df  | Mean Square | F      | Sig.              |
|------------|----------------|-----|-------------|--------|-------------------|
| Regression | 2582.773       | 5   | 516.555     | 21.934 | .000 <sup>a</sup> |
| Residual   | 2990.956       | 127 | 23.551      |        |                   |
| Total      | 5573.729       | 132 |             |        |                   |

a. Predictors: (Constant), ILP, SSP, LIS, CRP, LIQ

b. Dependent Variable: OP

Source: Own Survey (2019)

From the above table the overall test of the model is statistically significant (since P value <0.05). In addition, the calculated significance value is lower than the expected significance value (0.01). The higher F value and less significance value ( $p < .01$ ) indicate that the model reaches statistical significance and that multiple R in the population is equal to zero. In addition, the ANOVA table indicates that the model of the study is statistically significant and valid.

**4.3.2.3 Coefficients of Regression Analysis**

In order to know which of the predictors' i.e. ILP, SSP, LIS, CRP or LIQ has contributed significantly to our understanding of Y (in this case the organization performance (OP)), and the following table shows Coefficients when we explore each predictor's beta (i.e., standardized regression coefficient) and its level of significance.

**Table 4.18: Coefficient table for Regression**

**Model Coefficients**

| Model      | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|------------|-----------------------------|------------|---------------------------|--------|------|
|            | B                           | Std. Error | Beta                      |        |      |
| (Constant) | 9.209                       | 2.222      |                           | 4.144  | .000 |
| SSP        | .096                        | .095       | .080                      | 1.012  | .313 |
| CRP        | -.290                       | .102       | -.219                     | -2.838 | .005 |
| LIS        | .390                        | .077       | .408                      | 5.073  | .000 |
| LIQ        | .477                        | .117       | .337                      | 4.081  | .000 |
|            | .166                        | .139       | .086                      | 1.196  | .234 |

a. Dependent Variable: OP

Source: Own Survey (2019)

#### 4.3.2.4 Findings based on Research Questions

Table 4.14 above, shows the regression between independent variables (strategic supplier partnership, customer relationship, level of information sharing and quality of information sharing) and organization performance (OP). The Table 4.14 above shows coefficients of each model along with corresponding test statistics. Hereunder the formulated hypothesis are tested based on the values obtained from the regression model. As it is explained on chapter 3 multiple regression analysis was assumed to be employed so as to determine the relationship between organization performance of the BGI Ethiopia and the five supplier relationship variables. As per the SPSS output above, the equation

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon \text{ which means}$$

$$Y = \beta_0 + \text{SSP}X_1 + \text{CRP}X_2 + \text{LIS}X_3 + \text{LIQ}X_4 + \text{ILP}X_5 + \epsilon \text{ becomes}$$

$$Y = 9.209 + 0.096 X_1 + (-0.290) X_2 + 0.390 X_3 + 0.477 X_4 + 0.166 X_5 + 0.852$$

If all SCMP has not been performed on the company or (when  $X_1, X_2, X_3, X_4, X_5 = 0$ ), the organization performance of the company (BGI Ethiopia) will start from negative.

However, since, there will no operation without supply chain function. Therefore, the researcher do not interpret it. From the above equation, if  $X_1$  differed by one unit (and  $X_2, X_3, X_4, X_5$  did not differ)  $Y$  (Organization performance of BGI Ethiopia) will differ by  $\beta_1$  units, on average. The same holds for the other variables. Therefore, for our model if the strategic supply chain partnership increase by 1%, on average, the operational performance of BGI Ethiopia will be increased by 0.096 %.

Similarly,  $\beta_2$  is interpreted as the difference in the predicted value in operational performance for each one-unit difference in  $X_2$  if  $X_1, X_3, X_4, X_5$  remains constant. So compared to a one percent decrease in the customer relationship of BGI Ethiopia, we would expect the organizational performance of the company will be 0.290% having constant the other variables. In addition, holding or keeping the other variables constant, for one percent increase in organizational performance of the company, 0.390% is from the level of information sharing, 0.477% is level of form information quality and 0.166% from lean practice of the organization

***H1a: Strategic supplier partnership has significant positive effect on organizational performance***

From the given table 4.14 unstandardized coefficients and p-value for Strategic supplier partnership on organizational performance were 0.096 and 0.313 respectively; these values indicate that there were no significant influences on competitive advantage based on this study. Since the p-value 0.313 which is greater than level of coefficient 0.05. From the result we can conclude that the research hypothesis is not accepted.

In the existed literature different authors wrote Effective partnerships with suppliers can be critical factor to guide supply chain management (Li *et al.*, 2006). (Sadikoglu & Zehir, 2010) also stated that in strategic supplier partnership, suppliers play more direct role in an organization's quality performance. Strategically aligned organizations can work closely together and eliminate wasteful time and effort (Balsmeier & Voisin, 1996). An effective supplier partnership can be a critical component of a leading edge supply chain (Noble, 1997). The main objective of strategic partnerships with suppliers is increasing the functional capability desired supplier (Rosenzweig, 2003). Therefore, strategically managed long-term relationship with supplier has positive impact on a firm's supplier performance (Cooper & Ellram, 2003).

***H1b: Customer relationship has significant positive effect on organizational performance***

As it is depicted on the above table 4.14 unstandardized coefficients and p-value for Customer relationship on competitive advantage were -0.290 and 0.003 respectively; these values indicate that Customer relationship had significant influences on organizational performance of the company based on this study. Since the p-value 0.003 which is less than level of coefficient 0.05. This indicates that from the unstandardized coefficient as one unit of strategic supplier partnership decreases with 29 percent increase on organizations organizational performance. From the result we can conclude that the research hypothesis is accepted.

Customer relationship management as an important component of SCM practices. As pointed out by Day (2000), devoted relationships are the most sustainable advantage because of their essential barriers to competition. Focusing and maintaining the customer relationship will enable the organizations to be more responsive towards customers' needs and will result creating greater customer loyalty, repeat purchase and willing to pay premium prices for high quality product

***H1c: Level of information sharing has significant positive effect on organizational performance***

From the given table 4.14 above, unstandardized coefficients and p-value for Level of information sharing on organizational performance were 0.390 and 0.000 respectively; these values indicate that level of information sharing had significant influences on organizational performance based on this study. Since the p-value 0.000 which is less than level of coefficient 0.05. This indicates that that from the unstandardized coefficient 0.390 as one unit of level of information sharing increases with 39.0 percent increase on organizations organizational performance. From the result we can conclude that the research hypothesis is accepted.

Information sharing is an important aspect in achieving perfect integration in a supply chain. Poor information sharing between partners in a supply chain will result in poor coordination that will lead to many serious problems such as high inventory levels, inaccurate forecasts, low resource utilization, and high production costs. Effective use of relevant and timely information by all the functional elements in the supply chain is considered as a competitive factor and distinctive (Ahmadi, 2005). Failures can occur in case of information delays, shortage or distortion across the supply chain (Power, 2005). In this study supply chain information sharing is associated with the amount of information shared among supply chain partners in downstream and upstream side of the supply chain and also the information intensity.

***H1d: Level of information quality has significant positive effect on organizational performance***

From the given table 4.14 unstandardized coefficients and p-value for Level of information quality on organizational performance were 0.477 and 0.000 respectively; these values indicate that level of information quality had significant influences on organizational performance based on this study. Since the p-value 0.000 which is less than level of coefficient 0.05. From the result we can conclude that the research hypothesis is accepted.

Information quality includes an aspect such as accuracy, timeliness, adequacy and information exchanged credibility (Tan *et al.*, 1998). Based on (Li *et al.*, 2005), organization needs to review their information as a strategic asset and ensure that the information flows with minimum delay and distortion. In addition, (Li *et al.*, 2005) also notes that information shared must be accurate so that the best SCM solution will be obtain. Effective use of relevant and timely information by all the

functional elements in the supply chain is considered as a competitive factor and distinctive (Ahmadi, 2005)

***H1e: Level of Lean practice has significant positive effect on organizational performance***

The effect of lean practice on the competitive advantage of the organization also regressed and portrayed on the above table 4.14. Accordingly, the unstandardized coefficients and p-value for level of lean practice on organizational performance were 0.166 and 0.234 respectively; these values indicate that level of lean practice had no significant influences on organizational performance based on this study. Since the p-value 0.234 which is greater than the level of coefficient 0.05. This indicates that that from the unstandardized coefficient 0.166 as one unit of level of lean practice decrease with 23.4 percent increase on organizations organizational performance. From the result we can conclude that the research hypothesis is not accepted.

**4.3.3: Correlation matrix between construct of Competitive advantage and Organizational Performance**

**Table 4.19: Correlation matrix between construct of Competitive advantage and organizational performance**

| Correlations |                     |        |        |        |        |        |
|--------------|---------------------|--------|--------|--------|--------|--------|
|              |                     | CAP    | CAQ    | CAD    | CAT    | OP     |
| CAP          | Pearson Correlation | 1      | .415** | .412** | .396** | .488** |
|              | Sig. (2-tailed)     |        | .000   | .000   | .000   | .000   |
|              | N                   | 133    | 133    | 133    | 133    | 133    |
| CAQ          | Pearson Correlation | .415** | 1      | .537** | .477** | .532** |
|              | Sig. (2-tailed)     | .000   |        | .000   | .000   | .000   |
|              | N                   | 133    | 133    | 133    | 133    | 133    |
| CAD          | Pearson Correlation | .412** | .537** | 1      | .538** | .381** |
|              | Sig. (2-tailed)     | .000   | .000   |        | .000   | .000   |
|              | N                   | 133    | 133    | 133    | 133    | 133    |
| CAT          | Pearson Correlation | .396** | .477** | .538** | 1      | .504** |
|              | Sig. (2-tailed)     | .000   | .000   | .000   |        | .000   |
|              | N                   | 133    | 133    | 133    | 133    | 133    |

|   |                     |        |        |        |        |     |
|---|---------------------|--------|--------|--------|--------|-----|
| OP  | Pearson Correlation | .488** | .532** | .381** | .504** | 1   |
|   | Sig. (2-tailed)     | .000   | .000   | .000   | .000   |     |
|   | N                   | 133    | 133    | 133    | 133    | 133 |
| *. Correlation is significant at the 0.01 level (2-tailed). |                     |        |        |        |        |     |
| *. Correlation is significant at the 0.05 level (2-tailed). |                     |        |        |        |        |     |

Where: competitive advantage price/cost = CAP, Competitive advantage Quality = CAP, Competitive advantage Delivery dependability = CAD, Competitive advantage time to market = CAT, and Organization Performance = OP

As shown on the table 18 above, the coefficients of dependent and independent variables with the range of .381 up to .532 all are significant at  $p < 0.01$  level. As the result given on the table the relationship between the dependent and independent variables, indicates that each of the variable are significantly correlated with each other at a significant level of  $p < 0.01$ .

As illustrated in table 4.18 above, Pearson correlation test was conducted for quality and organizational performance the result indicates that, there is strong positive relationship between quality and organizational performance with a Pearson correlation coefficient of 0.532 ( $r = 0.532$ ) and significance value is less than 0.01. This significance tells that there is genuine relationship between quality and organizational performance.

On the other hand, as it is shown in the table 4.12 above there is strong positive significant correlation between time to market and Organizational Performance. In other words, time to market and Organizational Performance have genuine relationship with correlation coefficient of 0.504 ( $r = 0.504$ ) and significance value less than 0.01.

Also, for Price/cost and organizational performance Pearson correlation test was conducted and the results exhibited, there is positive correlation between Price/cost and organizational performance. In other words, delivery dependability and organizational performance have genuine relationship ( $r = 0.488$ ) at significance value less than 0.01.

Correlation test for between delivery dependability and organizational performance was also conducted as seen in the same table 4.18 above, the result shows that delivery dependability is

positively correlated to organizational performance with a Pearson correlation coefficient of 0.381 ( $r=0.381$ ) and significance value is less than 0.01. This significance tells that there is genuine relationship between delivery dependability and organizational performance.

#### 4.3.4 Regression Analysis between Competitive Advantage (CA) and Organizational Performance

The parameters of this model are estimated using multiple linear regression analysis. The regression between all independent variables (competitive advantage Price, competitive advantage quality, competitive advantage Delivery dependability and competitive advantage time to market) to examine the relationship to Organizational Performance (OP).

Competitive advantage is the extent to which an organization is able to create a defensible position over its competitors (McGinnis & Vallopra, 1999). It comprises capabilities that allow an organization to differentiate itself from its competitors and is an outcome of critical management decisions (Tracey *et al.*, 1999). The empirical literature has been quite consistent in identifying price/cost, quality, delivery, and time to market as important competitive capabilities. Tables below also shows the model summary, test of variance (ANOVA) and coefficients of each model along with corresponding test statistics.

**Table 4.20 Model Summary (Measure of Goodness of Fit)**  
**Model Summary**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .647 <sup>a</sup> | .318     | .400              | 5.03236                    |

a. Predictors: (Constant), CAT, CAP, CAQ, CAD

Where: competitive advantage Price/cost = CAP, Competitive advantage Quality = CAP, Competitive advantage Delivery dependability = CAD, Competitive advantage time to market = CAT, and Organization Performance = OP

Based on SPSS generated data above, the adjusted  $R^2$  (coefficient of determination) explain 31.8.5% of the factor affecting organization performance as represented by the four independent variables of competitive advantage (CAT, CAP, CAQ, CAD) that were studied.



**Table 4.21 Analysis of ANOVA**  
ANOVA<sup>b</sup>

| Model |            | Sum of Squares | df  | Mean Square | F      | Sig.              |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1     | Regression | 2332.169       | 4   | 583.042     | 23.023 | .000 <sup>a</sup> |
|       | Residual   | 3241.560       | 128 | 25.325      |        |                   |
|       | Total      | 5573.729       | 132 |             |        |                   |

a. Predictors: (Constant), CAT, CAP, CAQ, CAD

b. Dependent Variable: OP

Source: Own Survey, 2012

For this survey data shown on the table 4.16, F is 23.023, which is significant at  $p < 0.001$  (because the value in the column labeled Sig. is less than 0.001). This result tells us that there is less than a 0.1% chance that an F-ratio this large would happen, if the null hypothesis proposed about F-ratio were true. Therefore, we can conclude that our regression model results in significantly better prediction of organizational performance and that the regression model overall predicts the operational performance significantly well.

Table 4.21: Regression Analysis between competitive advantage and organizational performance **Coefficients<sup>a</sup>**

| Model |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|-------|------|
|       |            | B                           | Std. Error | Beta                      |       |      |
| 2     | (Constant) | 5.993                       | 1.991      |                           | 3.010 | .003 |
|       | CAP        | .367                        | .106       | .268                      | 3.454 | .001 |
|       | CAQ        | .521                        | .139       | .316                      | 3.739 | .000 |
|       | CAD        | -.059                       | .113       | -.045                     | -.519 | .605 |
|       | CAT        | .422                        | .131       | .271                      | 3.218 | .002 |

a. Dependent Variable: OP (Organization Performance)

Where: competitive advantage Price/cost = CAP, competitive advantage quality = CAQ, competitive advantage delivery dependability = CAD and competitive advantage time to market = CAT.

***H2a: competitive advantage Price/cost has significant positive effect organizational Performance***

From the given table 4.21 unstandardized coefficients and p-value for Price/cost on organizational performance were 0.367 and 0.001 respectively; these values indicate that Price/cost had significant influences on organizational performance based on this study. Since the p-value 0.001 which is less than level of coefficient 0.05. From the result we can conclude that the research hypothesis was accepted.

***H2b: competitive advantage quality has significant positive effect on organizational performance***

From the given table 4.21 unstandardized coefficients and p-value for quality on organizational performance were 0.521 and 0.000 respectively; these values show that quality has strong significant influences on organizational performance based on this data. Since the p-value 0.000 which is less than level of coefficient 0.05. This indicates that from the unstandardized coefficient 0.521 as one unit of quality increases with 52.1 percent increase on organizational performance. From the result we can conclude that this research hypothesis was accepted.

***H2c: competitive advantage Delivery dependability has significant positive effect on organizational performance***

From the given table 4.21 unstandardized coefficients and p-value for delivery dependability on organizational performance were -0.056 and 0.656 respectively; these values show that delivery dependability has no any strong significant influences on organizational performance based on this data. Since the p-value 0.656 which is greater than level of coefficient 0.05. From the result we can conclude that this research hypothesis was not accepted.

***H2d: competitive advantage time to market has significant positive effect on Organizational performance***

From the given table 4.21 unstandardized coefficients and p-value for time to market on organizational performance were 0.442 and 0.002 respectively; these values show that time to market has strong significant influences on organizational performance based on this data. Since the p-value 0.004 which is less than level of coefficient 0.05. This indicates that from the unstandardized coefficient 0.442 as one unit of time to market increases with 44.2 percent increase on the organizational performance. From this finding we can conclude that the research hypothesis was accepted. The specifics of each hypothesis testing result can be summarized in Table 4.21 below.

Table: 4.22 Summary Result of Hypotheses Testing

Source: own survey 2019

| <b>Hypotheses</b> | <b>Description</b>   | <b>Result</b> |
|-------------------|--|---------------|
| H1a               | Strategic supplier partnership has significant positive effect on organizational performance               | Not Accepted  |
| H1b               | Customer relationship has significant positive effect on organizational performance                        | Accepted      |
| H1c               | Level of information sharing has significant positive effect on organizational performance                 | Accepted      |
| H1d               | Level of information quality has significant positive effect on organizational performance                 | Accepted      |
| H1e               | Level of Lean practice has significant positive effect on organizational performance                       | Not Accepted  |
| H2a               | Competitive advantage Price/cost has significant positive effect on organizational                         | Accepted      |
| H2b               | H2b: competitive advantage quality has significant positive effect on organizational performance           | Accepted      |
| H2c               | Competitive advantage Delivery dependability has significant positive effect on organizational performance | Not Accepted  |
| H2d               | Competitive advantage time to market has significant positive effect on Organizational performance         | Accepted      |

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATION

In this section, the summary and conclusion of the research findings that have been analyzed and discussed in the previous chapter are briefly presented. Furthermore, based on the findings of this study possible recommendations are made.

#### 5.1 Summary of the Findings

This study is intended to investigate if there is a relationship between SCM practices, competitive advantage and organizational performance of BGI Ethiopia Brewery. The study was conducted by using both primary and secondary data. The primary data for this study were collected through questionnaire and interview with section heads and the Supply Chain Manager. A total of 136 questionnaires were distributed and 133 were collected and used for the analysis.

Accordingly, this paper provides empirical justification for a framework that identifies five key dimensions of SCM practices and describes the relationship among SCM practices, competitive advantage, and organizational performance of BGI Ethiopia. For the purpose of investigating these issues a comprehensive, valid, and reliable instrument for assessing SCM practices and competitive advantage on the organizational performance of BGI Ethiopia was developed. The instrument was tested using rigorous descriptive and inferential statistical tests. This study provides empirical evidence to support conceptual and prescriptive statements in the literature. Based on the results of the study and the following summary is given. Descriptive statistics on the effect of strategic supplier Partnership on the organizational performance of the company shows, BGI Ethiopia suppliers' selection practice was based on quality criteria and the company also involves key suppliers in new product development processes. The company had considered its key suppliers on continuous improvement program. However, it was suggested that the company has to improve the involvement of its suppliers in solving the problems jointly and inclusion of key suppliers in planning and goal-setting activities of the company regularly. Pertaining to Customer relationship the company had frequently interact with customers to set reliability, responsiveness, and other standards. Literatures also suggest that Close customer relationship allows an organization to differentiate its products from the competitors and sustain customer loyalty.

Pertaining to the practice of information sharing, the finding tells us that BGI Ethiopia has been informed its trading partners on the changing needs, and also shared priority information with the suppliers and fully informed them when any issue is arising which affect the company and its strategic suppliers. However, BGI Ethiopia didn't disclose its business planning with its strategic suppliers.

Ensuring the quality of the shared information becomes a critical aspect of effective SCM in any organization. Regarding, the level of information quality of the company the finding of the study attested that, BGI Ethiopia has established complete, adequate and reliable information exchange with the suppliers. However, most respondents do not believe BGI Ethiopia has on time information exchange with its suppliers.

Elimination of waste is a fundamental idea within the lean system. Concerning to internal lean practice of the company, the highest mean value was observed for the practice of continuous quality improvement programs in the company. However, the finding of the study also witnessed that although, BGI Ethiopia provide its product and services whenever needed, the equipment setup time for delivery of services is lower.

In addition to the effect of SCM practice, the effect of competitive advantage of the company on its organizational performance was also analyzed. Accordingly, the finding shows, BGI Ethiopia is offering of competitive price, very good capacity utilization and provision of lower price against the existing competitors. Moreover, on the average the respondents agree that the company offers high quality products to its customer and is being competitive enough based on quality. It is also offering products that are highly reliable and durable. Moreover, the majority of the respondents stated that company deliver the kind of products needed and striving to be the first in the market in introducing new products and delivering such product to market quickly.

However, pertaining to competitive advantages of the study, BGI Ethiopia is expected to carry out its operation with less Production cost. The company is not providing dependable delivery, time to solve customer complaints is not short, it do not deliver customer order on time and also customer order processing time is too long.

Finally, the overall organizational performance of the company, respondents were asked to provide their perception on how well BGI Ethiopia achieves its market-oriented goals as well as its financial goals in the past five years taking in to account. Accordingly, the finding tells us that, most of the respondents perceived that the organization market-oriented goals as well as its financial goals is increasing with the growth of sales, its profit margin on sales, the growth of market share and return on investment. However, on average the respondents understood items that the company achievement is the same as usual in terms of its market-oriented goals as well as its financial goals is with its market share and overall competitive position.

In general, taking the above-mentioned findings in mind it is possible to say that BGI Ethiopia is aligning its supply chain activities to get a competitive advantage in the market.

## **5.2 Conclusion**

The study concluded that as the research sought to study the effect of supply chain management practices on the organization performance, it was observed that all the supply chain management practices studied had a positive effect on the organization's performance. Specifically based on the findings of the study the following conclusions are drawn:

From the findings, we can conclude that the application of Supply Chain Management in BGI Ethiopia has a positive implication on organizational performance of the company, because, the results have confirmed that supply chain practices and organizational performance of the company shows above average performance. In addition, from the questionnaire analysis and data collected from the interview, we can conclude that even though BGI Ethiopia is applying Supply Chain Management, it's hard to say that the company is effective in implementing successful SCM.

This is confirmed that, from the correlation analysis of correlation between SCM practices with the dependent variable (Organizational Performance OP) attested that there is positive and significant correlation with independent variables. Meaning if the companies' strategic supplier relationship, customer relationship, level of information sharing, quality of information sharing and lean practices increase the operational performance of organizational performance of the BGI Ethiopia will increase proportionately. In addition, Correlation matrix between construct Competitive advantage of the company and organizational performance shows competitive

advantage quality, delivery dependability, time to market has genuine relationship on Organization Performance of the company.

From Regression Analysis between SCM practices with organization performance of the company three variables i.e. strategic supplier partnership, level of information sharing, and level of information quality had strong significant influence on organizational performance of BGI Ethiopia. Strategic supplier partnership, and lean practice had no significant influences on organizational performance of the case company. Accordingly, the findings of the survey also shows that that 54.2 % of corresponding change in determining organizational performance of BGI Ethiopia is the results Of the change in supply chain practices of all the five predictor variables jointly.

Based on Regression analysis between competitive advantage (CA) and organizational performance (OP) Price/cost, quality, and time to market had strong significant influences on organizational performance. Based on the study delivery dependability had no significant influences on organizational performance of the case company. Moreover, as it was confirmed by the study, 31.8.5% of the factor affecting organization performance of the company is as represented by the four independent variables of competitive advantage.

In addition, the study shows that out of nine hypotheses, six are supported. Customer relationship, level of information sharing, level of information quality from hypothesis1 has significant positive effect on organizational performance and competitive advantage price/cost, quality and time to market from hypothesis2 have significant positive effect on organizational performance.

### **5.3 Recommendation**

BGI Ethiopia is one of the most competent companies in the brewery industry of the country. Managing supply chain in such a tough business environment is most challenging for any company. As of the findings of the study, BGI Ethiopia is doing well in implementing SCM practices and sustaining its competitiveness in the brewery business. However, in each separate variables of the study, the company has drawbacks which are suggested to be corrected. Accordingly, the following recommendation is made as follows:

- Concerning to the company's strategic partnership with its suppliers, BGI Ethiopia must improve the involvement of its suppliers in solving the problems and in the planning



Relationship management technique the SCM should control the fair distribution of assets for the outlets otherwise, there may be a shift of outlets to other company's products.

Hence, Strategic supply chain partnership of BGI Ethiopia will be improved if the company involves suppliers in the continuous improvement programs, on planning and goal setting as well as in new product and service development

- The company is expected to evaluate and determine its customer expectation and encourage its customers to seek pertinent assistance through different mechanisms including conducting need assessment, and market research to maintain good relationship with its potential customers. Because, maintaining close customer relationship allows an organization to differentiate its products from the competitors, and sustain customer loyalty.
- Ensuring the quality of the shared information becomes a critical aspect of effective SCM in any organization. In order to improve level of information quality, BGI Ethiopia has to work more on accurate and timely information exchange with its suppliers. Level of information sharing, and Level of information quality are also vital in the supply chain since information flow is an integral part of SCM and material flow is closely dependent on information flow. Poor information sharing between partners in a supply chain will result in poor coordination that will lead to many serious problems.
- While offering more variety to the end customer's elimination of waste is a fundamental issue within such system. Therefore, in order to improve its lean practice, BGI Ethiopia is suggested to reduce the time required to prepare or refit its products. Moreover, the company has to work more on solving the problem in equipment set up time for delivering service to the customer.
- Moreover, by properly conducting market research and customer need assessment, the company is expected to provide its product and services whenever needed by its customers.

Since SCM is recently established as an independent department. BGI Ethiopia has evaluated the current skill labor deficit within the department, staffing with an experienced and adequate number of experts together with necessary equipment is mandatory to sustain and maintain the established good practice of SCM.

- People are the most important asset in any organization. No matter how educated and experienced employees are they need a continuous training for their improvement in some specific issues they are working around. Because Supply Chain Management is a relative new and complex concept, the company should consider a continuous management and employee Training to utilize their knowledge and performance around the area of SCM.

In addition, by applying the tools and techniques that SCM requires and by properly applying an appropriate management of supply chain processes, it is possible to achieve organizational and operational performance in the company. In doing so BGI Ethiopia is suggested improving its relationship with suppliers from simply buy-sale relationship to a modern supply chain relationship through establishing strategic or long term relationship.

Furthermore, so as to be competitive enough and to sustain in a changing market and remain profitable, BGI Ethiopia would need to re-evaluate their supply chain practices such that they keep pace on the market. IT systems and information sharing will play a major role in creating sustainable processes. Digital Marketing solutions, customer relationship, Supply Chain and strategic supplier Management are a few of the levers to attain their business goals.

#### **5.4 Implication for Future Research and Limitations**

While these results are valuable, the limitation of this study must also be considered. A potential limitations of this research are not considering the responses of the other , supply chain members i.e. suppliers and customer, only taking the operational performance as the performance measures, and not considering the other contextual factors i.e. type of industry, firm size and supply chain length. In addition, the data for the study only consisted of responses from single respondents in an organization which may be a cause for possible response bias. Therefore, the results must be interpreted taking this limitation into account. Future studies can examine the proposed relationships by bringing some contextual variables and additional dimensions into the model in order to fill the observed gap

The study confined itself to BGI Ethiopia Plc, however the competition in the whole brewery industry is becoming intense and this necessitates for further study regarding the issue of supply chain management and competitiveness in the beer industry. As this study focus on showing relationship between SCM practices and performance at organizational level, future research can study SCM issues at the supply chain level.

It would also be much better if it was used to participate the respondents from pairs of organizations at two ends of supply chains. By comparing different view of SCM practices from organizations across the supply chain, it is possible to identify the strength and weakness of the supply chain and the best common SCM practice across the supply chain.

It would be significant to investigate how SCM practice differs across organization size. In addition, it would also be interesting to examine the impact of supply chain structure (supply chain length, organization's position in the supply chain, channel structure, and so on) on SCM practice and operational as well as organizational performance. Hence, future studies can also examine the proposed relationships by bringing some contextual variables into the model, such as organizational size and supply chain structure.

Since, the concept of SCM is complex and involves a network of companies in the effort of

Producing and delivering a final product, it is difficult to cover entire domain just in one study. Future research can expand the domain of SCM practice by considering additional dimensions such as geographical proximity, cross-functional coordination, logistics integration, and agreed supply chain leadership, which have been ignored from this study.

However, by validating a multi-dimensional operational measure of the construct of SCM practice together with competitiveness of the company and by demonstrating its efficacy with organizational performance, the present study provides important insights for BGI Ethiopia management. It can be used as the useful tool for evaluating the strength and weakness of the current SCM practices of the organization. This study also provides empirical evidence to support conceptual and prescriptive statements in the literature regarding the impact of SCM practices.

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# ANNEXES

## Annexes I

### JIMMA UNIVERSITY ABH CAMPUS COLLEGE OF BUSINESS AND ECONOMICS DEPARTMENT OF MANAGEMENT QUESTIONNAIRE

Dear respondent this survey is conducted as my research project, on **The Effect of Supply Chain Management on Organizational Performance** which shall be submitted as part of fulfillment of the Master of Business Administration degree from the Jimma university ABH campus Graduate School of Business and economics. Please try to answer all the questions as honestly and accurately as possible. The survey will take less than 15 minutes. Your participation is very much appreciated.

#### General Instructions

There is no need of writing your name

Where answer options are available please tick ( ) in the appropriate box for part **I** and Circle for your response to each statements of part **II**.

#### Contact Address

Should you have any questions or comments regarding this questionnaire, do not hesitate to contact me at (Mobile: 0939779104 or [e-mail: blennesfin49@gmail.com](mailto:blennesfin49@gmail.com))

*Thank you for scarifying your precious time in advance*

#### **PART I: Demographic Information**

**Gender:** Male  Female

**Age:** Below 20 years  20-25 years  26-30 years   
31-35 years  36-40 years  above 40 years

##### **1) Educational Qualification:**

Grade 10 completed  Grade 12 completed  Certificate

College diploma  first Degree  Second Degree and above

**2) Job title** Managerial position  Section head

Non managerial position  other

**3) Years stayed at the organization:** Under 2 years  2- 5 years

6-10 years  over 10 years

**4) Your department/work unit** \_\_\_\_\_

**Part II: Instruments for supply chain management practices, operational performance and organizational performance**

**Section one: supply chain management practices**

About SCM practices of your firm, please circle the appropriate number to indicate the extent to which you agree or disagree with each statement.

| <b>Strategic supplier partnership:</b> |   | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
|--|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| 1.                                     | We consider quality as our number one criterion in selecting suppliers.                               |                          |                 |                |              |                       |
| 2.                                     | We regularly solve problems jointly with our suppliers.   |                          |                 |                |              |                       |
| 3.                                     | We have been helping our suppliers to improve their product quality.                                  |                          |                 |                |              |                       |
| 4.                                     | We have continuous improvement programs that include our key suppliers.                               |                          |                 |                |              |                       |
| 5.                                     | We include our key suppliers in our planning and goal- setting activities.                            |                          |                 |                |              |                       |
| 6.                                     | We actively involve our key suppliers in new product development processes.                           |                          |                 |                |              |                       |
| <b>Customer relationship:</b>          |   | <b>Strongly disagree</b> | <b>disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
|  | We frequently interact with customers to set reliability, Responsiveness, and other standards for us. |                          |                 |                |              |                       |
| 2                                      | We frequently measure and evaluate customer   |                          |                 |                |              |                       |
| 3                                      | We frequently determine future customer expectations  |                          |                 |                |              |                       |
| 4                                      | We facilitate customers' ability to seek assistance from  |                          |                 |                |              |                       |
| 5                                      | We periodically evaluate the importance of our relationship with our customers.                       |                          |                 |                |              |                       |

| <b>Level of information sharing:</b> |   | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
|--------------------------------------|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| 1                                    | We inform trading partners in advance of changing needs.  |                          |                 |                |              |                       |
| 2                                    | Our trading partners share proprietary information with us.   |                          |                 |                |              |                       |
| 3                                    | Our trading partners keep us fully informed about issues that affect our business.                              |                          |                 |                |              |                       |
| 4                                    | Our trading partners share business knowledge of core business processes with us                                |                          |                 |                |              |                       |
| 5                                    | We and our trading partners exchange information that helps Establishment of business planning.                 |                          |                 |                |              |                       |
| 6                                    | Exchange of information with our partners (formal or informally) is frequent.                                   |                          |                 |                |              |                       |
| 7                                    | We and our trading partners keep each other informed about events or changes that may affect the other partners |                          |                 |                |              |                       |
| <b>Level of information quality:</b> |   | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
| 1                                    | Information exchange between our trading partners and us is timely.   | 1                        | 2               | 3              | 4            | 5                     |
| 2                                    | Information exchange between our trading partners and us is accurate.   | 1                        | 2               | 3              | 4            | 5                     |
| 3                                    | Information exchange between our trading partners and us is complete.   | 1                        | 2               | 3              | 4            | 5                     |
| 4                                    | Information exchange between our trading partners and us is adequate  | 1                        | 2               | 3              | 4            | 5                     |
| 5                                    | Information exchange between our trading partners and us is reliable.   | 1                        | 2               | 3              | 4            | 5                     |
| <b>Internal lean practices:</b>      |   | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 1                                    | Our firm reduces process set-up time (time required to prepare or refit equipment/workstation for production)   | 1                        | 2               | 3              | 4            | 5                     |
| 2                                    | Our firm has continuous quality improvement programs  | 1                        | 2               | 3              | 4            | 5                     |
| 3                                    | Our firm produces only what is demanded by customers when needed (e.g. JIT)                                     | 1                        | 2               | 3              | 4            | 5                     |



**Section two: Competitive Advantage**

About competitive advantage of your firm, please circle the appropriate number to indicate the extent to which you agree or disagree with each statement

| <b>Price/cost:</b>             |   | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
|--------------------------------|---|--------------------------|-----------------|----------------|--------------|-----------------------|
| 1                              | We can offer prices as low or lower than our    | 1                        | 2               | 3              | 4            | 5                     |
| 2                              | Our capacity utilization is very good.          | 1                        | 2               | 3              | 4            | 5                     |
| 3                              | Our Inventory turnover is high.                 | 1                        | 2               | 3              | 4            | 5                     |
| 4                              | We run operation with less Production cost.     | 1                        | 2               | 3              | 4            | 5                     |
| 5                              | We offer competitive prices                     | 1                        | 2               | 3              | 4            | 5                     |
| <b>Quality:</b>                |   | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
| 1                              | We can compete based on quality.                | 1                        | 2               | 3              | 4            | 5                     |
| 2                              | We offer products that are highly reliable.     | 1                        | 2               | 3              | 4            | 5                     |
| 3                              | We offer products that are very durable.        | 1                        | 2               | 3              | 4            | 5                     |
| 4                              | We offer high quality products to our customer. | 1                        | 2               | 3              | 4            | 5                     |
| <b>Delivery dependability:</b> |   | <b>Strongly disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly agree</b> |
| 1                              | We deliver the kind of products needed.         | 1                        | 2               | 3              | 4            | 5                     |
| 2                              | We deliver customer order on time.              | 1                        | 2               | 3              | 4            | 5                     |
| 3                              | We provide dependable delivery.                 | 1                        | 2               | 3              | 4            | 5                     |
| 4                              | Time to solve customer complaints is short.     | 1                        | 2               | 3              | 4            | 5                     |
| 5                              | Customer order processing time is short.        | 1                        | 2               | 3              | 4            | 5                     |
| <b>Time to market</b>          |   | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 1                              | We deliver product to market quickly.           | 1                        | 2               | 3              | 4            | 5                     |
| 2                              | We have time-to-market lower than industry      | 1                        | 2               | 3              | 4            | 5                     |
| 3                              | We are first in the market in introducing new   | 1                        | 2               | 3              | 4            | 5                     |
| 4                              | We have fast product development.               | 1                        | 2               | 3              | 4            | 5                     |

**Section three: organizational performance**

Regarding organizational performance, please circle appropriate number which best indicates your firm's overall performance.

| <b>Organizational performance:</b><br>How well an organization achieves its market-oriented goals as well as its financial goals in the past five years? |                                 |   |   |   |   |   |
|--|---------------------------------|---|---|---|---|---|
| 1  | Market share.                   | 1 | 2 | 3 | 4 | 5 |
| 2  | Return on investment.           | 1 | 2 | 3 | 4 | 5 |
| 3  | The growth of market share.     | 1 | 2 | 3 | 4 | 5 |
| 4  | The growth of sales.            | 1 | 2 | 3 | 4 | 5 |
| 5  | Growth in return on investment. | 1 | 2 | 3 | 4 | 5 |
| 6  | Profit margin on sales.         | 1 | 2 | 3 | 4 | 5 |
| 7  | Overall competitive position.   | 1 | 2 | 3 | 4 | 5 |

If any comment you will come:

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**Thank you again very much!!!**

## Appendix II

### Personal Interview Guide

**Date:** \_\_\_\_\_

**Department:** \_\_\_\_\_

**Interviewee:** \_\_\_\_\_

**Position/Title:** \_\_\_\_\_

1. What are the major challenges that the company face in implementing a quality Supply Chain Management?
2. Do you think the application of the Supply chain management enhances the organizational performance of the company?
3. How is the relationship of the SCM department with its supply chain networks?
4. What are the major competitive advantages of the company?
5. What are the major challenges the SCM is facing to achieve competitiveness?

