LOGISTICS EFFECTS ON THE PRODUCTIVITY OF THE ZIMBABWEAN FOOD AND BEVERAGES SECTOR (A CASE STUDY OF DELTA BEVERAGES LAGERS DIVISION)

BY

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The undersigned certify that they have read and recommended to Bindura University of Science Education for acceptance, a project titled “Logistics effects on the productivity of the Zimbabwean food and beverages sector a case study of delta beverages lagers division, submitted by Esley Siyanganga in partial fulfilment of the requirements for the Master of Science degree in purchasing and supply.

........................................... ......................................../........................................
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Dedication

I would like to dedicate this research to my beloved husband, Never, my son Daniel and my daughter Aviela Goni. Thank you to my supervisor who guided me in this process.

I appreciate your love and support and encouragement. I am truly thankful, may God bless you. If it was not for their love, undying support and encouragement in pursuit of this degree I would not have reached where I am today.
Abstract

This study seeks to understand the Logistics effects on the productivity of the Zimbabwean food and beverages sector. The study had three objectives, to establish logistic practices used by food and beverages organizations at Delta Lagers, to establish the challenges faced by Delta Lagers in adopting logistics practices, to examine the effects of logistics practices on productivity of food and beverages organizations and to suggest recommendations on how to improve logistics practices. Data was collected using questionnaires and interviews, which was analysed using the SPSS system version 16. Using a sample size of 44 respondents, Descriptive statistics were used to analyse the objectives of the research. The research showed that Delta Corporation, Lagers Division adopted logistics practices by using reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice. Further to that, it was clear that there is a positive effect between logistics practices and productivity of the food and beverage industry. The researcher recommended that food and beverage organisations should use reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice to enhance the productivity of food and beverage organisations. The researcher focused on the food and beverage industry, therefore the researcher recommended that the same study could be carried-out in other industries in Zimbabwe.
Acknowledgements

I would like to extend my sincere and heartfelt obligation towards all the people who have contributed towards the completion of this dissertation. Without their guidance, help, cooperation and encouragement, I would not have made it.

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I extend my gratitude to my lecturers as well as members of the economics department for their guidance and support for the completion of this project.

My gratitude also goes to my parents and members of my family who have always supported me economically and spiritually.

Any omission does not mean I am not grateful.

Thank you

Esley Siyanganga
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CHAPTER 1

INTRODUCTION

1.1 Introduction
This chapter will provide a description of background on logistics on Food and Beverages Sector productivity and how it contributes to the success of every organisation and also highlighting different items which are purchased. This chapter also includes statement of the problem, significance of the study, the objectives of the research and questions that will be answered in the study, delimitations and limitations that the researcher encountered during the research.

1.2 Background of the study
In the today’s environment, a number of Food and Beverages organizations has increased significantly due to changes in consumer preferences.

Food supplies that flow through the supply chain consist of items purchased from suppliers and donations from individuals and other organisations. Logistics has a major role on the organisational success. The success of Food and beverages organisations are often dependent on the efficiency and effectiveness of logistic. Many organizations continue to underestimate the importance of logistics. Improved logistics performance actually results to improved organizational productivity

Delta corporation is principally an integrated beverage company with a diverse portfolio of local and international brands in larger beer, traditional beer, coca cola franchised sparkling and alternative nonalcoholic beverages. More than 70 % of the inputs and services of the company are sourced from the market. The company has an internal fleet comprising over 200 prime mover vehicles and in excess of 400 trailers, primarily for secondary distribution, which allows the company to deliver its products directly to retail and wholesale customers.
There are challenges relating to poor road conditions, road congestion in urban centers and generally poor driving conditions in the country.

Logistics is a process of planning, implementing and controlling the efficient, cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption, (Thomas and Kopczak, 2005). Delta Lagers logistics involves coordinating and controlling movement of raw materials as well as finished goods from the suppliers to the district where projects are being conducted and also ensure that vehicles are allocated to everyone and there is co-ordination of trips.

Logistics also involves planning and controlling the movement of commodities such as sorghum, malt and sugar from the suppliers to the plant for the production of beer. The organization ensures that it efficiently manage the inflow and outflow of the raw materials, transport the finished product to the distribution facilities. The performance of the food and beverages industries is measured on the ability to meet the target and how resources are used.

1.3 Statement of the problem
Food and beverages organisations have been very proactive in meeting consumer needs. Logistics practices have become important and central in these organizations from the realization of the role they play in the overall performance of the organizations. Hence organizations need to embrace all the logistics practices that will improve their performance. Organisations are experiencing production delays due to delays of equipment needed for the production to effectively take place. The study investigates on the impact of logistics practices at Delta Lagers productivity.

1.4 Research Objectives
The research is guided by the following objectives:

- To establish logistic practices used by food and beverages organizations at Delta Lagers.
- To establish the challenges faced by Delta Lagers in adopting logistics practices.
- To examine the effects of logistics practices on productivity of food and beverages organizations.
- To suggest recommendations on how to improve logistics practices.
1.5 Research Questions
The research questions for the study are:

i. What are the logistics practices used by Delta Lagers?
ii. What are the challenges faced by Delta Lagers in the adoption of logistics practices?
iii. What is the effect of logistics practices on productivity of food and beverages organisations?
iv. What recommendations that can be proposed to improve logistics practices?

1.6 Significance of the study
Specifically the finding of this study is expected to benefit the following stakeholders:

1.6.1 To Bindura University of Science Education
The research is going to increase the database of Bindura University of Science Education. The research will increase reference material to Bindura University of Science Education knowledge board. The study can also provide a guide line to other scholars who intent to carry out more research of the same area after reading my project.

1.6.2 Food and Beverages Industry
The study will help food and beverages organisations logistics managers to assess and analyse different logistics practices that can be adopted so as to achieve organizational objectives. It will assist the food and beverages organisations recognise the importance of logistics. The proposed empirical research will also focus on how logistics strategies have contributed to the success of project. Also the suppliers will understand logistics challenges facing food and beverages sector and together with the organizations work at adopting measures to mitigate the challenges.

1.6.3 To the Researcher
This research will benefit the researcher by improving the researcher’s skills in carrying out researches in future studies. It is also a requirement for the attainment of a Masters Degree in Purchasing and Supply Chain Management. The researchers will acquire great understanding of impact of logistics to gain knowledge of the logistics challenges faced by Food and Beverages organisations. The research will also increase the level of intellectual capability and expand the level of decision making with reference to logistics.
1.7 Assumptions

The study is based on the following assumptions:

- The respondents are available to give required information without fear.
- The respondents have knowledge on the impact of logistics on organizational productivity.
- That researcher will gain access to information which is needed for the study.
- The organisation being used will grant the researcher authority to access documents needed for the purposes of the research and the information, would be current, accurate and without errors or omissions.

1.8 Delimitations

The research will focus on Delta Lagers, a beverage organisation and that is not comprehensive enough as different food and beverages organisations operate in unique ways. The research is limited to Harare plant. This means the study is confined with specified geographical boundary. The scope of the study is limited to the analysis into the impact of logistics practices in food and beverages organisations at Delta Lagers.

1.9 Limitations

The main limitations of the research were:

- Accessing the relevant respondents to the study, as they were ever busy with their day-to-day duties.
- The respondents were hesitant to give information because of the existence of confidentiality issues.
- The researcher utilizes public holidays, after work hours and weekends to overcome the restraint of time to carry out the research

1.10 Definition of Terms

- Logistics
  Logistics is the process of planning, implementing and controlling the efficient and cost-effective flow of goods and materials as well as related information, from point of origin to point of consumption for the purpose of meeting the ultimate requirements of the end user.
Productivity
Productivity refers to the rate of output per unit of labor, capital or equipment.

Food
Food refers to any nourishing substance that is eaten to sustain life, provide energy and promote growth.

Beverage
Beverage is explained as a liquid that can quench the thirst. In this case, drinks and beer are the beverages.

1.11 Structure of the Research
This dissertation is comprised of five chapters with chapter one introducing the problem and topic to be researched. Chapter two will provide relevant literature on what other researchers have established in the field of logistics. After that, chapter three will provide a detailed account on how the relevant data will be gathered for the research while chapter four will do the analysis and presentation of the data. To conclude the research, chapter five will give generalised conclusions and recommendations for further studies.

1.12 Chapter Summary
This chapter explains the background of the study, the statement of the problem being studied. Other aspects which were discussed in this chapter are purpose of the study, research questions, significance of the study, assumptions, delimitations of the study, limitations and definition of terms. The next chapter focuses on the review of literature which is important to the current area of study. Chapter three looks at the methodology of the research. Chapter four contains the presentation, analysis and discussion of the data collected from primary sources. Chapter five contains conclusion made, recommendations and suggestions for more research are made based on facts collected during the research.
CHAPTER II

LITERATURE REVIEW

2.0 Introduction
The section is concerned with opinions, views and comments from other researchers in the area of study. The objective is to put together knowledge and understanding of the topic through determining what experts say about the logistics practices on organizational productivity. The chapter addresses the conceptual and theoretical framework related to the study. The chapter will review logistics practices practiced by Food and Beverages organisations. Finally the chapter will also review the relationship between logistics function and organizational productivity, and challenges that Food and Beverages organisations face when implementing logistics practices.

2.1 The Role of Logistics
Logistics management is very important in the success of a company’s operations and has a direct impact on its bottom line. Moreover, logistics practices have an important role in customer satisfaction and this is more important product costs that are low. In industries, logistics has a role of optimising the existing production and distribution processes based on the same resources through management techniques so as to promote the efficiency and competitiveness of enterprises. Logistics activities incorporate the whole supply chain that is why they are important in increasing supply chain’s performance. The aim of logistics process is to combine and organize every activity involved in acquiring, converting and distributing goods from raw materials to finished goods till the final customers so as to achieve customer service objectives in an efficient cost effective manner (Bureau of Transport and Regional Economics, 2001).
2.2 The Challenges in the Adoption of Logistics Practices

Lack of effective information technology necessary to support the management of return flows is a challenge in the adoption of logistics practices. Information technology lays in the very base of the logistics, constituting the main capability for effective information flow, transparency among the partner organizations and through its integrative ability it could be incorporated into the logistics framework (Daugherty, Myers and Richey, 2002). Lack of successful logistics practices will create performance measurement systems that provide data as to whether the designed logistics practices is performing up to the expectations (Daugherty et al, 2002). Lack of education at both the enterprise and personnel level is a challenge in the adoption of logistics practices. The cost of logistics practices is higher than the cost of forward logistics A main barrier seen in the implementation of the logistics practices is the resistance to change.

2.3 Conceptual Framework

According to Munyimi and Chari, (2018) defined a conceptual framework as an arrangement of concepts and or theories which are put together as a map for the study and it shows the relationship of research variables. The study is guided by conceptual framework to examine the logistics practices which can be used by the organization. Concepts were used to explain the logistics activities, the relationship between logistics and productivity and the challenges hindering the adoption of logistics practices.

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**Figure 2.1 Conceptual framework**

Source: author (2019)
2.4 Theoretical Literature

According to Hawking (1996) theories are analytical tools that can be used in understanding, explaining, and making predictions in given area under discussion. Various models and theories have been formulated to explain on organizational productivity and how organizations can enhance productivity. The theories also elaborate further on how organizations can influence logistics practices to an organization performance. The study is based on three theories which are network theory and fugate logistic performance model and theory of constraint. These models or theories play an important role in the study on impact practices on organizational performance.

2.4.1 Network theory

A good relationship with suppliers results in increased performance for the organisation, for a better performance, the organizational suppliers should create a strong relationship with its suppliers so as to support the supply chain network. With the network theory, the firm’s continuous interaction with other players becomes an important factor in the development of new resources (Haakansson and Ford, 2002). Buyer-seller relationships helps organization to reduce problems which may be associated with delays and quality issues and that means a better service for the buyer.

Firms within a network are linked to each other hence information sharing and the level of information flow is high among the parties. Through information flow, the procuring department will know the types and quality of goods which suppliers have and the logistics department will have information on the delivery of products. Therefore organizations will have to evaluate its supplier on supplier data base before they build the relationship.

Miles, et al (2006) states that in order for the organization to hold a strong collaboration with other firms or suppliers, it should start collaborating internally in an effective manner. Internal collaboration takes place when internal members such as procurement or logistics personnel and program personnel share information concerning product and delivery. Thus, firms located in the centre of a network could be considered to comprise a strong internal collaborative power inside their own business unit (Miles, et al, 2006, p, 7).
2.4.2 Theory of constraint

Theory of constraint (TOC) was developed by Goldratt in 1990 explaining limitations on organizational performance. Constraints are either internal or external and they prevent organizations and projects from maximizing performance and reaching their goals. The TOC model basically stated that every system, practice or project in an organization has at least one constraint that limits its constraints (Simatupang, 2004). Constraint can be in the form of human resources, supplies, information, policies and equipment.

Procurement and logistics performance depend on the efforts of the core elements which are transportation, inventory, warehouse, suppliers and information flow. Hence constraints in this case can be in form of information disruption, material delays emanating from suppliers. The organization can put enough lead time to the participants or suppliers to protect the level of delivery times. Simatupang, et al., (2004) stated that theory of constraint thinking process can be applied to identify problems in the apparel logistics management. Hence it is therefore useful to use TOC in measuring the influence of transport management, inventory management, warehouse management and buyer-supplier relationship on the performance of the organization.

2.4.3 Fugate Logistic Performance Model

The model formulated by Fugate et al. (2010). The model emphasizes on the dimensions of efficiency, effectiveness and differentiation of logistics activities as determinants of logistics performance. Improved logistics practices add value to an organization as it leads to improved organizational performance.

Fugate et al. (2010) examined that firms that choose to combine efficiency and effectiveness achieve better logistics performance. In this study, logistics elements are inventory management, transport management and warehouse management. Improved transport management (both for humanitarian and commodities) and inventory management techniques will reduce risk associated with delays. Warehouse management can reduce costs associated with theft, pilferage, breakages. This can improve organizational performance as the project can be completed within scheduled time if not affected by other factors such as unforeseen events and environmental factors. Once the logistics activities or practices are managed well, it will lead to efficiency and effectiveness of operations and better service delivery.
2.5 Logistics Practices

This section reviews the logistics strategies in theory which were used in this research and will discuss the next logistics practices reverse logistics, lean logistics practice, last mile logistics practices and maritime logistics practice.

2.5.1 Reverse Logistics

The demand of reverse logistics is bringing out a new market for the third-party logistics industries. Globalisation of markets and policies for environment protection are the two main reasons why reverse logistics has risen. A successful reverse logistics could help to increase the service level of companies and reduce the costs of producing processes (Hakansson and Persson, 2004). Many companies want to build their reverse logistics system but this needs professional knowledge in logistics management.
2.5.2 Lean logistics

As mentioned, companies want to hold as less inventory as possible. For the most part, the longer the goods stay in transit or in storage, the more value is lost. The only way to start implementing lean logistics is to use data obtained from a TMS. To apply lean logistics, one needs to be efficient with inventory management (Berggren and Bengtsson, 2004). When inventory spends less time in the warehouse, and there’s almost none to spare, it must be quickly transported where it needs to be, when it needs to be there. Over 50% of those who adopt lean logistics practices report immediate improvement, and it’s easy to notice why. With this level of information, one will know the exact position of the goods, where they should be, the employees that are needed, also when and where the shipments are to be done.

2.5.3 Last mile logistics

Last mile logistics, this is when where a company makes contact with a customer (Bolumole, 2001). Many shipments are stalled in last mile logistics because of its complexity. Most companies are not concerned about the shorter routes of the trip, they are only concerned on long routes because they are easier to manage than the final leg of the trip. Last mile logistics accounts for 28% of a company’s transportation costs. It is very complex to manage and most companies do a poor job managing it. Last mile logistics is difficult to navigate. Whether you outsource this to a 3PL or try to tough it out yourself, you will need a plan, the right technology, useful data and a customer-centric mind set (Ballis, 2006).

2.5.4 Maritime logistics

Maritime industry plays an important role in international freight. It provides a cheap and high carrying capacity conveyance for consumers. Therefore, it has a very important role in the transportation of goods, such as crude oil and grains. It has a disadvantage that its transport time should be longer and its schedule is strongly affected by the weather factors. To reduce costs and increase competitiveness, current maritime logistics firms tend to use large scaled ships and cooperative operation techniques. Moreover, maritime customers are only concerned about service quality than the price of delivery. Thus, it is of importance to come up with logistics concept that are new so as to increase service satisfaction, e.g. real-time information, accurate time windows and goods tracking systems. The operation of maritime transport industry can be divided into three main types: (1) Liner Shipping: The business is based on the same ships, routes, price, and regular voyages. (2) Tramp Shipping: This is characterised by irregular transport price, unsteady transport routes, and schedule. It usually delivers particular goods, such as Dry Bulk Cargo and crude oil. (3) Industry Shipping: The main purpose is to
ensure the supply of raw materials. This sometimes needs specialized containers, such as the high-pressure containers for natural gas.

2.6 Empirical Literature Review
This section covers the empirical study which constitutes different researches which were conducted from different countries around the world. The studies were focused on the effects of logistics practices.

2.6.1 To establish logistic practices used by food and beverages organizations at Delta Lagers

Dekker (2014) wrote a research about logistics management best practices for customer service. The research is good to be used in this project to establish the logistics best practices. The methods used by the writer are reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice which simulates the customer service. However, the research did not research the role of logistics practices on productivity of the food and beverage industry.

Lu and Gelman (2013) carried out a research on forms of logistics operation. The research was carried out in the United States of America. The research discussed that forms of logistics operations can be divided into four main activities reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice. The researchers concluded that the forms of logistics affects and reduce logistics costs positively.

2.6.2 The challenges faced in the adoption of logistics practices

Eriksson, (2009) conducted a research on the barriers to logistics implementation. The purpose of the research was to identify the barriers faced in the adoption of logistics practices. However the research showed that lack of information and technological systems, lack of appropriate performance metrics, lack of training and education, financial constraints and resistance to change to logistics practices. The research concluded by giving along with the opportunities, the barriers in front of the establishment of a logistics systems and the contribution of logistics in overcoming these challenges are were discussed.

2.6.3 The effects of logistics practices on productivity of food and beverages organizations

Kaynak, Kocoglu, and Akgun (2013) conducted a research on the role of reverse logistics in the concept of logistics centres. The purpose of this research is to identify the benefits of reverse
logistics. The findings indicated that the consolidation of reverse logistics functions under the organized structure would provide a wide range of opportunities and benefits for the organizations. The five major aspects endowed by the construction of a logistics village and the inclusion of reverse logistics activities in this central organizing, operational and administrative hub are; coordination and cooperation, centralization, consolidation, 3rd party reverse logistics collaboration and integration.

A survey conducted by Aberdeen Group, (2008) shows the changing role of the logistics practices in the supply chain. They evaluated their lean logistics practice and found out that they play positive roles such as on-time delivery/shipment and inventory accuracy. Survey also shows the reason to choose lean logistics practice on the basis of their roles in supply chain e.g. data quality, on-time delivery, accuracy in inventory handling, exchange of information electronically etc. the results concluded that there is a positive role between lean logistics practices and productivity of the food and beverage industry.

Tseng, Yue and Taylor (2015) researched on the role of transportation in logistics chain. The research was conducted in Australia. The objective of the research was to define the role of last mile logistics in logistics for the reference of further improvement. The researchers found that the operation of last mile logistics determines the efficiency of moving products and have a positive role on organisational performance. Hence it is essential to adopt last mile logistics practices.

Sheikh and Rana (2014) investigated the role of logistics service providers in supply chain performance management in Pakistan. The results of the research shows that logistics practices can also enhance the supply chain activity through the introduction and induction of cross docking facilities. The logistics practices were measured by reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice. The research concludes that these logistics practices cannot only get rid unnecessary stock of inventories but can also increase the quality of customer service through distribution network redesigning.

2.7 Research gap
The above literature review is evidence that the studies on logistics practices and its impact on organizational productivity has been done. The previous studies have focused on the impact of logistics on organizations which is not always the case for every organization as there are which are profit oriented. Hence the management and the impact may differ between organization
types. The previous studies do not overlook the challenges that could actual hinder the implementation of logistics practices in food and beverages sector.

It is hence logical to find out the impact of logistics practices on food and beverages sector productivity. The studies have assumed that if managed well, logistics and procurement practices create a positive relationship in the organization. This study focuses on the impact of logistics practices in the Food and Beverages organization productivity.

2.8 Chapter summary

In this chapter the researcher discussed on the logistics practices that can be implemented by the Food and Beverages organisations and their effect on organizational productivity. It also revealed on the relationship between logistics and productivity of the organisation and challenges that they face when adopting logistics practices. The study seek to examine the relationship between logistics functions and the organization productivity which hence will be measured on efficiency of management, quality and delivery performance. Chapter 3 will discuss the methodology of the study which deals with methods in collecting data from the field.
CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction
This chapter concentrates on the research methodology employed in the study. It gives an adequate explanation of the research design used by the researcher. It also gives a framework of the population and sampling techniques applied within the study. This includes the steps that were taken to insure that there is validity and authenticity on the research findings. The instruments that were used to collect data and presentation process were also discussed.

3.2 Research Design
The researcher adopted a quantitative research in the form of descriptive research design. The research design was based on pilot study so as to provide actual information from Delta Corporation Zimbabwe. Descriptive research design was used because it offered an opportunity for the researcher to view perceptions, attitudes and behaviors of employees pertaining to the logistics effects on the productivity of the Zimbabwean food and beverages sector in Zimbabwe. For instance in this research it was important to establish the respondent’s perceptions or views on the logistics effects on the productivity of the Zimbabwean food and beverages sector on Delta Corporation Zimbabwe.

3.3 Descriptive research
Descriptive research design was used to obtain general overview of the subject and it shows the relationship between two variables. In this study, it was used to show logistics effects on the productivity of the Zimbabwean food and beverages sector. Descriptive research method bridges the gap between qualitative and quantitative research. However when one researcher
does not understand its purpose, it might be misused. Descriptive research design requires an in-depth understanding.

3.3.1 Case study
The researcher adopted a descriptive research design in form of a case study. A case study is an intensive investigation into the aspects of an individual or small group of the population, (Marimba and Moyo 1987). The researcher gets a deeper insight about the individual or sample of people being investigated. Case study is a useful way of obtaining descriptive and explanatory information (Wageenar 2002). In this regard, the study therefore focused on Delta Corporation Zimbabwe Limited, Lagers Division.

3.4 Population and Sample
The targeted population was comprised of people working at Delta Corporation Zimbabwe, Lagers Division and its suppliers which where forty five members. A sample of forty four respondents was chosen based on the department which they work. Table 3.1 shows the population and the sample sizes.

Table 3.1 Population and Sample

<table>
<thead>
<tr>
<th>Category</th>
<th>Population</th>
<th>Sample</th>
<th>Percentage representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>5</td>
<td>5</td>
<td>11%</td>
</tr>
<tr>
<td>Employees</td>
<td>30</td>
<td>29</td>
<td>64%</td>
</tr>
<tr>
<td>Suppliers</td>
<td>10</td>
<td>10</td>
<td>22%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>44</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Primary data (2019)

As shown in table 3.1, respondent were drawn from various categories, namely top level management, procurement employees and Delta suppliers. This inclusive approach ensures that there was little bias in terms of responses since the views of these categories varies.
3.5 Sampling
According to Krejcie and Morgan (1970) formula, the sample size for this study was forty four as already mentioned. The researcher used a sample as the entire Delta Corporation Zimbabwe, Lagers Division staff and suppliers as they are the staff members who are involved with the day to day operations of the organization. The respondents were characterized by top level management, procurement staff and suppliers.

3.6 Sampling technique
The researcher adopted purposive sampling technique as a method to gather data and the reasons why the researcher chose that particular technique were explained. Sample technique is a method that was used to select a part of the population of the respondents. The study targeted the supply chain department of Delta Corporation; Lagers Division since they are the people involved with the purchasing of organizational requirements and is able to provide information on procurement activities than other staff members from different functions.

3.7 Research Instruments
According to Wegner (2002) the instrument for data collection provide the researcher with information on how to obtain necessary data on which results and conclusions can be obtained at the end of the research project. This study used questionnaires and interviews to collect data.

3.7.1 Questionnaires
The researcher made use of questionnaires as instruments of gathering information from research respondents. The questionnaire was designed in three sections which were categorized according to the study objectives and the research questions of the study. The first section has questions which are meant to gather demographic data of respondents. The second section of the questionnaire has questions which seek to establish logistic practices used by food and beverages organizations at Delta Lagers, the third section seeks to examine the relationship between logistics functions and productivity of food and beverages organizations and lastly the third section of the questionnaire was meant to determine the challenges faced by Delta Lagers in adopting logistics practices.

The questionnaires used for the study was containing structured questions. Each section was developed to address specific objectives or research questions. The questions asked in the questionnaire made it easy for the researcher to gather, analyse and also even to save time and costs. The respondents were given enough time to respond to the questions, so as to ensure that they give a fair view of their opinions towards the questions asked. The researcher also seeks
permission to collect data from the top management, so as to ensure that production activities are not being affected and also to ensure that, confidential information is safeguarded.

3.7.2 Interviews
Interviews were used as a complimentary tool to the questionnaires as other people can easily express themselves on face to face interviews. An interview schedule refers to a form of questionnaires which is generally filled in by the researcher or the interviewer himself. The researcher sits with the respondent face to face and fills in the form, Sharma et al (2009). The same authors went further to explain that because of the insistence on a specific form, this method is also called a formal type interview. Saunders et al (2012), refer to it as the structured interview. The researcher conducted interviews with customers in the companies under study and telephone interviews with other customers whom the researcher could not interview face to face.

The researcher used interviews because they are easy to administer and conduct and also that questions could be adjusted were necessary to enable respondents to have a better understanding of what is required. Personal interviews allowed the researcher to capture nonverbal cues which is impossible when using questionnaires and this improved the researcher’s understanding and also it allowed for the verification of the accuracy of the information provided.

However interviews have their own limitations in that they are costly in terms of time and transport in the case of face to face interviews, they are limited to small samples because of their nature and that they prone to bias as people might withhold confidential information which could be necessary (Saunders et al 2012).

3.8 Data collection procedures
Data collection procedures are steps undertaken by the researcher in administering instrument and the collection of data from the respondents (Brown, 2006). The researcher make appointment with the Head of Supply Chain department through telephone seeking consent to collect data. The data collection took seven days to complete. Forty four questionnaires were hand delivered to the staff respondents and suppliers. The researcher first explained the reason for carrying out the study to the organization. The respondents were given a week to fill in the questionnaires after which the researcher made a follow up on the questionnaires.
3.12 Validity and reliability
Instruments used for the data collection for the study were reliable because a pilot testing had been carried out to correct any ambiguity in the research instruments. The researcher conducted a pilot study using supply chain department employees. Some questions were changed while others were rephrased after the based on the outcome that came out from the pilot study. The results of the pilot test were not used in the data collection. The researcher then distributed new rephrased questioner from the pilot study. Also to ensure validity, the respondents were carefully selected to ensure they are qualified to answer the questions. The population used for the study was from the Supply chain department. Moreover to ensure reliability of the research, existing theories were reviewed from different authors and researchers.

3.13 Data presentation and analysis techniques
Data collected using the questionnaires were analysed using Statistical Package Social Science (SPSS) software version16. The data was then transferred to Microsoft Excel and Microsoft Word where it was presented and analysed. A combination of tables and bar graphs to present the findings on data presentation were used. The data obtained was analysed based on the objectives of the research and the research questions to be answered.

3.14 Summary
This chapter presented the research methodology of the research showing how the data was to be gathered, presented and analyzed. The next chapter looks at how the gathered data was presented and analyzed.
CHAPTER IV

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction
The focus of this chapter is on data presentation, analysis and discussion of the findings. This chapter reports the demographics of the respondents, presentation, analysis and discussion of the findings following question by question and the chapter summary.

4.2 Validity and Reliability Tests
The Cronbach’s Alpha test of research instruments resulted in a reliability coefficient of 0.74 > 0.7, hence the research instruments was reliable. According to Saunders, Lewis and Thornhill (2012) a Cronbach’s Alpha coefficient of greater than or equal to 0.7 shows high reliability of data.

4.3 Questionnaire and Interview Response
Thirty six questionnaires were distributed to buying professionals and suppliers in Delta Corporation, Lagers Division. The table 4.1 below summaries the responses of the questionnaires and interviews,

Table 4.1: Questionnaire and Interview Response

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Expected</th>
<th>Actual</th>
<th>Percentage (%)</th>
</tr>
</thead>
</table>
Out of the 44 questionnaires distributed to thirty six buying professionals and suppliers in Delta Corporation, Lagers Division, 44 were successfully completed and returned in time. The response rate was favourable at 100% as shown in the table 4.1 above. High percentage response rate guaranteed the researcher that required information had been gathered unlike if the response rate was below 50%. The study intended to carryout interviews with the management at Delta Corporation, Lagers and a response rate of 100 percent was obtained. From the findings in table 4.1 above, it reveals that respondents were cooperative to the study.

4.4 Demographic characteristics
The researcher asked general information about the respondents. The general information included experiences in the logistics department and levels of education.

4.4.1 Experiences in the Logistics Department
The figure 4.1 below shows the experiences of respondents in the logistics department in Delta Corporation, Transport Division;

<table>
<thead>
<tr>
<th>Questionnaire</th>
<th>44</th>
<th>44</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews</td>
<td>5</td>
<td>5</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Primary data (2019)
The figure 4.1 represents the period that the respondents have been in the logistics field. The findings show that the majority of the respondents represented by 43.2% have been in the logistics field for a period between 5 to 10 years and 34.1% of the respondents have also been in logistics for a period between 11 to 15 years. 18.2% of the respondents have been logistics for a period between 15 years and above while 4.5% have been in logistics profession for less than 5 years. The length of service in logistics shows that majority of the logisticians have been in logistics profession for more than 5 years which is a good thing to the logisticians because they will be less investment needed to develop them since they got the experience.

### 4.4.2 Level of Education of the Respondents

The figure shows the level of education of respondents;

![Figure 4.2: Level of Education of Respondents](image)

**Figure 4.2 Level of Education of Respondents**

**Source: Fieldwork (2019)**

The study results as shown by Figure 4.2 showed that, from the 44 respondents that completed the questionnaires, 24(54.4%) have a diploma in Logistics, 15(34.1%) have a degree in Logistics and a further 5(11.4%) with a postgraduate degree in Logistics. The results usually display that; the popular of those involved in logistics have a logistics connected requirement.

### 4.5 Logistics Practices

The table shows the logistics practices in the food and beverages organisations;
Table 4.2 Logistics Practices

<table>
<thead>
<tr>
<th>Logistics Practices</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse logistics practice</td>
<td>44</td>
<td>4.0227</td>
<td>1.02273</td>
</tr>
<tr>
<td>Lean logistics practice</td>
<td>44</td>
<td>4.0455</td>
<td>1.16048</td>
</tr>
<tr>
<td>Last mile logistics practice</td>
<td>44</td>
<td>4.0455</td>
<td>.91384</td>
</tr>
<tr>
<td>Maritime logistics practice</td>
<td>44</td>
<td>4.0909</td>
<td>1.05253</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td></td>
<td>44</td>
<td></td>
</tr>
</tbody>
</table>

Source: Fieldwork (2019)

The above table 4.2 shows the means and standard deviations for the response regarding to the logistics practices adoption in the food and beverages organisations. The mean is the most commonly used mathematical measure of average whilst standard deviation is a measure of how spread out a data set is. From the data in table 4.2, the mean of reverse logistics practice is (mean = 4.0227) which mean the respondents definitely agree that food and beverages organizations adopted reverse logistics whilst (standard deviation = 1.02273). The results agree with the results of the interviews as many interviewees agreed that they use reverse logistics and adopted it as a logistic practice. The results coincides with Kaynak et al, (2013) who found out that consolidation of reverse logistics functions under the organized structure would provide a wide range of opportunities and benefits for the organizations. Lean logistics practice has a (mean = 4.0455) and (standard deviation 1.16048). The results agree with responses from the interviews were several logistics managers cited lean logistics practice as logistics practice that is used in the food and beverage organisations to. This results coincide with the findings of Dekker (2014) who found out that logistics methods used by the writer are reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice which simulates the customer service. Last mile logistics has the (mean = 4.0455) with the total responses and the (standard deviation = 0.91384). The results agree with responses from the
interviews were logistics managers in the food and beverage industry agreed that they use last mile logistics as another logistics practice owing to its advantages of. The result coincides with Lu and Gelman (2013) who found out that last mile logistics plays a very major role in determining the organization performance. Maritime logistics practice has (mean = 4.0909) and (standard deviation = 1.05253) which means that respondents agreed that they use maritime logistics.

4.6 Challenges faced by Delta Lagers in the adoption of logistics practices

The table below shows the challenges faced by Delta Lagers in the adoption of logistics practices in the food and beverage industry:

Table 4.3 Challenges faced by Delta Lagers in the adoption of logistics practices

<table>
<thead>
<tr>
<th>Challenges Faced by Delta Lagers in the Adoption of Logistics Practices</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of information and technology</td>
<td>44</td>
<td>4.0909</td>
<td>1.39464</td>
</tr>
<tr>
<td>Lack of appropriate performance matrix</td>
<td>44</td>
<td>4.0682</td>
<td>1.54615</td>
</tr>
<tr>
<td>Lack of training and education</td>
<td>44</td>
<td>4.0000</td>
<td>1.01156</td>
</tr>
<tr>
<td>Financial constraints</td>
<td>44</td>
<td>4.2727</td>
<td>1.22690</td>
</tr>
<tr>
<td>Resistance to change</td>
<td>44</td>
<td>4.1591</td>
<td>1.34585</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Fieldwork (2019)

The above table 4.3 shows the means = 4.0909 and standard deviations = 1.39464 for lack of information and technology in the adoption of logistics practices in the food and beverages organizations meaning that the respondents agreed that the adoption of logistics practices is limited by lack of information and technology. The results agree with interview results. From the data in table 4.3, the mean of the challenges of lack of appropriate performance matrix is (mean = 4.0682) which mean the respondents agreed that food and beverages organizations is challenged by lack of appropriate performance matrix in adopting logistics practices whilst
The results agree with the results of the interviews as many interviewees agreed that. The results coincide with Eriksson, (2009) who found out that lack of appropriate performance metrics is a barrier to logistics practices. Lack of training and education has a (mean = 4.0000) and (standard deviation = 1.01156). The results agree with responses from the interviews were several logistics managers cited lack of training and education as a challenge in adopting logistics practices in the food and beverage organisations. Financial constraints has the (mean = 4.2727) with the total responses and the (standard deviation = 1.22690). The results agree with responses from the interviews were logistics managers in the food and beverage industry agreed that financial constrains is a barrier to logistics practices. Resistance to Change has (mean = 4.1591) and (standard deviation = 1.34585 which means that respondents agreed that respondents agreed that there is resistance to change to logistics practices. The result coincides with Eriksson, (2009) who found out that lack of information and technological systems, lack of appropriate performance metrics, lack of training and education, financial constraints and resistance to change to logistics practices are the major challenges to logistics practices.

4.7 The Effects of Logistics Practices on Productivity of Food and Beverages Organizations

This section shows the effects of logistics practices on productivity of food and beverages organizations;

4.7.1 Logistics Practices have a Positive effect on Productivity of Food and Beverages Organizations

The table below shows the responses to the question does logistics practices have a positive effect on productivity of food and beverages organizations;
The table 4.5 above show that reverse logistics have a positive effect on productivity of food and beverage organisations as shown by the mean = 4.0682 and standard deviation = .84627; lean logistics have a positive effect on productivity of food and beverage organisations mean = 4.0455 and standard deviation = .96339; last mile logistics have a positive effect on productivity of food and beverage organisations mean = 4.1818 and standard deviation = 1.24401 and maritime logistics have a positive effect on productivity of food and beverage organisations mean = 4.0455 and standard deviation = 1.16048. The results are in line with the responses given by the Delta management who agreed that the four logistics practices namely reverse logistics, lean logistics, last mile logistics and maritime logistics have a positive effect.

Table 4.5 Logistics Practices have a Positive effect on Productivity of Food and Beverages Organizations

<table>
<thead>
<tr>
<th>Logistics Practices have a Positive effect on Productivity of Food and Beverages Organizations</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse logistics have a positive effect on productivity of food and beverage organisations</td>
<td>44</td>
<td>4.0682</td>
<td>.84627</td>
</tr>
<tr>
<td>Lean logistics have a positive effect on productivity of food and beverage organisations</td>
<td>44</td>
<td>4.0455</td>
<td>.96339</td>
</tr>
<tr>
<td>Last mile logistics have a positive effect on productivity of food and beverage organisations</td>
<td>44</td>
<td>4.1818</td>
<td>1.24401</td>
</tr>
<tr>
<td>Maritime logistics have a positive effect on productivity of food and beverage organisations</td>
<td>44</td>
<td>4.0455</td>
<td>1.16048</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Fieldwork (2019)
on productivity of food and beverage organisations. The finding is supported by Sheikh and Rana (2014) who found that logistics practices can also enhance the supply chain activity through the introduction and induction of cross docking facilities, which were measured by reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice.

**4.7.2 Logistics Practices have a Negative effect on Productivity of Food and Beverages Organizations**

The table below shows the responses to the question does logistics practices have a negative effect on productivity of food and beverages organizations;

**Table 4.6 Logistics Practices have a Negative effect on Productivity of Food and Beverages Organizations**

<table>
<thead>
<tr>
<th>Logistics Practices have a Negative effect on Productivity of Food and Beverages Organizations</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse logistics have a negative effect on productivity of food and beverage organisations</td>
<td>44</td>
<td>1.9091</td>
<td>1.05253</td>
</tr>
<tr>
<td>Lean logistics have a negative effect on productivity of food and beverage organisations</td>
<td>44</td>
<td>1.8864</td>
<td>1.14559</td>
</tr>
<tr>
<td>Last mile logistics have a negative effect on productivity of food and beverage organisations</td>
<td>44</td>
<td>1.7727</td>
<td>.93668</td>
</tr>
<tr>
<td>Maritime logistics have a negative effect on productivity of food and beverage organisations</td>
<td>44</td>
<td>1.8864</td>
<td>1.29787</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Fieldwork (2019)*

The table 4.6 above show that respondents strongly disagree that reverse logistics have a negative effect on productivity of food and beverage organisations as shown by the mean =
1.9091 and standard deviation = 1.05253; Lean logistics have a negative effect on productivity of food and beverage organisations mean = 1.8864 and standard deviation = 1.14559; Last mile logistics have a negative effect on productivity of food and beverage organisations mean = 1.7727 and standard deviation = .93668 and maritime logistics have a negative effect on productivity of food and beverage organisations mean = 1.8864 and standard deviation = 1.29787. However, are in line with existing literature since most of the existing literature suggested a positive effect of logistics practices on the productivity of the food and beverage industry. Tseng et al, (2015) found out that the operation of last mile logistics determines the efficiency of moving products and have a positive role on organisational performance.

4.8 Summary
This chapter show results obtained from the field and the results which were analyzed by using SPSS software version 16. The results indicated that logistics effects on the productivity of the Zimbabwean food and beverages sector are positive. The next chapter will present summary of the findings, conclusions, recommendations and areas which need further study.
CHAPTER V

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter focuses on summary, conclusions and recommendations using the study findings which were analysed and discussed in chapter four.

5.2 Summary

5.2.1 Summary of 1st objective: To establish logistics practices used by food and beverages organizations
Based on the first objective, the researcher sought to establish the logistics practices used by food and beverages organizations. The researcher found out that the organization uses reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice. Due to these practices, administration costs including stationery costs are seen to be reduced and productivity is being improved in this process.

5.2.2 Summary of 2nd objective: To establish the challenges in adopting logistics practices
The researcher noted that lack of information and technological systems, lack of appropriate performance metrics, lack of training and education, financial constraints and resistance to change to logistics practices are the challenges in adopting logistics practices.

5.2.3 Summary of 3rd objective: To examine the effects of logistics practices on productivity of food and beverages organizations.
Finally, it was revealed that the measured logistics practices reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practice significantly
productivity in the food and beverage industry. The researcher discovered that though there are challenges in adopting logistics practices in the food and beverage industry such as financial constraints and resistance, logistics practices positively improved productivity in the food and beverage industry.

5.3 Conclusions
The following conclusions were drawn in this research;

5.3.1 To establish logistics practices used by food and beverages organizations
The research concludes that the logistics practices used in the food and beverage organizations are reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practices.

5.3.2 To establish the challenges in adopting logistics practices
The research conclude that the major challenges or barriers faced in the adoption of logistics practices are lack of information and technological systems, lack of appropriate performance metrics, lack of training and education, financial constraints and resistance to change to logistics practices.

5.3.3 To examine the effects of logistics practices on productivity of food and beverages organizations.
Logistics practices researched positively effects the productivity of food and beverage industry by reducing costs. This is due to more importantly; logistics practices play a big part in customer satisfaction, which is more important than low product costs. The benefits from logistics practices are plentiful which are avoiding logistics disruptions, reduced safety stock, optimizing inventory levels, improved cash flows and enhancing customer service.

5.4 Recommendations
With respect to the conclusions drawn, to improve and embrace the effectiveness of the productivity of food and beverage organizations, the researcher recommends the following:

To establish logistics practices used by food and beverages organizations
The logisticians in the food and beverage industry can enhance the supply chain activity through the introduction and induction of reverse logistics practice, lean logistics practice, last mile logistics practice and maritime logistics practices

To establish the challenges in adopting logistics practices
The research recommends efficient information systems which supports tracking and tracing the returns of the product, linking with the previous sales, high and standardized performance to emphasise the need to reach the longitudinal, dynamic and progressive level of the top-performing firm. This will overcome the challenges of lack of information and technological systems and lack of appropriate performance metrics.

It is also recommended to use logistics centre because there are good resources for open innovation and can be used for educational purposes to overcome the challenge of lack of education. The consolidation of logistics delivery/shipment is possible with the involvement of multiple firms and shared resources (e.g. trucks, inspection units, technology, equipment, facility) to overcome the challenge of financial constraints.

To overcome the challenge of resistance to change, there is need for a radical change in the mindset and practice. The so called “follower” firms would in time acknowledge the gain they would have besides the entrepreneurial behaviour triggered by the existence of other firms which makes the new entrants realize the reduced risk, reduced cost and collective power they would have.

**To examine the effects of logistics practices on productivity of food and beverages organizations.**

In order to increase the productivity of food and beverage industry, a key concept is to maximize the usage of these logistics practices. Integrating the logistics practices have positive effects on the productivity of food and beverage industry.

**5.5 Further Research suggestions**

This research focused on the logistics effects on the productivity of the Zimbabwean food and beverages sector. Nevertheless the researcher suggests further research to be carried out on other companies in a different line of business in order to make a comparison of the logistics effects on the productivity different organizations.
References:


CII Institute of Logistics (2012), “Warehouse and Inventory” Post Graduate Diploma in Supply Chain Management, Course material, Chennai.


Appendices

Appendix 1: Questionnaire
My name is **Esley Siyanganga** registration number **B1129373**, a final year student of Bindura University of science education doing a Master of Science degree in purchasing and supply. I am under taking a research entitled **“Logistics effects on the productivity of the Zimbabwean food and beverages sector”**. Please be assured that this research is purely for academic purposes, the information you are going to give will be treated with strictest confidentiality and will be used for this study only and to this end, it will not be published. On behalf of Bindura University, the researcher would like to promise no misuse of information so obtained. Your cooperation in filling the questionnaire is greatly appreciated. For more information, you can contact the following:

**Researcher**

**Esley Siyanganga**

**Phone number:** 0732 128 726

**Email:** esiyanganga@delta.co.zw

**Research Supervisor**

**Mr Damiyano**

**Phone number:** 0777 108 147

**Email:** davydamex@yahoo.com

**SECTION A: DEMOGRAPHICS**

*Please kindly provide the following information (tick where appropriate)*
1. Number of years in the logistics industry:

<table>
<thead>
<tr>
<th>Below 5 years</th>
<th>01</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10 years</td>
<td>02</td>
</tr>
<tr>
<td>11-15 years</td>
<td>03</td>
</tr>
<tr>
<td>Above 15 years</td>
<td>04</td>
</tr>
</tbody>
</table>

2. Level of Education:

Please kindly provide the following information (tick where appropriate)

<table>
<thead>
<tr>
<th>Diploma</th>
<th>01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
<td>02</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>03</td>
</tr>
</tbody>
</table>

SECTION B

1. Identifying the strategic sourcing practices (Ticks all that apply)

Using the scale below, please tick your level of agreement or disagreement for the questions:
1. What are the challenges faced by Delta Lagers in adopting logistics practices?

Using the scale below, please tick your level of agreement or disagreement for the questions:

1 - Strongly Disagree (SD), 2 - Disagree (D), 3 - Neither Agree nor Disagree (NAD), 4 - Agree (A), 5 - Strongly Agree (SA)

The challenges faced by Delta Lagers in adopting logistics practices:

<table>
<thead>
<tr>
<th>Logistics Practices:</th>
<th>SD</th>
<th>D</th>
<th>NAD</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse Logistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lean Logistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last mile Logistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maritime Logistics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. What are the challenges faced by Delta Lagers in adopting logistics practices?

Using the scale below, please tick your level of agreement or disagreement for the questions:

1 - Strongly Disagree (SD), 2 - Disagree (D), 3 - Neither Agree nor Disagree (NAD), 4 - Agree (A), 5 - Strongly Agree (SA)

The challenges faced by Delta Lagers in adopting logistics practices:

<table>
<thead>
<tr>
<th>The challenges faced by Delta Lagers in adopting logistics practices:</th>
<th>SD</th>
<th>D</th>
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<tbody>
<tr>
<td>Lack of information and technology</td>
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<td>Lack of appropriate performance matrix</td>
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<td>Lack of training and education</td>
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<td>Financial constraints</td>
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<td>Resistance to change</td>
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</table>
3. Logistics Practices have a Positive effect on Productivity of Food and Beverages Organizations?

Using the scale below, please tick your level of agreement or disagreement for the questions:

1 - Strongly Disagree (SD), 2 - Disagree (D), 3 - Neither Agree nor Disagree (NAD), 4 - Agree (A), 5 - Strongly Agree (SA)

Logistics Practices have a Positive effect on Productivity of Food and Beverages Organizations

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<tr>
<th>Logistics Practices have a Positive effect on Productivity of Food and Beverages Organizations:</th>
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<td>Reverse logistics have a positive effect on productivity of food and beverage organisations</td>
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<td>Lean logistics have a positive effect on productivity of food and beverage organisations</td>
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<td>Last mile logistics have a positive effect on productivity of food and beverage organisations</td>
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<td>Maritime logistics have a positive effect on productivity of food and beverage organisations</td>
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</table>

4. Logistics Practices have a Negative effect on Productivity of Food and Beverages Organizations?

Using the scale below, please tick your level of agreement or disagreement for the questions:
1 - Strongly Disagree (SD), 2 - Disagree (D), 3 - Neither Agree nor Disagree (NAD), 4 - Agree (A), 5 - Strongly Agree (SA)

Logistics Practices have a Negative effect on Productivity of Food and Beverages Organizations

<table>
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<tr>
<th>Logistics Practices have a Negative effect on Productivity of Food and Beverages Organizations:</th>
<th>SD</th>
<th>D</th>
<th>NAD</th>
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<td>Reverse logistics have a negative effect on productivity of food and beverage organisations</td>
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</table>

THANK YOU
Appendix 2: Interview Guide

INTERVIEW GUIDE FOR MANAGERIAL STAFF

1. How do you understand logistics practices at your organisation?

2. What are the logistics practices you are using in your organisation?

3. What are the challenges faced by your organisation in the adoption of logistics practices?

4. What is the effect of logistics practices on productivity of food and beverages organizations?
APPENDIX 3: Application Letter to Carry-out a Research

House number 7429
Chiwaridzo 3
Bindura

01 November 2018

To the Accounting officer of Delta Corporation, Zimbabwe
Number 21,
Manchester Road,
Southerton,
Harare

Dear Sir/Madam

Ref: Application for permission to conduct a research

Research topic: Logistics effects on the productivity of the Zimbabwean food and beverages sector

My name is Esley Siyanganga, registration number B1129373 a master’s student at Bindura University of Science studying Master of Science degree in purchasing and supply chain management. I am seeking for permission to conduct a research in Delta Corporation, Lagers Division.

Thank you for your time and consideration.

Yours faithfully

Esley Siyanganga   Signature..................