# BUGANDA ROYAL INSTITUTE OF BUSINESS AND TECHNICAL

# **EDUCATION MENGO**



# PRODUCTION OPERATIONS AND ENVIRONMENT REGULATIONS OF

# FIRMS IN WAKISO DISTRICT

# CASE STUDY OF COCA COLA COMPANY

BY

# **BIKOBERE HAWA**

BR/UDA/8006/16

A RESEARCH REPORT SUBMITTED TO THE BUSINESS DEPARTMENT IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF A DIPLOMA IN ACCOUNTANCY OF BUGANDA ROYAL INSTITUTE OF BUSINESS AND TECHNICAL EDUCATION. MENGO-KAKEEKA

SEPTEMBER 2018

## DECLARATION

I BIKOBERE HAWA do declare that the information provided in this report is my original work and has never been presented to any institution for any award, academic or otherwise.

Signature .....

#### APPROVAL

This is to certify that this research report has been written under my supervision and it is now ready for submission to examination council with my approval.

Supervisor's Name: MR. KALULE BEN.

Supervisor's signature.....

Date ...../..../...../

### **DEDICATION**

I dedicate this report to my father Mr. Mulata Ali, mother Mrs. Njeri Shamim, my brothers, sister and all my friends for the support they have rendered to me

I dedicate to my course mates/friends like Patricia for their support they have rendered to me during the completion of this report.

#### ACKNOWLEDGEMENT

I thank the Almighty God for the wisdom rendered to me that enabled me complete my studies successful.

I take this opportunity to thank all people who made a contribution in my academic life so far, I would like to express my heartfelt gratitude to my supervisor Mr. Kalule Ben, whose tireless efforts have made my dreams a reality and for the academic guidance rendered to me during the course of my studies

<b>TABLE OF</b>	CONTENTS
-----------------	----------

DECLARATION i
APPROVALii
DEDICATIONiii
ACKNOWLEDGEMENT iv
ABSTRACTviii
CHAPTER ONE1
1.0 Introduction1
1.1 Background of the study
1.2 Statement of the problem
1.3 Objectives of the study
1.3.1 General objectives
1.3.2 Specific objectives
1.4 Research questions
1.5 Scope of the study
Geographical scope
Time scope
Subject scope
1.6 Significance of the study
CHAPTER TWO 4
LITERATURE REVIEW
2.0 Introduction
2.1 Factors Affecting the Manufacturing Process
2.2 Factors That Determine the Volume Of Production:
2.3 Issues and Competitive Manufacturing

CHAPTER THREE	. 9
RESEARCH METHODOLOGY	. 9
3.0 Introduction	. 9
3.1 Research design	. 9
3.2 Study population	9
3.3 Sampling technique	9
3.4 Sample size	10
3.5 Sources of data	10
3.5.1 Primary source	10
3.5.2 Secondary source	10
3. 6 Data collection instruments	11
3.6.1 Questionnaires	11
3.6.2. Interview guide	11
3.7 Data Processing, Presentation and Analysis	11
3.7.1 Data Processing	11
3.7.2 Data presentation and Analysis	11
3.8 Limitations of the study	12
CHAPTER FOUR	13
DATA PRESENTATION ANALYSIS AND DISCUSSION OF FINDINGS	13
4.0 Introduction	13
Table 1 Gender	13
Table 2 Age group	13
Table 3 Education level	14
Table 4 Durations in the organisation	14
Table 5 Unskilled labour force reduces the quantity produced by Coca Cola	15

Table 6 High demand from customers increase goods produced in Coca Cola.       15
Table 7 Environment regulations negatively affect production units
Table 8 Environment regulations reduce the quantity produced in Coca Cola.       16
Table 9 Coca Cola respects and follows the environment regulations set by the government
Table 10 Production of goods in coca cola pollutes the environment       17
Table 11 Political conditions of a country influences the volume of production       18
Table 12 Low levels of technology reduces the volume of production    18
Table 13 Environment Regulations determine the production unit of Coca Cola
Table 14 Environment Regulations determine the sales of Coca Cola production.       19
CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS
5.0 Introduction
5.1 Summary of Findings
5.1.1 Findings on the factors that are limiting the increase in production units of Coca Cola Company 20
5.1.2 Findings on the effects of production of Coca Cola products on the environment
5.3 Recommendations
REFERENCES
QUESTIONNAIRE

#### ABSTRACT

The study was conducted on the topic entitled "Production operations and environmental regulations of firms in Wakiso district a case study of Coca Cola Company"

Furthermore the study was guided by the following objectives; to find out factors that are limiting the increase in production units of Coca Cola Company, to find out the environment regulations on manufacturing firms in Wakiso District, to find out the effects of production of Coca Cola products on the environment.

The study followed a cross sectional research design. This design was used because the study were largely descriptive and comparative basing on the views of respondents backed by secondary data, using both qualitative and quantitative data therefore the researcher used the cross sectional research design to collect information from different participants like the managers to provide information relating production operations and environment regulations. The researcher used the descriptive design as it's the one required in reviewing different literature written on the topic by different authors and explaining the literature in relation to the current literature.

The researcher therefore concludes from her findings that environment regulations are of paramount importance on production operations; this due to the fact there is a strong relationship between production operations and environment regulations. It was also revealed that environment regulations have a negative impact on the production operations of Coca Cola Company.

It therefore recommended that organisations should take into consideration environmental regulations in order to protect the environment.

More so manufacturing industries, further research should be taken into those organisations to reveal whether they follow environmental regulations

#### **CHAPTER ONE**

#### **1.0 Introduction**

This chapter presents the general background of the study, statement of the problem, objectives of the study for both general and specific objectives, research questions, scope of the study, and the significance of the study.

#### **1.1 Background of the study**

According to Vicki Benge (2018) Ever since the first major environmental regulations were enacted in the 1970s, there have been concerns about their potential impacts on businesses. Managing the balance between environmental constraints and economic impacts has been an ongoing dilemma. The recent economic downturn, combined with increased competition from emerging economies, has made the debate even more acute, particularly in relation to climate change policies.

According to Jordan (2013) Production operations management is an area of management concerned with designing and controlling the process of production and redesigning business operations in the production of goods or services. It involves the responsibility of ensuring that business operations are efficient in terms of using as few resources as needed and effective in terms of meeting customer requirements. It is concerned with managing an entire production system which is the process that converts inputs (in the forms of raw materials, labor, and energy) into outputs (in the form of goods and/or services), as an asset or delivers a product or services. Operations produce products, manage quality and creates service. Operation management covers sectors like banking systems, hospitals, companies, working with suppliers, customers, and using technology. Operations are one of the major functions in an organization along with supply chains, marketing, finance and human resources. The operations function requires management of both the strategic and day-to-day production of goods and services.

According to Bruegel (2012) environmental regulations add costs to companies and slow down productivity. Environmental regulations may thus affect the competitiveness of the domestic industry if the stringency of policies differs across countries, putting some firms at a disadvantage to their foreign competitors. An alternative view is that environmental regulations may foster innovation in environmentally-friendly technologies, help regulated firms achieve technological leadership and boost

broader economic growth. These views have received a great deal of attention from policy makers, particularly in the context of the recent economic downturn. The growing importance of this debate in policy circles has led to a large number of studies that attempt to quantify the impact of environmental regulations on businesses. These studies have analysed many aspects of the economic performance of regulated businesses, including productivity, innovation, employment, profitability, output and trade.

Coca Cola Company which is located on plot 964 Block 111 Namanve Industrial Area near Bweyogerere in Mukono District along Kampala Jinja Road 20 km from Kampala city center. Coca Cola Company manufactures both non-carbonated and carbonated drinks like Coca Cola, Sprite, Krest, Stoney, Novida, Fanta Orange, most important to note is that the company employs 1,000 contractors and casual workers, the Company manufactures both Plastic and glass bottles of 500ml and 300ml.

#### **1.2 Statement of the problem**

According to the Coca Cola Production Report (2017) stated that the production department of coca cola company registered low production units as compared to recent years. The report showed a decrease in production quantity and it showed that it was attributed to so many different factors such as poor employee morale, high costs of raw materials, quality of machines used among others.

Despite all effort from when the problem was realised coca cola has done all possible ways to increase its production units such as recruiting experienced workers, increasing in availability of raw materials among others, but still low production units are continuously being registered. Environmental regulations could be the main cause of the decrease in production operation.

This study therefore seeks to establish the relationship between the production operations and environment regulations of firms in Wakiso District using Coca Cola Company as the case study

#### 1.3 Objectives of the study

#### 1.3.1 General objectives

To assess the impact of production operations and environmental regulations of firms in Wakiso District

#### 1.3.2 Specific objectives

1. To find out factors that are limiting the increase in production units of Coca Cola Company

- 2. To find out the environment regulations on manufacturing firms in Wakiso District
- 3. To find out the effects of production of Coca Cola products on the environment

#### **1.4 Research questions**

- 1. What are the factors that are limiting the increase in production units of coca Cola Company?
- 2. What are the environment regulations on manufacturing firms in Wakiso District?
- 3. What are the effects of production of Coca Cola products on the environment?

#### 1.5 Scope of the study

#### **Geographical scope**

The study was conducted at Century Bottling Company which is located on plot 964 Block 111 Namanve Industrial Area near Bweyogerere in Mukono District along Kampala Jinja Road 20 km from Kampala city center.

#### Time scope

The study took 6 effective months from January to June 2018 and it focused on production oprations of Coca Cola Company and the available environmental regulations.

#### Subject scope

The study was majorly concerned on two aspects that is the independent variable (production units) and dependent variables (environmental regulations)

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

- i. The study will be of importance to the researcher to her partial fulfillment of her academics or education at diploma level
- ii. The research study will be of importance to other researchers that will carry out research related study on researched topic.
- iii. This research will also be of significant to organisations to be aware of factors limiting increase in production units.

#### **CHAPTER TWO**

#### LITERATURE REVIEW

#### 2.0 Introduction

This chapter presents a review of related literature by various Researchers and Scholars over the years in relation with the production operations and environment regulations. Its main purpose is to examine what has been established by other Authors in this area of the study.

#### 2.1 Factors Affecting the Manufacturing Process

According to Vicki Benge (2018) the manufacturing process is a complex one that can be impacted by many factors: supplies, equipment, factory overhead, the need for special parts, and the people who work at all points in the process. The more variables there are, the greater the possibility of disruption to the smooth operations of a factory. Management styles can also have a positive or negative impact on this process.

#### **Supplies**

According to Abrell, Faye, and Zachmann, (2011) many manufacturers depend on raw materials supplied from outside sources. Some of the factors that can delay or hamper a regular delivery schedule include a glitch at the site of a supply source, problems with transportation or inclement weather. If supplies are not forthcoming as needed, the potential for shutdown or a major slowdown in the manufacturing process can result. Alternatively, a smooth supply operation and well-managed inventory promote production as scheduled.

#### Factory Overhead

According to Bruegel (2012) Manufacturers depend on utilities to power machines, cool equipment and light the workspace in their factories. Even a temporary shutdown of the power supply or lack of a steady water source can impact production, thus affecting the manufacturing

process. In addition, management style can have a significant impact on production in both negative and positive ways.

#### Special Parts

In the textbook "Operations Management," professors R. Dan Reid of the University of New Hampshire and Nada R. Sanders of Lehigh University posit "conformance to specifications" as one definition of quality in manufacturing. They cite as an example the situation of machine parts being built to specs. Here, an unforeseen change in made-to-order parts can have a significant impact on the manufacturing process, especially if the parts are shipped over long distances from offsite. Disparities in quality may require multiple orders for the same inventory, resulting in delays and temporary slowdowns or shutdowns of the manufacturing process.

#### People

According to Aldy and Pizer, (2011) the workforce, especially "touch labor," the workers directly involved in the manufacturing process, can affect that process in many ways. For example, sick days and vacations taken by key personnel must be figured into production to prevent a negative impact on manufacturing. An intangible factor that affects the manufacturing process and is dealt with after the fact is human error. Alternatively, human insight into a manufacturing process leading to more labor-efficient and cost-effective methods of production can affect the manufacturing process in a positive way. For example, In a paper published by MIT, William C. Jordan and Stephen C. Graves cite flexibility as a key strategy in improving the manufacturing process. This involves being able to manufacture different products in the same plant at the same time.

#### Equipment

Jordan (2013) argues that when a manufacturing process involves complex machines to complete production, a temporary malfunction or a breakdown in an intricate piece of equipment can affect the manufacturing process. Identifying means of improving efficiency of all working parts of production promotes a continual and more efficient operation. Positioning of equipment

and the personnel required to operate machines can also affect production. In a paper on manufacturing cycle times, Mandar M. Chincholkar of Intel Corporation and several of his academic and research colleagues explain the concept of "process drift," which they describe as a common occurrence in manufacturing processes where machines fail to function properly due to lack of cleaning.

#### Production

In ordinary language volume of production means creation of goods like tables, books etc. In Economics production means the creation of economic utilities. It is known fact that individuals can't create any matter or commodities. They can only create utility through changing the place or time of the materials. They insert utility and value into the materials. Materials available in nature by themselves are not useful unless their form or place is changed. For example, a carpenter creates utility to a log by changing it into a table, chair or furniture.

In this connection it may be noted that production does not mean mere creation of utility or matter. Utility in the absence of value is useless in sense. Hence production implies creation of both utility and value of the goods out of the matter. Economic development of a country depends on the volume of production. The higher the volume of manufacturing or production, the greater will be the development of a country. Hence, volume of production and the future of a country closely related to one another. Several factors as explained below determine the volume Of Production in an economy.

#### 2.2 Factors That Determine the Volume Of Production:

1. According to Vicki Benge (2018) Availability of Natural Resources: The volume production depends on the quantity and quality of the natural resources available in a country. If a country has large Deposits of natural resources like fertile soil, perennial rivers, extensive forests, long sea coasts, rich minerals etc, volume of production will be high. The larger the availability of resources, the larger will be the volume.

2. Availability of capital: Capital is an important factor in determining the volume of production. Capital includes both fixed capital and variable capital like machinery, buildings. raw materials, electricity etc. The capital depends on the level of savings and investment and banking facilities.

3. According to Abrell, Faye (2011) Technology is another determinant of the volume of production. If the people possess technical knowledge, education and training, they can produce diverse goods. They can make inventions and adopt latest technology for producing goods and services. Besides, they also increase the quantity and quality of goods. Hence the nature of technology influences the volume of manufacturing or production.

4. According to Jordan (2013) Another determinant of Volume of manufacturing or production is the factors of production. Factors of production comprise labor, capital and organization. The quantity and quality will influence the volume of production. If these are plenty, then production of goods on large scale is possible.

5. Transport facilities: Transport facilities also determine the volume of production. Better transport and communications enable the free movement and distribution of goods within a country. They also create adequate demand for the raw materials

6. According to Zachmann, (2011) Methods of organization: The volume of manufacturing or production is determined by the methods organization. Old and outdated methods reduce the volume manufacturing or production. Introduction of rationalization and modernization will increase the volume of production. Introduction of division of labor in production process also increases the quantity and quality of production.

7. According to Bruegel (2012) Political conditions: Political conditions of a country also influence the volume of manufacturing or production. If there exists political instability, Production will not increase. As against this, if there exists political stability, production will be organized on large scale.

8. Climate: The conditions of climate also influence the volume of production. If there exists a favorable climate and adequate rainfall, then production will increase and vice-versa.

9. According to Aldy (2011) Efficiency the people: The volume also depends on the efficiency of the people. If efficiency of the people is higher, production will be high and vice-versa.

10. According to Pizer, (2011) Economic policy of the government: The volume of production is also determined by the economic policy of the government. The government should provide initiative and incentive for young and dynamic entrepreneurs for starting and managing new firms. Then only volume of manufacturing or production will increase.

#### 2.3 Issues and Competitive Manufacturing

According to McClelland, J.D., 1999, the management of the natural environment is becoming increasingly important within manufacturing as customers, suppliers and the public demand that manufacturers minimize any negative environmental effects of their products and operations. Managers play a critical role in determining the environmental impact of manufacturing operations through choices of raw materials used, energy consumed, pollutants emitted and wastes generated. Over the past three decades, conceptual thinking on environmental issues have slowly expanded from a narrow focus on pollution control to include a large set of management decisions, programs and technologies. According to Brahmbhatt, M., 2014 Pressures to apply the concept of sustainable development to manufacturing underscore the need to think strategically about environmental issues. In this context, sustainable development translates into the integration of environmental management into manufacturing design and technology decisions. However, at this point, the implications of environmental management for manufacturing performance appear mixed. Limited empirical research and anecdotal evidence point to benefits such as reduced waste, and new markets.

According to Branger, F and Chevallier, J., 2013 the management of environmental issues draws on elements of strategy, capabilities and performance. At the strategic level, product design, process technologies and managerial systems are major determinants in the environmental performance of manufacturing firms. For example, if complex multi-layer plastics are used for packaging, closed-loop recycling of materials becomes very difficult, if not impossible. Choices of particular process technologies.

#### **CHAPTER THREE**

#### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter presents the research design that was used, study population, sampling procedures and technique, sample size, data sources, and data collection methods and instruments and methods and limitations of the study.

#### 3.1 Research design

The study followed a cross sectional research design. This design was used because the study were largely descriptive and comparative basing on the views of respondents backed by secondary data, using both qualitative and quantitative data therefore the researcher used the cross sectional research design to collect information from different participants like the managers to provide information relating production operations and environment regulations. The researcher used the descriptive design as it's the one required in reviewing different literature written on the topic by different authors and explaining the literature in relation to the current literature.

#### **3.2 Study population**

This includes the total number of individual that make up a universe, the study comprised of members that constituted the universe, these were from different levels of management such as the top level management, middle level managers and lower level managers. The study population comprised of 80 respondents.

#### 3.3 Sampling technique

The study used stratified sampling technique to select sample from the total population, this method involved grouping of respondents basing on their common characteristics such as those of similar department were grouped together in a strata. And later on simple random sampling was carried out to get sample. This method was used because it helps the researcher to get every type of respondent that is required in the sample since they are in similar and common status.

9

#### 3.4 Sample size

The sample size comprised of 40 respondents that were selected from different department such as levels of management such as the top level management, middle level managers and lower level managers.

#### Table 3.1 Showing sample size

Categories	Sample size
Top Managers	2
Middle level manager	10
Lower level managers	8
Other staff/employees	20
Total	40

#### 3.5 Sources of data

The research data was obtained from two sources namely; primary and secondary data.

#### **3.5.1 Primary source**

Primary data was obtained through personal interviews with respondents, observations and self-administered questionnaires.

#### 3.5.2 Secondary source

Secondary data was obtained through the company brochures, statistical report and bulletins, annual reports on general observation, textbooks, other student's research work,

#### 3. 6 Data collection instruments

#### 3.6.1 Questionnaires

A questionnaire is a research instrument consisting of a series of statement and other prompts for gathering information from respondents. This technique helped to collect primary data through setting a number of questions, which give to a cross section of respondents. The questionnaire mainly based on predetermined and standardized statements. Self-administered questionnaires were used by the researcher because they are cheap to distribute and process. They were more flexible and helped to save time.

#### 3.6.2. Interview guide

This is the type of method where the researcher asks questions face to face the respondents. This method was employed to find information necessary information from the group more quickly just to allow individual self-expression. The experts such as top executives of the company were researched for interview.

#### 3.7 Data Processing, Presentation and Analysis

#### **3.7.1 Data Processing**

Data processing included coding and editing all the responses collected from the fields which were edited with the view of checking for completeness and accuracy to ensure that data is accurate and consistent. It also helped to remove unwanted responses which would be considered insignificant. Coding was done after editing which was done manually and by the use of computer through word processing and Excel.

#### 3.7.2 Data presentation and Analysis

The data was presented in tabular form, with frequencies and percentages for classifications of responses, easier analysis and visual impression. The researcher used Statistical Package for Social Sciences (SPSS) to analyze after collecting data from the study area, the variables under study and the result were presented in tables for easy interpretation. Data was manually entered in a Statistical

Package for Scientific Software (SPSS) and Excel. Analysis was carried out by use of frequencies and percentage

#### 3.8 Limitations of the study.

The research faced inadequate funds but she managed by requesting the guardians and friends to help her with sum amount of money in order to complete her research.

Bias from the respondents, some respondents were very busy with busy schedules however, the researcher assured them about the relevance of this research towards their lives and development and she managed to convince them and they provided information to researcher.

#### **CHAPTER FOUR**

#### DATA PRESENTATION ANALYSIS AND DISCUSSION OF FINDINGS

#### **4.0 Introduction**

This chapter presents findings and interpretations of the findings from the study on the relationship between productions operations and environment regulations of firms in Wakiso district. These findings were obtained from a primary source of data and are presented in the tables showing percentages.

#### **Table 1 Gender**

Gender	Number of respondents	Percentage (%)
Male	22	55
Female	18	45
Total	40	100

Source: Primary Data 2018

The results in table 1 indicate that, male constitute 55% of the respondents and female constitute 45% of the respondent of the study, implying that the researcher was gender sensitive as she collected views from both male and female respondents at almost equal numbers.

#### Table 2 Age group

Age group	Number of respondents	Percentage (%)
Below 30 years	20	50
Between 30-40yrs	13	32
Above 40yrs	7	18
Total	40	100

Source: Primary Data 2018

The results in the table 2 above shows that employees below 30 years were 50%, 32% were those employees in between the age of 30-40 and 18% represented those employees above 40 years, this implies that Coca Cola Company employs more of youth because they are still energetic and strong to perform duties.

#### **Table 3 Education level**

Education level	Number of respondents	Percentage (%)
Certificate	5	12.5
Diploma	10	25
Degree	25	62.5
Total	40	100

#### Source: Primary Data 2018

According to the findings in the table 3 above findings show that 12.5% of the total respondents were holding a certificate, 25% of the respondents were having a diploma, and 62.5% of the respondents were holding a bachelor's degree, and this implies that Coca cola Company employs workers at all levels of academic in its workforce.

#### **Table 4 Durations in the organisation**

Duration	Number of respondents	Percentage (%)
Less than 2yrs	5	12.5
2-5yrs	15	37.5
Above 5 years	20	50
Total	40	100

Source: Primary Data 2018

From table 4 findings show that 12.5% of the respondents has served coca cola for a period less than 2yrs, 37.5% of the respondents had stayed for a period between 2 to 5yrs, 50% of the respondents had stayed for a period above 5 years which implies that Coca cola motivates its employees and provide job security that why it retains its employees for a very long period of time.

Response	Number of respondents	Percentage (%)
Strongly agree	33	82.5
Agree	5	12.5
Uncertain	2	5
Disagree	-	-
Strongly disagree	-	-
Total	40	100

#### Table 5 Unskilled labour force reduces the quantity produced by Coca Cola.

Source: Primary Data 2018

From findings in table 5 above, 82.5% of the respondents strongly agreed that Unskilled labour force reduces the quantity produced by Coca Cola, 12.5% of the respondents agreed, and 5% of the respondents were uncertain of it. This implies that labour force is among the major determinants of quantity produced in Coca Cola Company since they are the one to mix the ingredients and operate machines.

Table 6 High demand from customers increase goods produced in Coca Cola.

Response	Number of respondents	Percentage (%)
Strongly agree	25	62.5
Agree	15	37.5
Uncertain	0	0
Disagree	-	-
Strongly disagree	-	-
Total	40	100

Source: Primary Data 2018

The results in table 6 shows that 62.5% of the total respondents strongly agreed that High demand from customers increase goods produced in Coca Cola, 37.5% of the respondents agreed that High demand from customers increase goods produced in Coca Cola and this implied that increase in the goods produced are based on the demand from the customers.

Response	Number of respondents	Percentage (%)
Strongly agree	22	55
Agree	13	32.5
Uncertain	5	12.5
Disagree	-	-
Strongly disagree	-	-
Total	40	100

 Table 7 Environment regulations negatively affect production units.

Source: Primary Data 2018

Basing on the findings/results in table 7 findings shows that 55% of the total respondents strongly agreed that Environment regulations negatively affect production units, 32.5% of the respondents agreed, 12.5% of the total respondents were uncertain. This implies that environment regulations hinder production modes/methods that can be adopted by Coca Cola which at some times may be harmful to environment hence low production.

 Table 8 Environment regulations reduce the quantity produced in Coca Cola.

Response	Number of respondents	Percentage (%)	
Strongly agree	6	15	
Agree	26	65	
Uncertain	8	20	
Disagree	-	-	
Strongly disagree	-	-	
Total	40	100	

Source: Primary Data 2018

According to table 8 findings shows that 20% of the total respondents were uncertain whether Environment regulations reduce the quantity produced in Coca Cola, 65% of the total respondents agreed, and 15% of the respondents strongly agreed that Environment regulations reduce the quantity produced in Coca Cola, this implies that environment regulations limits some productions operations that could increase the quantity produced.

Response	Number of respondents	Percentage (%)	
Strongly agree	31	77.5	
Agree	8	20	
Uncertain	1	2.5	
Disagree	-	-	
Strongly disagree	-	-	
Total	40	100	

Table 9 Coca Cola respects and follows the environment regulations set by the government

Source: Primary Data 2018

Basing on the table 9 findings/results shows that 77.5% of the respondents strongly agreed that Coca Cola respects and follows the environment regulations set by the government, 20% of the respondents agreed that Coca Cola respects and follows the environment regulations set by the government, 2.5% of the respondents were uncertain. This implies that coca cola aims at protecting the environment surrounding it

Table 10 Production of goods in coca cola pollutes the environment

Response	Number of respondents	Percentage (%)	
Strongly agree	28	70	
Agree	12	30	
Uncertain	-	-	
Disagree	-	-	
Strongly disagree	-	-	
Total	40	100	

Source: Primary Data 2018

From table 10 findings shows that 70% of the total respondents strongly agreed that Production of goods in Coca Cola pollutes the environment, 30% of the respondents agreed and this implies that Coca Cola needs to treat its wastes before releasing it to the environment.

Response	Number of respondents	Percentage (%)
Strongly agree	20	50
Agree	12	30
Uncertain	8	20
Disagree	-	-
Strongly disagree	-	-
Total	40	100

#### Table 11 Political conditions of a country influences the volume of production

Source: Primary Data 2018

Basing on the findings in the table 11, 50% of the total respondents strongly agreed that Political conditions of a country influences the volume of production, 30% of the respondents agreed and 20% of the respondents were uncertain. This implies that production of goods in Coca Coal Company varies according to the political atmosphere/situation in the country

Table 12 Low levels of technology reduces the volume of production

Response	Number of respondents	Percentage (%)	
Strongly agree	13	32	
Agree	27	68	
Uncertain	-	-	
Disagree	-	-	
Strongly disagree	-	-	
Total	40	100	

Source: Primary Data 2018

The results in table 12 shows that 32% of the respondents strongly agreed that Low levels of technology reduces the volume of production, 68% of the total respondents agreed that Low levels of technology reduces the volume of production. This therefore implies that increase in quantity produced in Coca Cola Company is highly enhanced the by the availability of machines.

Response	Number of respondents	Percentage (%)	
Strongly agree	23	58	
Agree	13	32	
Uncertain	4	10	
Disagree	-	-	
Strongly disagree	-	-	
Total	40	100	

 Table 13 Environment Regulations determine the production unit of Coca Cola

Source: Primary Data 2018

Findings/result from table 13 shows that 58% of the total respondents strongly agreed that Environment Regulations determine the production unit of Coca Cola, 32% of the respondents agreed, and 10% of the total respondents were uncertain. This implies that environment regulations has a strong positive relationship with the production units in Coca Cola Company

Table 14 Environment Regulations determine the sales of Coca Cola production.

Response	Number of respondents	Percentage (%)	
Strongly agree	-	-	
Agree	-	-	
Uncertain	8	20	
Disagree	30	75	
Strongly disagree	2	5	
Total	40	100	

Source: Primary Data 2018

Findings from table 14 shows that 20% of the total respondents were uncertain whether Environment Regulations determine the sales of Coca Cola production, 75% of the respondents disagreed and 5% of the respondents strongly disagreed. This implies that there is no any relationship between environment regulations and sales of Coca Cola Company

#### **CHAPTER FIVE**

#### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### **5.0 Introduction**

This chapter presents the summary of the findings which have been presented in chapter four comparing them with the research objectives of the study, conclusion drawn and lastly recommendations made.

#### **5.1 Summary of Findings**

# **5.1.1** Findings on the factors that are limiting the increase in production units of Coca Cola Company

In an attempt on the first objective of the study the researcher managed to collect different information and from the study findings the following factors were revealed that are limiting the increase in production units of coca cola company; unskilled labour force reduces the quantity produced by coca cola, environmental regulations also negatively affects the increase in production units of coca cola company and low level of technology reduce the production units.

#### 5.1.2 Findings on the effects of production of Coca Cola products on the environment

The responses on the effect of production of coca cola products on the environment showed the following effects; environment regulations negatively affect production units of Coca Cola Company, Environmental regulations reduce the quantity produced in Coca Cola Company,

#### **5.2 Conclusion**

The researcher therefore concludes from her findings that environment regulations are of paramount importance on production operations; this due to the fact there is a strong relationship between production operations and environment regulations. It was also revealed that environment regulations have a negative impact on the production operations of Coca Cola Company.

## **5.3 Recommendations**

It therefore recommended that organisations should take into consideration environmental regulations in order to protect the environment.

More so manufacturing industries, further research should be taken into those organisations to reveal whether they follow environmental regulations.

#### REFERENCES

Abrell, J., Faye, A. N., and Zachmann, G., (2011). Assessing the impact of the EU ETS using firm level data. Brussels:

Bruegel. Acemoglu, D., Aghion, P, Bursztyn, L., and Hemous, D., (2012). The Environment and Directed Technical Change. The American Economic Review, 102(1), pp131-166.

Aghion, P., Dechezleprêtre, A., Hemous, D., Martin, R., and Reenen, J. V., (2014). Carbon Taxes, Path Dependency and Directed Technical Change: Evidence from the Auto Industry. Journal of Political Economy, forthcoming.

Aichele, R. and Felbermayr, G., (2012). Kyoto and the carbon footprint of nations. Journal of Environmental Economics and Management, 63(3), pp.336-354.

Ambec, S., Cohen, M., Elgie, S. and Lanoie, P., (2013). The Porter hypothesis at 20: Can environmental regulation enhance innovation and competitiveness? Review of Environmental Economics and Policy, 7(1), pp.2-22.

Aldy, J. E. and Pizer, W. A., (2011). The competitiveness impacts of climate change mitigation policies. NBER Working Papers 17705, Cambridge, M.A.: National Bureau of Economic.

Aldy, J. E. and Pizer, W. A., (2013). Comparability of effort in international climate policy architecture. Harvard Project on Climate Agreements Discussion Paper 14-62, Cambridge, Mass.: Harvard Project on Climate Agreements.

Alpay, E., Kerkvliet, J. and Buccola, S., (2002). Productivity growth and environmental regulation in Mexican and US food manufacturing. American Journal of Agricultural Economics, 84(4), pp.887-901.

Anger, N. and Oberndorfer, U., 2008. Firm performance and employment in the EU emissions trading scheme: An empirical assessment for Germany. Energy Policy, 36(1), pp.12-22.

Antweiler, W., Copeland, B. R. and Taylor, M. S., 2001. Is free trade good for the environment? American Economic Review, 91(4), pp.877-908.

Bartik, T., 2013. Social costs of jobs lost due to environmental regulations. Working papers 13-193, Kalamazoo, Michigan: Upjohn Institute.

Baumol, W. J. and Oates, W. E., 1988. The theory of environmental policy. 2nd ed. Cambridge: Cambridge University Press.

Belova, A., Gray, W. B., Linn, J. and Morgenstern, R. D., 2013. Environmental regulation and industry employment: A reassessment. Paper No. CES- WP-13-36. Washington D.C.: US Census Bureau, Center for Economic Studies.

Ben-Kheder, S. and Zugravu, N., 2012. Environmental regulation and French firms location abroad: An economic geography model in an international comparative study. Eco-logical Economics, 77, pp.48-61.

Berman, E. and Bui, L., 2001a. Environmental Regulation and Productivity: Evidence from Oil Refineries. Review of Economics and Statistics, 83(3), pp.498-510.

Berman, E. and Bui, L., 2001b. Environmental regulation and labor demand: Evidence from the south coast air basin. Journal of Public Economics, 79(2), pp.265-295.

Böhringer, C., Fischer, C., and Rosendahl, K. E., 2014. Cost-effective unilateral climate policy design: Size matters. Journal of Environmental Economics and Management, 67(3), pp.318-339.

Boyd, G. A. and McClelland, J.D., 1999. The impact of environmental constraints on productivity improvement in integrated paper plants. Journal of Environmental Economics and Management 38, pp.121-142.

Brahmbhatt, M., 2014. New Climate Economy Report: Background Note on Climate Mitigation and Jobs. London: New Climate Economy.

Branger, F., Quirion, P. and Chevallier, J., 2013. Carbon leakage and competitiveness of cement and steel industries under the EU ETS: much ado about nothing. Working Paper No 53-2013, Paris:

#### **QUESTIONNAIRE**

Dear esteemed respondent, I am Bikobere Hawa a student of Buganda Royal Institute of business and technical education currently carrying out research on the *"Production operations and environment regulations of firms in Wakiso district"*. I hereby kindly request you to participate in this research which is purely academic and therefore your response will be treated with utmost confidentiality and for academic purposes only.

#### SECTION A: BACKGROUND INFORMATION

Please tick in the box with the most correct answer

1. Gender

Male	Female	
2. Age group		
Below 30 years	between 30-40 years	above 40 years
3. Education level		
Certificate	Diploma	Degree
4. Duration in the or	rganization	

Less than 2 years	2-5yrs	Above 5 years

#### **SECTION B**

To what extent do you agree or disagree with the following statements. Please rate them using the following scale;

- 1. Strongly Agree (SA)
- 2. Agree (A)
- 3. Uncertain
- 4. Disagree (DA)
- 5. Strongly (SDA)

5. Unskilled labour force reduces the quantity produced by coca cola

Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	
6. High demand from	m customers in	crease goods pro	oduced in coca	cola	
Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	
7. Environment regu	lations negativ	ely affect produ	action units		
Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	
8. Environmental regulations reduces the quantity produced in coca cola					
Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	
9. Coca cola respects and follows the environment regulations set by the government					
Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	



Strongly agree	Agree	Uncertain	Disagree	Strongly disagree