THE IMPACT OF SUSTAINABLE PRODUCTION ON SUSTAIBALE CONSUPTION: THE CASE OF COCACOLA COMPANY NAMANVE BRANCH

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A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF BACHELOR OF PROCUREMENT AND LOGISTICS MANAGEMENT OF UGANDA CHRISTIAN UNIVERSITY

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UGANDA CHRISTIAN UNIVERSITY

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DECLARATION

I, OSHABA PATRON hereby declare that this work is original and never has been submitted to any other institution for a ward of any Degree. Where the work of others has been used, reference has been made there of.

Signed: …… Date: ……

OSHABA PATRON

APPROVAL

This report titled the impact of sustainable production on sustainable consumption, the case of Coca-Cola Company Namanve branch has been submitted by **OSHABA PATRON** for examination with my approval as the University Supervisor, and it's now ready for presentation for the award of a Bachelor's degree of procurement and logistics management of Uganda Christian University.

Signed: …….. Date: ……..

MADAM TUMUHAMYE COMFORT

DEDICATION

I dedicate this piece of work to my mother Miss. NAMANYA BUTUNGI, my amazing brothers, sisters, and friends at large that have been instrumental to my education life.

ACKNOWLEDGEMENT

Above anyone, I want to thank the Almighty for how far He has brought me and for guiding me throughout the process of creating this report, all glory and honour goes back to Him.

I extend a vote of thanks to a number of people who unreservedly, contributed towards the accomplishment of this research work. I also would like to acknowledge the assistance and role played by the following personalities to the successful completion of this study. I cannot say exactly how grateful I am to my supervisor, MADAM TUMUHAMYE COMFORT, for her guidance in this study was beyond measure. Thank you also for providing me with professional advice, encouragement and your time that has spurred me to success. In the same way, I would like to thank all the people at Coca-Cola Company, Namanve branch for the time they gave me as without their input, this study would not have come to fruition. I cannot forget the efforts of the staff of Uganda Christian University especially the lecturers at Faculty of Business and Administration their input and effort that enabled me acquire the invaluable knowledge I currently possess, their contribution can never be quantified but will always be reminiscent whenever I look through this book.

Lastly, I thank my family for sacrificing the little they have and investing in my education and enabling me to acquire this lifelong achievement.

May the Almighty God reward them all immensely.

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LIST OF ABBREVIATIONS

UNEP	United Nations Environmental Programme
UN	United Nations
SCP	Sustainable Consumption and Production
10-YFP	10-Year Framework Programme
CP	Cleaner Production
SD	Sustainable development
SCM	Supply chain management
NGOs	National Governmental Organisation
KPMG	Klynveld peat Marwick Goerdeler
UGGDS	Uganda Green Growth Development Strategy
NEMA.	National Environmental Management Authority
SPSS	Statistical Package for the Social Sciences

ABSTRACT

The study investigated the impact of sustainable production on sustainable consumption. The three research objectives that guided the study include the factors for achieving sustainable production at Coca-Cola Company Namanve branch, analyse the challenges encountered in implementing sustainable consumption at Coca-Cola Company Namanve branch and suggesting possible ways of ensuring sustainable production and sustainable consumption at Coca-Cola Company Namanve branch. The study employed a cross sectional research design that was descriptive in nature, used to describe characteristics of the population and other phenomenon studied. The researcher used both qualitative and quantitative. Quantitative data was analysed using the Statistical Package for the Social Sciences (SPSS) computer program to come up with the findings whereas qualitative data was analysed qualitatively. From the study findings, the factors for achieving sustainable production include; resource efficiency not only looks to minimize waste but also reduce exhaustion of non-renewable resources, Eco-efficiency not only aims to prevent waste and increase resource productivity but also to ensures minimal impact towards ecology, Incorporation of green practices into supply chain management activities can enable organizations meet goals associated with environmental and social sustainability, Adopting low-carbon technologies can help reduce energy consumption and promote sustainable development. , the study concluded that the possible ways of ensuring sustainable production and sustainable consumption included; balancing the use of natural resources can foster growth and the efficient use natural resources, Proper planning, inventory management, sharing of surplus food, freezing of foodstuffs, feeding of scraps to animals and being creative with leftovers are some of the ways to minimize food loss and waste. The study recommended that There is need for strengthening awareness creation and trainings in the areas of waste management like the application of circular models where waste is used as an input as opposed to the current traditional linear model of take make and waste which being applied in most manufacturing firms of Uganda. Knowledge generation through research should go hand in hand with strategies to create the capacity to apply and roll out new knowledge to promote the implementation of sustainability practices.

CHAPTER ONE

1.0 Introduction

This chapter looks at the background of the study, problem statement, purpose of the study, objectives of the study, research questions, scope of the study, definition of key terms, conceptual frame work and the significance of the study.

1.1 Background of the study

The means we live nowadays are unsustainable since far too numerous resources are consumed than what the earth may redevelop. Nevertheless, it is significant to recognise the big gap in consumption between rich and poor. Around 10% of the richer populaces of the world account for approximately half of global greenhouse gas emissions in control for climate change (UNEP, 2020). These unsustainable practices have backed the existing major environmental crises like climate change, biodiversity loss and pollution (UN, 2020). This has two implications: one being the urgent need for both social and ecological transformation; and two, the need to address high levels of inequality.

Sustainable Consumption and Production (SCP) aims to minimize the negative environmental impacts from consumption and production systems, considering all stages of the life-cycle of products and services while promoting quality of life for all. Efforts concerning sustainable consumption and production (SCP) have been crucial and prevalent during the past few decades. Both business and governments have worked tirelessly to decouple economic growth from the environmental degradation that has consistently accompanied it (UNEP, 2008). The measures adopted and solutions implemented by the business world range from pollution control to improved industrial efficiency (environmental resources exploited per unit of output), reached through organizational measures and the adoption of new technologies. Developed countries like China and Canada and international organizations have set up programs, policies, and regulations targeted toward sustainability. The European Union, for example, has adopted several new modes of communication and policy since the inception of the Fifth Environmental Action Programme (European Commission 1992), encompassing numerous conventions and protocols at the global and local levels, notably the Kyoto Protocol (UNFCCC 1997).

Africa has been the area on the top for executing Sustainability production and consumption and the unveiling of the African 10-Year Framework Programme (10-YFP) on Sustainable Consumption and Production (SCP) confirmed the assurance to execute SCP activities in Africa. The development of national and local SCP programmes in numerous African countries has placed the ground for highlighting the importance of SCP in attaining sustainable development in Africa, (Prosperity, 2019). The backing offered by the Marrakech Task Force on Cooperation with Africa in endorsing SCP in the region displays that partnership is too vital in attaining sustainable development and lessening of poverty in Africa.

Through inspiring countries to endorse Sustainable production and consumption technologies of Agenda 21, the government of Uganda promoted for the introduction of better production approaches through all crucial segments of the economy. The part of sustainable consumption is gradually attracting thoughtfulness to the quality and safety parts of products in addition to prices (Vergragt, 2013). Progressively, new people are nowadays giving attention to related features plus labels, data sheets, chemical composition, product efficiency, and disposal after use and impacts on the environment.

More sensitisation, capacity development and technical assistance is however still critical to improve people's appreciation of eco-labels and other certification systems. The identified priority areas of the SCP Programme in Uganda are demonstration of Cleaner Production (CP) effectiveness, information exchange and dissemination of technical information, and harvesting and demand-side management of energy use were selecting for piloting (Hall, (2011).

The coca cola company incorporated on September 5, 1919 is a beverage company. The business imposes or licenses non-alcoholic drink brands, principally sparkling beverages and variety of still beverages which include water, improved juices ready to drink teas and coffees sports drink dairy and energy drinks. The company's segments include Europe, Middle East and East Africa; Latin America North America Asia among others. Due to such a large market globally it therefore practices sustainability to meet the competitive advantage.

1.2 Problem statement.

Unsustainable patterns of consumption and production are root causes of triple environmental crises of climate change, biodiversity loss and pollution. These crises and related environmental degradation, threaten human well-being and achievement of sustainable development goals. In spite of the increasing participation of government of Uganda and all citizens working together to improve resource efficiency, reduce waste and pollution and shape a new circular economy, little or no impact on the change of attitude and implementation of sustainable production and sustainable consumption has been achieved (Shove, 2019). The reasons for this mismatch remain largely unexplored and neither do we have empirical evidence to explain them. Hence, the need to carry out this study to establish the cause for this mismatch.

1.3 General objective of the study

The general objective of the study was to investigate the impact of sustainable production on sustainable consumption.

1.4 Specific objectives

The specific objectives of the study are;

i. To assess the factors for achieving sustainable production at Coca-Cola company Namanve branch.
ii. To analyse the challenges encountered in implementing sustainable consumption at Coca-Cola company Namanve branch
iii. To suggest possible ways of ensuring sustainable production and sustainable consumption at Coca-Cola company Namanve branch.

1.5 Research questions

i. What are the factors for achieving sustainable production at Coca-Cola Company Namanve branch?
ii. What are the challenges encountered in implementing sustainable consumption at Coca-Cola Company Namanve branch?
iii. What are the ways of ensuring sustainable production and sustainable consumption at Coca-Cola Company Namanve branch?

1.6 Scope of the Study

1.6.1 Content Scope

The study investigated the impact of sustainable production and sustainable consumption. The study then assessed the factors for achieving sustainable production at Coca-Cola Company Namanve branch, analyse the challenges encountered in implementing sustainable consumption at Coca-Cola Company Namanve branch and suggesting possible ways of ensuring sustainable production and sustainable consumption at Coca-Cola Company Namanve branch

1.6.2 Time Scope

The study considered a period of five years that is from 2018-2022 due availability of reliable information of good quality that was obtained. The researcher considered a period of 5 months as long enough to allow gathering of information, data collection and processing.

1.6.3 Geographical Scope

Geographically, the study was limited to the premises of Coca-Cola Namanve branch. Namanve is an area in central Uganda, most of which lies in Kira municipality Wakiso district with portions in Mukono municipality Mukono district. Namanve lies in Bweyogerere ward, in south eastern Kira municipality, in Wakiso District, central Uganda.it is located approximately 15 kilometres (9.3m), by road, east of downtown Kampala, Uganda capital and largest city. Namanve is bordered by seta to the east, Namilyango to the south east, Lake Victoria to the south, Kirinya to the south west and Bweyogerere to the west and North West. Portions of Namanve lie within the boundaries of Mukono Town council.

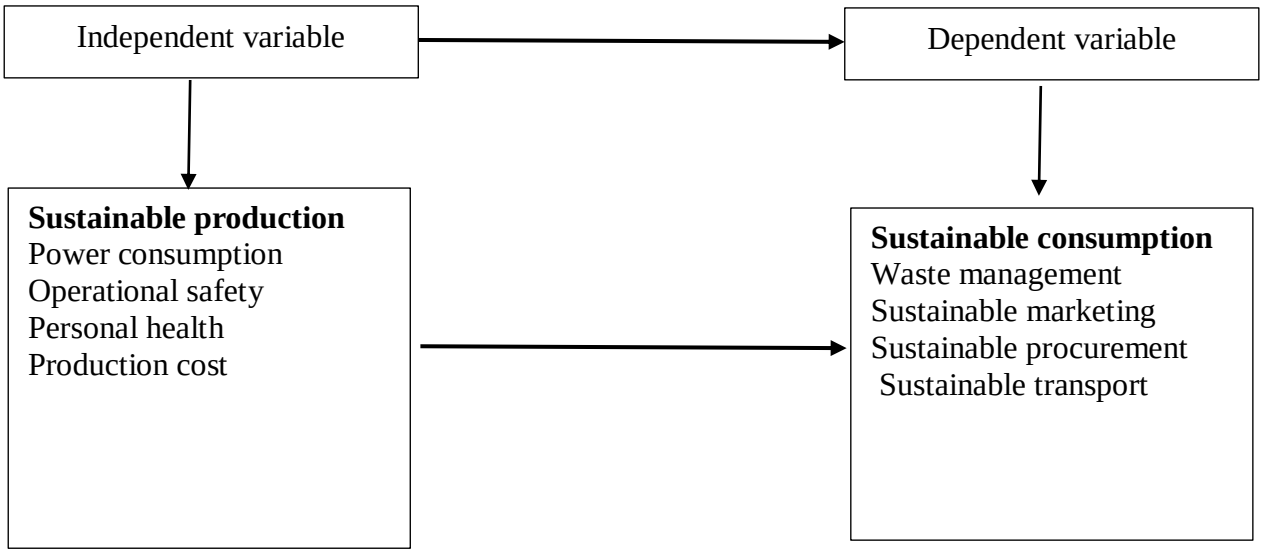
1.7 Definition of key terms

Sustainability refers to the processes and actions through which humankind avoids the depletion of natural resources to keep an ecological balance so that society's quality of life does not decrease. The integration of sustainability initiatives into organizational operations derives from social pressures, stricter government policy, corporate image, growing public awareness and market pressures.

Sustainable consumption refers to the use of products and services in ways that minimise impacts on the environment in order for human needs to be met in the present but also for future.

Sustainable production refers to the creation of goods and services using processes and systems that are non-polluting, conserving of energy and natural resources, economically viable, socially and creatively rewarding for all working people plus safe and healthful for workers, communities and consumers.

1.8 Conceptual frame work



Source: Researcher's personal conceptualisation through review of literature

1.9 Significance of the study

The study findings aimed at benefitting major stakeholders in the procurement field, namely financiers, non-government organizations, institutions of higher learning (tertiary colleges and universities) and the government in pursuing capacity enhancement policies for all categories of enterprise operators. These are also for those involved in sustainable production and sustainable consumption.

Policy makers and political leaders may also benefit from the study because findings could guide them in prioritizing resource allocation. The study's conclusions and recommendations as a case of reference necessary in identifying the potential gaps will facilitate this.

The findings of the study may further act as reference data for other scholars/researchers.

To the researcher, the study would lead the researcher in obtaining bachelor's degree of business and administration of Uganda Christian University since it is one of the prerequisites for the award.

Its findings will help the researcher to fully understand the underlying concepts of field research very well including data collection, information compiling, gathering and analysis skills. After gaining such skills, the researcher will ably carry out business research related activities both on work and in personal consultancies.

CHAPTER TWO: LITERATURE REVIEW

This chapter dealt with the review of related literature on the study of the variables specifically on investigating the impact of sustainable production and sustainable consumption. The study then assessed the factors for achieving sustainable production at Coca-Cola Company Namanve branch, analysed the challenges encountered in implementing sustainable consumption at Coca-Cola Company Namanve branch and suggested possible ways of ensuring sustainable production and sustainable consumption at Coca-Cola Company Namanve branch.

2.0 Introduction

Sustainable Consumption and Production (SCP) can be defined as: a holistic approach to minimising the negative environmental impacts from consumption and production systems while promoting quality of life for all (Bhuiyan, 2015). Thus, while Sustainable Consumption and Production (SCP) may mean different things to different people, it can generally be agreed that SCP is about systemic change, decoupling economic growth from environmental degradation and applying a lifecycle thinking approach that takes into consideration all phases of resource use in order to do more and better with less. It has rightly been pointed out that a major challenge in environmental policymaking is determining whether and how fast our society should adopt sustainable management methods as these decisions may have long lasting effects on the environment.

In the 1970s, the scientific community began to realize that unsustainable development was leading toward environmental and economic collapse. This warning is also known as “limits to growth”, which was proposed by the Club of Rome, (Southerton, 2018). After decades of economic development, sustainable development (SD) is assumed to be an attempt “without alternative” for the survival of humankind (Geels, 2018). As a predominant goal and crucial necessity for establishing SD, the integration of consumption and production systems with SD was formulated and implemented (Spaargaren,2019). The concern over sustainable consumption and production (SCP) patterns has been elevated to an unprecedented level and has gained international prominence. A series of international conferences related to on-going climate changes and SCP matters have been held. The Johannesburg Plan of Implementation in 2002 called for all countries to promote SCP patterns with the developed countries taking the lead and with all countries benefiting from the process, and a decade later, the United Nations Conference on Sustainable Development (Rio+20) reaffirmed that SCP was a cornerstone of SD, proposing a 10-Year Framework of Programmes on SCP patterns.

2.1 The factors for achieving sustainable production

Waste minimisation is frequently mentioned in sustainability strategies. Committing to minimise waste is recognised as desirable in managing resources. Waste minimisation is described as 'the reduction of waste' at source recognising that is cheaper not to produce waste in the first place. Waste minimisation covers activities aimed at reducing wastes from raw material and ingredient use, product loss, water consumption and effluent generation, paper and packaging, factory and office consumables, energy consumption, all other solid, liquid and gaseous wastes, and wasted effort (Akenji, 2014).

Supply chain management (SCM) involves the flow of goods and services from origin to consumption, aiming to reduce costs, improve quality, and foster product innovation. As environmental concerns grow, manufacturers are adopting green practices in SCM to meet environmental and social goals. Barber (2003) suggests that green supply chain management can enhance company performance, competitiveness, and meet stakeholders' demands for environmental protection, aligning with Berg's (2011) findings that enterprises face pressure from stakeholders, including NGOs, to integrate social and environmental issues into SCM.

Resource efficiency also called resource productivity, has received much attention recently because it is not only focused on managing resources as a whole rather than being limited to one stage of the resource's life, such as waste minimisation and pollution prevention which centred the focus on waste (cause) and its polluting effect but also on reducing the consumption of primary materials without affecting the level of output qualitatively. The UK government actively promotes resource efficiency as a part of its sustainable development policy (Bilen, 2008). This strategy aims to efficiently use and reduce the flow and consumption of resources from nature (Hukkinen, 2011). Unlike past approaches, resource efficiency considers the entire lifecycle of resources, focusing on waste reduction, resource conservation, and environmentally-friendly production processes (Brizga, 2014). By curbing resource extraction and emissions, the government aims to reduce environmental damage and exhaustion non-renewable resources.

External pressure as in recent years as enterprises have been increasingly influenced by the pressure from governments, international standards and their communities regarding both environmental and social issues to the extent that current measures of organizational competitiveness have changed from managing costs to sustainability. According to previous studies, external pressure is divided into two parts, namely, regulatory pressure and stakeholder's pressure. Regulatory pressure from international and domestic regulations are

influencing various industries to adopt and prioritize sustainable manufacturing processes, urging them to implement green practices, (Burja, 2009) for example the Montreal Protocol (1987), Kyoto Protocol (1997) and ISO standards. Stakeholders play a crucial role in encouraging companies to adopt sustainable manufacturing practices and engage in process and product innovation. Pressure from stakeholders in the supply chain can lead companies to become more sustainability-conscious, prompting the establishment of sustainability goals and practices in response to stakeholder demands (Ward, 2007; Cohen, 2010).

Eco-efficiency is the broadest strategy, because it not only aims to prevent waste and increase resource productivity but also to ensure minimal impact towards ecology while improving the quality of life all without exceeding Earth's limits, (Chang, 2013). Thus, it is bigger in scope, covering economic, social and ecological dimensions, and is not limited to the company itself. Eco-efficiency is a management philosophy, which encourages business to search for environmental improvement while at the same time giving social and economic benefits by fostering innovation, growth and competitiveness. Eco-efficiency can be viewed from many levels and is basically a call to achieve more value added from resources input with reduced emissions and waste.

The adoption of sustainable reporting has become widespread among major companies worldwide. Over 80% of S&P 500 firms reported on sustainability in 2015, up from 20% in 2011. Around 73% of the top 100 companies in 45 countries surveyed by KPMG also reported on corporate responsibility. While many reference sustainability reporting guidelines, less than half have their corporate responsibility information independently verified, (Vandenbergh, 2019). The rise in sustainable reporting is driven by increasing demand from investors and governments. By 2016, over 50 countries had regulations or policies encouraging or requiring sustainability reporting by organizations.

Energy management is crucial due to the negative environmental impacts of fossil fuels. Adopting low-carbon technologies and reducing dependence on energy suppliers can help reduce energy consumption and promote sustainable development (Tihanyi, 2016). As climate change intensifies, companies are facing external pressures from regulations to reduce their carbon footprint and emissions. Additionally, the increasing energy demand in developing countries has led to higher energy costs and shortages, making it a pressing issue to address. However, these challenges also provide motivation for the manufacturing industry to

implement practices that reduce greenhouse gas emissions and energy consumption (Shaw, (2011).

Process design can decrease energy consumption, waste emissions, and production costs while optimizing resource usage. It also reduces the impact of toxic waste on the environment, leading to better manufacturing flexibility and product quality. Strategies like Lean Production can enhance a company's competitiveness, as it positively correlates with environmental performance by reducing pollution costs and strengthening overall environmental performance (Pape, 2014).

2.2 The challenges encountered in implementing sustainable consumption

Excessive use of agrochemicals and overreliance on agriculture has rightly been pointed out as the commercialization of horticulture farming, expansion of farms, and the practice of monoculture favour the proliferation of pests, which in turn increases the need for pesticides. Currently, due to agricultural industrialization, more and more farmers in Uganda and indeed globally, are using agro-chemicals that is fertilizers and pesticides in their farms to deal with pests and all other destructive insects as well as increasing productivity (Rau, 2014). These agrochemicals lead to soil degradation, increased greenhouse gas emissions, pesticide accumulation, and declining water availability and quality (Carragher, 2019). Additionally, the indiscriminate use of chemical pesticides impacts soil texture, productivity, and poses risks to the environment, human health, and non-target microorganisms.

Arguably, environmental unsustainability is due to both structural features and historically specific characteristics of industrial capitalism resulting in specific patterns of production and consumption, as well as population growth. Poverty has often contributed to unsustainable production and consumption patterns and ultimately to environmental degradation in the country (Seyfang, 2019). The poor depend much more on nature for their livelihoods than the rich (Prothero, 2018) hence exhausting natural resources in the process, on top of that sustainability tends to come at an expense and goods usually produced sustainably are too expensive for most to afford.

Food wastage and losses at consumer and production levels as it has been noted that although Sub-Saharan Africa faces severe food shortages, on one hand, it experiences high rates of postharvest loss on the other, with an estimation that about 50% of fruits and vegetables, 20% of cereals, pulses and legumes and 40% of roots and tubers are lost before they reach the consumer (Freund ,2018). Thus, such wastage and loss not only leave the people hungry with

inadequate food to consume but also exerts undue pressure on the lands for higher production of food to feed the ever-growing population.

Lack of e-waste management as according to the UN, e-waste is considered the fastest-growing waste stream in the world with 44.7 million tonnes generated in 2016 and 50 million tonnes in 2018 thus the name 'tsunami of e-waste'. The increase in e-waste is mostly brought about by exporting of e-waste to developing countries which lack technology to properly dispose of it, planned obsolescence, the cost associated with repairs and ignorance, (McDonagh, 2017). With this increase in e-waste, we see that there has been an increase in resource depletion, green-house gas emissions, soil contamination, water and air pollution.

A survey of 2,000 Americans revealed that 61 percent believe green goods perform poorly compared to traditional products, citing issues like weak cleaning supplies and underpowered electric cars as well as the cost associated to green goods in comparison to traditional goods, (Overy, 2016). This negative perception of sustainability labels can create distrust and result in consumers opting for less eco-friendly options. However, green brands have improved over time and can now compete with traditional products. To address these biases, businesses should read reviews and select brands that meet their standards while being mindful of the environment. (Adams, 2016)

Limited retail availability or difficulty in finding sustainable and sweatshop-free options in brick and mortar and mortar retail stores is a common and serious structural barrier. The sustainable product assortment carried by the local Walmart, Target, or grocer is a mere fraction compared to traditional product shelves, ranging from apparel, cleansers, makeup, and produce. As demand for earth-conscious products goes up, they are more likely to go out of stock at least until the corporations start to notice (Antunes, 2014). What's more, businesses and consumers may have trouble locating them in the store's layout since certain products will be categorized differently from the traditional item they are replacing. Overall, the dominating retail environment can make it incredibly difficult and inconvenient to shop consciously, (Stakeholder Forum, 2013).

Social norms and community standards are the primary determinants of our behaviour, especially when it concerns the environment. Therefore, it can be one of the biggest barriers to overcome, (Gilmer, 2019). If one's family, friends, or co-workers are not concerned with their impact on the environment or how their purchases affect workers overseas, it can be incredibly tough to stick to individual goals (Byers 2019). On the other hand, having a community that

keeps one accountable is incredibly influential which is why it's important to seek out like-minded people wherever one can and with online communities brightly growing every day, it will not be hard to find a squad to cheer one on.

Lack of awareness for sustainable options or knowledge of what products to purchase and actions to take can be paralyzing (Sedlacko, 2014). This applies not only to consumers but to businesses and policy makers as consumers often lack understanding of the environmental and social impacts of their consumption choices, leading to unsustainable behaviours, most companies may not be fully aware of the potential benefits, cost savings, and market advantages associated with sustainable production, the lack of awareness of policymakers about the urgency of sustainability issues can delay or hinder the implementation of effective regulations and policies. What we don't know can hurt the planet, and the only cure for not knowing is reading, listening to informational podcasts, watching climate change documentaries, and reading up on favourite brands' manufacturing processes to see if they align with sustainable values (Simpson, 2020).).

It's an extreme privilege to have the time, knowledge, and financial resources to practice pro-environmental production and consumption behaviours. While a growing number of consumers are willing to pay a premium price for products with a moral cause, we must recognize that not everyone is in a comfortable position to do so, (Phipps, 2020). Even if the item's production process is not ideal, it's hard to refuse a bargain or store-brand item that doesn't break the bank. Financial constraints pose a significant challenge for individuals, businesses, and governments looking to adopt sustainable practices as the cost of sustainable products and services are higher than conventional alternatives, making them less accessible to consumers and businesses with limited financial means (Bessant, 2016). However, the extra price associated with quality and ethically-made apparel can actually pay off in the long run.

2.3 The possible ways of ensuring sustainable production and sustainable consumption

Balancing the use of natural resources to foster growth encourages the efficient use and sustainable management of natural resources. The difference between national production and consumption, the policy-induced change in a country's wealth is measured by adjusted net savings. This considers investment in human capital, depreciation of fixed capital, depletion of natural resources, and pollution damage (Noble, 2017). Consistently negative saving rates indicate diminishing wealth and unsustainable development. Positive savings form the basis for future growth.

Minimizing food loss and waste is crucial and involves addressing decreases in food quantity and quality at all stages of the supply chain. This problem is evident not only in our homes but especially in catering companies that waste unconsumed food daily due to excessive production (Gaffney, 2017). To combat this issue, we need to encourage proper planning, inventory management, sharing of surplus food, freezing of foodstuffs, feeding of scraps to animals, being creative with leftovers and initiatives like the Food Reform for Sustainability and Health project aim to develop intelligent solutions and foster partnerships in the restaurant sector to support a healthy population and planet (Nair, 2011).

Encourage e-waste management which aims to reduce the amount of electronic waste by focusing on end-of-life practices. To minimize e-waste, we need to raise awareness of its improper management in developing countries, promote the purchase of energy star rated electronics from companies that encourage buy-backs, and emphasize recycling, repair, and repurposing of equipment (Bengtsson, 2014). Governments should also implement export limits to ensure that exported e-waste is matched with an equal quantity of recycled or reused materials in various countries as in 2019, the world generated a staggering 53.6 Mt of e-waste, with Asia producing the highest amount at 24.9 Mt, followed by the Americas (13.1 Mt) and Europe (12 Mt), while Africa and Oceania generated 2.9 Mt and 0.7 Mt, respectively (Global E-waste Monitor 2020).

Development, implementation and enforcing of various strategic legal, policy, and institutional frameworks that promote sustainability. Uganda's commitment to green growth and sustainable development is evident through the 1995 Uganda constitution, the Uganda vision 2040, the UGGDS and recently the Switch Africa Green project which Uganda is implementing and coordinating through NEMA. It is one thing to develop and implement various strategic legal, policy, and institutional frameworks that promote sustainability and it is another to enforce and reinforce them as enforced regulations can compel businesses to integrate environmentally friendly technologies, reduce pollution, and minimize waste generation.

End-of-life management is crucial when it comes to enforcing sustainability as it is essential to make a correct management of waste to be able to protect the environment around us, (Wittmer, 2018). The 5 R's (Reduce, Recycle, Repurpose, Repair, and Reuse) are vital terms in the search for sustainability, in this case companies should adopt and align them to their goals and objectives as this will help them to minimize waste, recycle materials, be creative in repurposing, repair instead of replacing, and promote reusability in their products and practices.

Reducing or eliminating pollution as lately, many conferences or trade shows, one of the hot topics is how to reduce the use of environmentally unfriendly materials in production, as well as by-products of manufacturing processes. For example, using renewed interest in dry or near-dry machining, using as little coolant as possible while performing metal removal or de-burring, taking the burrs off of finished material after it's been cut is another process that uses quite a few powerful chemicals (Kanemoto, 2021).

Optimizing the current use of fossil fuels is a given as cutting energy cost is a win-win situation in today's environment. There seems to be little argument that we are close to peak oil that is availability, when half of the world's known oil reserves have been consumed. The only argument left is when the supply crunch will start, or if it has already begun. Save now by turning off machinery when it is not being used. Replace a single-speed motor with a variable-speed or servo drive to reduce energy consumption (Heavey, 2017). Also, look into alternative sustainable sources of energy like wind, solar, or hydroelectric power.

Raising awareness among customers about the environmental consequences of their consumption choices, such as carbon emissions, water usage, and waste generation is crucial in the fight for a better tomorrow. They can be educated through various forms, such as sustainability campaigns, labelling systems (e.g., eco-labels), and information dissemination through digital platforms, (Griggs, 2017). Some research shows that informed consumers are more likely to demand sustainable products, which, in turn, encourages businesses to adopt greener practices.

Green financing and economic incentive for example green bonds, sustainable investment funds, and incentives like tax breaks, subsidies, and grants for sustainable initiatives from governments and financial institutions can provide businesses and individuals with the necessary funds to invest in sustainable consumption and production hence doing away with the barrier of financial constraints, (Brown, 2013). Lastly, collaborative initiatives between businesses, governments, and non-governmental organizations can pool resources and expertise to implement large-scale sustainable projects.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter presented the research design, study population, sample size and selection technique, Sampling techniques, data collection methods, data collection instruments, validity and reliability, data collection procedures, data management and analysis, measurement of variables and conclusion.

3.2 Research Design

According to Amin (2005) a research design is a conceptual structure where research is conducted and it constitutes a blue print for collection, measurement and analysis of data. This study used a cross-section study design using both qualitative and quantitative approaches (Amin, 2005). The cross-sectional approach was used because the issues of sustainable production on sustainable consumption was studied at that point in time (Amin, 2005). The study used both quantitative and qualitative approach because qualitative methods provided in-depth explanations to events while quantitative methods provided the data needed to meet required objectives and to test the hypotheses (Mugenda, 1999).

3.3 The Study Population

Mugenda and Mugenda (2003) define population as an entire group of individual or objects having common observable characteristic. The study population comprised of management staff and employees from the procurement, accounting and finance departments in addition to the relevant departments responsible for sustainable production on sustainable consumption Coca-Cola Company Namanve branch and 50 respondents helped to get the required information.

3.4 Sample Size and Selection Technique

According to (Sekaran, 2003) a sample is a subset of a population. It comprised some selected members who were referred to as elements. Sampling is the process of selecting a sufficient number of elements from the population so that a study of the sample and an understanding of its characteristics would make it possible to generate such characteristics to the population elements. The study selected up to 44 respondents based on Krejcie and Morgan Sampling Guidelines (see appendix III) as shown in table 1 below.

Table 1: Population Category and Sample Size of the Respondents

Population category	Total population	Sample size	Sampling Techniques
Senior staff members	10	9	Purposive
Employees	40	36	Simple random sampling
Total	**50**	**44**	

Source: researcher's primary data 2018

As table 1 indicated, a sample of 44 respondents were selected out of 50, based on Krejcie and Morgan's (1980) sampling guidelines (see appendix III). In this study purposive sampling technique was used for senior staff members whereas Simple random sampling was used for the employees because of their large number.

3.5 Sampling Techniques

Sampling is a systematic process of selecting the number of individual cases/units to provide information needed for the study (Kombo and Tromp 2006). Thus, sampling was important in research due to the limitations in studying the whole population and reduction of both costs and time required since a small number of units have to be investigated (Eswaran and Singh, 2010).

There are broadly two sampling approaches thus probability and none probability sampling techniques. The probability sampling approach involved selecting a sample in such a way that all the elements in the population have some chances of being selected (Amin, 2005). This study used simple random sampling which was a sample obtained from the populations in such a way that samples of the same size have equal chances of being selected (Amin, 2005). As indicated in table 1 above, the study used simple random sampling for employees. In using simple random sampling, the study used the cluster approach where names in each category was written on a sheet of paper and one picked at a time until the required number was reached. To arrive at the sample size the study used proportionate sampling (50/44*the No in the population category).

In the non-probability approach, the elements in the population do not have a well-defined chance of being selected (Amin, 2005). This study used purposive sampling which involved the researcher using own judgment or common sense regarding the participants from whom the information was to be collected. Thus, the selection of the respondents was based on the

researcher's experience with the respondents' tenure of the required information. This study used purposive sampling for the senior staff members.

3.6 Data Collection Methods

The study used a survey approach where quantitative data was collected. There are several survey approaches, however for the purpose of this study the questionnaire was used as discussed below.

3.6.1 The questionnaire method.

The questionnaire was issued to 44 respondents at Coca-Cola Company Namanve branch. The respondents noted their answers within closely defined alternatives. The aim of using this method was to get broad-based views from the respondents. The questionnaire used a 5-point Likert rating scale to secure the degree of the presence of the variables of interest in the study population. In cases of open-ended questions, the respondents encouraged to express themselves more freely as well as provide any other information as they saw fit.

3.7 Data Collection Instruments

3.7.1 Self-Administered Questionnaire

A total of 44 questionnaires was distributed to the targeted population. The study used a close ended questionnaire for getting response from respondents. A standard Questionnaire on a five-point Likert scale was used to get quantifiable primary data from individual respondents on a scale of 5- Strongly Agree; 4- Agree; 3- Not Sure; 2- Disagree; 1- Strongly Disagree.

3.8. Data collection procedure

The researcher obtained an introductory letter from the faculty of Business and administration of Uganda Christian University Mukono, to conduct research to Coca-Cola Company Namanve branch. A letter of permission to carry out the research was obtained from Coca-Cola Company Namanve branch offices in order for the researcher to carry out the study. The researcher then obtained a document containing the names of senior staff members and employees in the organization. The researcher distributed questionnaires herself with the help of the office messenger who knew better all the employees at the organization and 44 respondents received these questionnaires. A period of one week was given to the respondents to fill them and this was done to give time to respondents for probing and clarification of questions where they had not been understood clearly. Afterwards data collected was checked for errors and complied for analysis.

3.9 Data Processing and analysis

The data collected was edited, coded and later analysed using Statistical Package for the Social Sciences (SPSS) computer program. Quantitative data was presented in form of descriptive statistics using percentages and frequencies for each of the variables used. Quantitative data was then presented inform of Univariant analysis. The data was examined to extract the themes and sub-themes in relation to the research objectives, and then used to describe and explain the phenomenon about the impact of sustainable production on sustainable consumption.

3.10 Data Analysis

Descriptive statistics of frequency tables were used to analyse and present the data from questionnaires. In particular, the researcher used SPSS software package version to generate frequency tables as means of presenting data. The data was summarized, analysed and interpreted as on each research objective. In contrast, qualitative data from Interview scripts, notes and statements was systematically coded and classified into broad descriptive categories while exploring themes, meanings and/or issues that emerged from the information gained from the interview. This data was further linked to the research objectives/questions to generate meaning and explanation on the study topic.

3.11 Limitations of the study

The researcher experienced a problem of limited finances with respect to this study. Costs regarding this limitation included transport, printing and photocopying of relevant materials. However, the researcher had to solicit some money from her mother and use it sparingly so as to overcome the cost constraint.

The researcher experienced a time constraint in data collection, analysing of data and in final presentation of the report. However, the researcher overcame this problem by ensuring that the time element is put into consideration and that all appointments agreed upon with respondents is fully met.

The researcher was not able to probe deeper into the subject matter because some respondents hide some information because it was regarded as confidential. However, the researcher assured the respondents that any information given is to be treated with maximum confidentiality.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.0 Introduction

The study was undertaken to investigate the impact of sustainable production on sustainable consumption. Data was collected using questionnaires which were based on set objectives which included; assessing the factors for achieving sustainable production at Coca-Cola Company Namanve branch, analysing the challenges encountered in implementing sustainable consumption at Coca-Cola Company Namanve branch and suggesting possible ways of ensuring sustainable production and sustainable consumption at Coca-Cola Company Namanve branch

4.1 General characteristics of respondents.

The characteristics of respondents in terms of Gender (sex), Age bracket and level of education were as shown below.

4.1.1 Gender of respondents

Table 1: showing Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	16	53.3	53.3	53.3
	female	14	46.7	46.7	100.0
	Total	30	100.0	100.0	

Primary source.

According to the table above, majority (53.3%) of the respondents were males whereas the minority; (46.7%) were females. This showed that there was gender imbalance in the study which was related to the willingness of the respondents to participate in the study. This however assisted the researcher to obtain distinct data from respondents of different sex which was unbiased.

4.1.2 Age of respondents

Table 2: showing Age of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below 20 years	2	6.7	6.7	6.7
	20-25 years	18	60.0	60.0	66.7
	26-30 years	6	20.0	20.0	86.7
	31-35 years	2	6.7	6.7	93.3
	36-40 years	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Primary source.

According to the table above, majority (60.0%) of the respondents were aged between 20-25 years, (20.0%) had 26-30 years whereas the minority (6.7%), (6.7%) and (6.7%) all had years ranging from below 20 years, 31-35 years and 36-40 years respectively. This also helped the researcher to obtain varying views about the study under investigation since the study involved respondents with different age groups.

4.1.3 Education level of the respondents

Table 3: showing Education level of respondents

		Frequency	Percent	Valid Percent
Valid	Certificate	1	3.3	3.3
	diploma	8	26.7	26.7
	Bachelors	9	30.0	30.0
	others	12	40.0	40.0
	Total	30	100.0	100.0

Primary source.

According to the table above, majority (40.0%) of the respondents had attained other levels of education, (30.0%) had attained a bachelors, (26.7%) had diploma whereas the minority; (1.1%) had attained a certificate level of education. This implied that majority of the respondents had obtained some kind of education which assured the researcher that the respondents could easily interpret the questionnaires and raise views relevant to the study under investigation.

4.2. The factors for achieving sustainable production

Table 4: showing the factors for achieving sustainable production

The factors for achieving sustainable production	**SA**		**A**		**N**		**D**		**SD**	
Resource efficiency not only looks to minimize waste but also reduce exhaustion of non-renewable resources	**(F)**	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**
	9	30.0%	14	46.7%	4	13.3%	1	3.3%	2	6.7%
Eco-efficiency not only aims to prevent waste and increase resource productivity but also to ensures minimal impact towards ecology.	17	56.7%	9	30.0%	2	6.7%	1	3.3%	1	3.3%
Incorporation of green practices into supply chain management activities can enable organizations meet goals associated with environmental and social sustainability.	11	36.7%	8	26.7%	5	16.7%	5	16.7%	1	3.3%
Adopting low-carbon technologies can help reduce energy consumption and promote sustainable development.	16	53.3%	9	30.0%	1	3.3%	3	10.0%	1	3.3%
The practice of sustainability reporting ensures accountability, transparency and compliance.	10	33.3%	13	43.3%	5	16.7%	1	3.3%	1	3.3%
Adopting process design strategies and standardization plays a crucial role in the promotion of sustainable production.	12	40.0%	9	30.0%	6	20.0%	2	6.7%	1	3.3%
Does external pressure from stakeholders, international and domestic regulations to influence the adoption sustainable manufacturing processes?	8	26.7%	10	33.3%	4	13.3%	6	20.0%	2	6.7%

Source: Primary data

According to the table above, majority (46.7%) of the respondents agreed that resource efficiency not only looks to minimize waste but also reduce exhaustion of non-renewable resources, (30.0%) strongly agreed, (13.3%) were not sure, (6.7%) strongly disagreed whereas the minority; (3.3%) disagreed.

More to this, the study findings stressed that the majority; **(**56.7%) of the respondents strongly agreed that Eco-efficiency not only aims to prevent waste and increase resource productivity but also to ensures minimal impact towards ecology, (30.0%) agreed, (6.7%) were not sure, whereas the minority; (3.3%) disagreed and strongly disagreed respectively.

In line to the study findings, majority (36.7%) of the respondents strongly agreed that Incorporation of green practices into supply chain management activities can enable organizations meet goals associated with environmental and social sustainability. (26.7%) agreed, (16.7%) both were not sure and disagreed respectively whereas the minority; (3.3%) strongly disagreed.

The study findings also stressed that the majority, (53.3%) of the respondents strongly agreed that adopting low-carbon technologies can help reduce energy consumption and promote sustainable development, (30.0%) agreed, (10.0%) disagreed whereas the minority; (3.3%) were not sure and strongly disagreed respectively.

In relation to the study findings, majority (43.3%) of the respondents agreed that the practice of sustainability reporting ensures accountability, transparency and compliance (33.3%) strongly agreed, (16.7%) were not sure, whereas the minority; (3.3%) disagreed and strongly disagreed respectively.

Furthermore, the study findings stressed that majority (40.0%) of the respondents strongly agreed that adopting process design strategies and standardization plays a crucial role in the promotion of sustainable production. (30.0%) agreed, (20.0%) were not sure, (6.7%) disagreed whereas the minority; (3.3%) strongly disagreed.

Lastly the study finding acknowledged that majority (33.3%) of the respondents agreed that external pressure from stakeholders, international and domestic regulations influence the adoption sustainable manufacturing processes, (26.7%) strongly agreed, (20.0%) disagreed, (13.3%) were not sure whereas the minority; (6.7%) strongly disagreed.

In an interview with the top management on factors for achieving sustainable production, the respondents suggested that;

> There is need for sustainability and long-term thinking: Attaining the Sustainable Development Goals (SDGs) will require a combination of policies, international cooperation, and capacity-building and technical assistance directed towards long-term sustainability, as well as a strengthening of the implementation of Macro Economic Application System (MEAs). A truly integrated set of policies and actions will be required from all stakeholders influencing consumption and production patterns. This will entail consideration of the interlinkages between different goals and economic sectors as well as an integrated approach to social, economic and environmental objectives. Central objectives will be improving and sustaining the quality of life and health for all, while decoupling socio-economic development from escalating resource use and environmental degradation. SDGs could importantly address critical issues such as irreversible damage to the global environment, and key tipping points that trigger feedbacks leading to runaway negative impacts. Targets and indicators for the goals could be designed to promote such decoupling and improve resource efficiency throughout product life cycles, increasing recycling and reducing waste, thus reaping important economic gains and higher contributions to human welfare.

4.3. The challenges encountered in implementing sustainable consumption

Table 6: showing the challenges encountered in implementing sustainable consumption

The challenges encountered in implementing sustainable consumption	**SA**		**A**		**N**		**D**		**SD**	
	(F)	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**
There is application of excessive fertilizers and pesticides to improve crop production that has negative environmental implications	18	60.0%	10	33.3%	2	6.7%	0	0.0%	0	0.0%
Lack of e-waste management has led to an increase in resource depletion, green-house gas emissions, soil contamination, water and air pollution.	10	33.3%	13	43.3%	5	16.7%	1	3.3%	1	3.3%
Food wastage and losses at consumer and production levels exerts undue pressure on the lands for higher production of food to feed the ever-growing population.	12	40.0%	9	30.0%	6	20.0%	2	6.7%	1	3.3%
The negative perception of sustainability labels can create distrust and result in consumers opting for less eco-friendly options.	6	20.0%	15	50.0%	5	16.7%	3	10.0%	1	3.3%
There is limited retail of green products which makes it incredibly difficult and inconvenient to shop consciously.	8	26.7%	10	33.3%	4	13.3%	6	20.0%	2	6.7%
Social norms and community standards are the primary determinants of our consumption behaviour, especially when it concerns the environment	13	43.3%	12	40.0%	2	6.7%	3	10.0%	0	0.0%
Green products are usually more expensive compared to traditional products and this	8	26.7%	8	26.7%	5	16.7%	3	10.0%	6	20.0%

limits consumers from purchasing sustainable products.										
There is lack of awareness of consumers as to the importance of sustainable consumption in communities	12	40.0%	10	33.3%	3	10.0%	2	6.7%	1	3.3%

Source: Primary data

The table above showed that majority, (60.0%) of the respondents strongly agreed that there is application of excessive fertilizers and pesticides to improve crop production that has negative environmental implications, (33.3%) agreed, whereas the minority, (6.7%) were not sure.

More to this the table stipulated that majority, (43.4%) of the respondents agreed that lack of e-waste management has led to an increase in resource depletion, green-house gas emissions, soil contamination, water and air pollution, (33.3%) strongly disagreed, (16.7%) were not sure whereas the least (3.3%) both disagreed and strongly disagreed respectively.

In relation to the study findings, majority (40.0%) of the respondents agreed that food wastage and losses at consumer and production levels exerts undue pressure on the lands for higher production of food to feed the ever-growing population, (30.0%) agreed, (20.0%) were not sure, (6.7%) disagreed whereas the minority; (3.3%) strongly disagreed.

The study findings stressed that majority, (50.0%) of the respondents agreed that the negative perception of sustainability labels can create distrust and result in consumers opting for less eco-friendly options, (20.0%) strongly agreed, (16.7%) were not sure, (10.0%) disagreed whereas the minority; (3.3%) strongly disagreed.

In line to the study findings, it was highlighted that majority (33.3%) of the respondents agreed that there is limited retail of green products which makes it incredibly difficult and inconvenient to shop consciously, (26.7%) strongly agreed, (20.0%) were not sure and the minority; (6.7%) strongly disagreed.

Also, the study findings acknowledged that majority (43.3%) of the respondents strongly agreed that **s**ocial norms and community standards are the primary determinants of our consumption behaviour, especially when it concerns the environment, (40.0%) agreed, (10.0%) disagreed whereas the minority; (6.7%) were not sure.

Likewise, the study showed that majority (26.7%) and (26.7%) of the respondents both strongly agreed and agreed respectively that green products are usually more expensive compared to

traditional products and this limits consumers from purchasing sustainable products., (20.0%) strongly disagreed, (16.7) were not sure and the least (10.0%) disagreed.

Lastly the study findings indicated that majority (40.0%) of the respondents strongly agreed that there is lack of awareness of consumers as to the importance of sustainable consumption in communities, (33.3%), (10.0%) were not sure, (6.7%) disagreed whereas the minority, (3.3%) strongly disagreed.

In an interview with the top management on challenges encountered in implementing sustainable consumption, the respondents suggested that;

> Many environmental challenges result from unsustainable production and consumption patterns. These include the continuous and increasing conversion of natural ecosystems for agriculture, the fragmentation of habitats, loss of biodiversity and degradation of various ecosystem services, overfishing, unsustainable agricultural practices and overexploitation of other renewable resources on which people and economies depend. Diverse negative environmental impacts are caused by various extractive and processing industries, as well as by waste disposal, especially dumping and burning around urban areas. Pollution damage is degrading ecosystems that provide key services underpinning human welfare, and often impacts directly on human health and economic productivity.
>
> Furthermore, he explained about escalating resource use. Globally, increasing resource use, waste and pollution are undermining prospects for future development. There is also an inequitable use of resources and distribution of the impacts of pollution and environmental degradation – between the wealthy and the poor, urban and rural populations, and men and women. Consumption and production patterns in most economic sectors have to change significantly to address these challenges.

4.4. The possible ways of ensuring sustainable production and sustainable consumption

Table 5: showing the possible ways of ensuring sustainable production and sustainable consumption

The possible ways of ensuring sustainable production and sustainable consumption	**SA**		**A**		**N**		**D**		**SD**	
Balancing the use of natural resources can foster growth and the efficient use natural resources.	**(F)**	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**	**(F)**	**(%)**
	8	26.7%	10	33.3%	4	13.3%	6	20.0%	2	6.7%
Proper planning, inventory management, sharing of surplus food, freezing of foodstuffs, feeding of scraps to animals, being creative with leftovers are some of the ways to minimize food loss and waste.	13	43.3%	12	40.0%	2	6.7%	3	10.0%	0	0.0%
Well-designed and enforced policies and regulations can compel both the consumers and producers to adopt sustainable practices.	8	26.7%	8	26.7%	5	16.7%	3	10.0%	6	20.0%
Incorporating reduction, recycling, repurpose, repair and reuse in our processes and products can help to minimize waste by fostering end-of-life management.	12	40.0%	10	33.3%	3	10.0%	2	6.7%	1	3.3%
Raising awareness among customers about the environmental consequences of their consumption choices can	12	40.0%	7	23.3%	4	13.3%	1	3.3%	2	6.7%

foster the adoption of sustainable										
Optimizing the current use of fossil fuels can help to minimize the consumption of energy.	9	30.0%	14	46.7%	4	13.3%	1	3.3%	2	6.7%
Encouraging the purchase of energy star rated electronics from companies that encourage buy-backs can minimize increase of e-waste.	17	56.7%	9	30.0%	2	6.7%	1	3.3%	1	3.3%

Source: Primary data

According to the table above, majority (33.3%) of the respondents agreed that balancing the use of natural resources can foster growth and the efficient use natural resources, (26.7%) strongly agreed, (20.0%) disagreed, (13.3%) were not sure whereas the minority; (6.7%) strongly disagreed.

More to this, the study findings stressed that majority (43.3%) of the respondents strongly agreed that proper planning, inventory management, sharing of surplus food, freezing of foodstuffs, feeding of scraps to animals, being creative with leftovers are some of the ways to minimize food loss and waste, (40.0%) agreed, (%10.0) disagreed whereas the minority; (6.7%) were not sure.

In line to the study findings, majority (26.7%) both strongly agreed and agreed that well-designed and enforced policies and regulations can compel both the consumers and producers to adopt sustainable practices, (20.0%) strongly disagreed, (16.7%) were not sure whereas the minority; (10.0%) disagreed.

In relation to the study findings, majority (40.0%) 0f the respondents strongly agreed that incorporating reduction, recycling, repurpose, repair and reuse in our processes and products can help to minimize waste by fostering end-of-life management (33.3%) agreed, (10.0%) were not sure, (6.7%) disagreed whereas the minority (3.3%) strongly disagreed.

The study findings also stressed that majority, (40.0%) of the respondents strongly agreed that raising awareness among customers about the environmental consequences of their consumption choices can foster the adoption of sustainable (23.3%) agreed, (13.3%) were not sure, (6.7%) strongly disagreed whereas the minority; (3.3%) disagreed.

Likewise, the study findings revealed that majority (46.7%) of the respondents agreed that optimizing the current use of fossil fuels can help to minimize the consumption of energy,

(30.0%) strongly agreed, (13.3%) were not sure, (6.7%) strongly disagreed and the minority; (3.3%) disagreed.

Lastly the study findings acknowledged that majority, (56.7%) of the respondents strongly agreed that encouraging the purchase of energy star rated electronics from companies that encourage buy-backs can minimize increase of e-waste, (6.7%) were not sure whereas the minority; (3.3%) strongly disagreed and strongly disagreed respectively.
In an interview with the top management on possible ways of ensuring sustainable production and sustainable consumption at Coca-Cola Namanve branch, the respondents suggested that;

> Shifting to SCP will require fundamental changes in the way society operates and how we live our lives. Such a full-scale transition will take considerable time; thus, given the urgency and magnitude of unsustainability and the central role of consumption and production, there is a need for immediate forceful action to bring the transition in motion. The SDGs, which have been in place for a good number of years, should serve as a catalyst to kick-start this societal transformation. This requires addressing the major drivers of consumerism and overconsumption, as well as unequal consumption opportunities, in modern society. Dealing only with the symptoms and addressing only the politically less challenging issues will not result in the kind of changes needed for putting our civilization on the track to sustainability. The goals and indicators of the SDGs, and the associated action plans for implementation, must be formulated from this perspective.
>
> Furthermore, SCP must be coordinated with the 10YFP to ensure complementarity and synergies. An immediate opportunity for such coordination is through the 10YFP UN Inter-Agency Coordination Group. The setting of indicators and targets for both the SDGs and the 10YFP is a foundation for complementary operation. Together, both programs would need a comprehensive set of indicators that would consolidate environmental, social and economic elements into a common framework for monitoring progress. A periodic report as such would show: (a) how production and consumption patterns contribute or fail to contribute to the wellbeing of people; and (b) how the prospects of achieving wellbeing by future generations are threatened or safeguarded by current production and consumption activities.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of findings observed and inferred from the data presented in chapter four. The summary of findings is based on the literature available in chapter two. This chapter also provides, the conclusions, recommendations and suggested areas for further study.

5.1 Summary of the Findings

5.1.1 The factors for achieving sustainable production

From the study finding, it was highlighted that majority of the respondents strongly agreed and agreed that resource efficiency not only looks to minimize waste but also reduce exhaustion of non-renewable resources and this was supported by (Brizga, 2014), who stated that unlike past approaches, resource efficiency considers the entire lifecycle of resources, focusing on waste reduction, resource conservation, and environmentally-friendly production processes. Also, the study highlighted that most of the respondents acknowledged that, eco-efficiency not only aims to prevent waste and increase resource productivity but also to ensures minimal impact towards ecology and this was similar to Chang, 2013) who said that eco-efficiency is a management philosophy, which encourages business to search for environmental improvement while at the same time giving social and economic benefits by fostering innovation, growth and competitiveness. Eco-efficiency can be viewed from many levels and is basically a call to achieve more value added from resources input with reduced emissions and waste. Likewise, the study indicated that incorporation of green practices into supply chain management activities can enable organizations meet goals associated with environmental and social sustainability and this was in agreement with (Shaw, (2011), who revealed that the increasing energy demand in developing countries has led to higher energy costs and shortages, making it a pressing issue to address. However, these challenges also provide motivation for the manufacturing industry to implement practices that reduce greenhouse gas emissions and energy consumption. Lastly, the study stipulated that external pressure from stakeholders, international and domestic regulations influence the adoption sustainable manufacturing processes and this was related to (Burja, 2009) who said that Stakeholders play a crucial role in encouraging companies to adopt sustainable manufacturing practices and engage in process and product innovation. Pressure from stakeholders in the supply chain can lead companies to become more sustainability-

conscious, prompting the establishment of sustainability goals and practices in response to stakeholder demands.

5.1.2 The challenges encountered in implementing sustainable consumption

From the study findings, the study indicated that majority of the respondents agreed and strongly agreed that there is application of excessive fertilizers and pesticides to improve crop production that has negative environmental implications and this was similar to (Rau, (2014) who stipulated that currently, due to agricultural industrialization, more and more farmers in Uganda and indeed globally, are using agro-chemicals that is fertilizers and pesticides in their farms to deal with pests and all other destructive insects as well as increasing productivity. More so, the study findings stressed that majority of the respondents agreed and strongly agreed that lack of e-waste management has led to an increase in resource depletion, green-house gas emissions, soil contamination, water and air pollution and this was related to (McDonagh, 2017), who said that the increase in e-waste is mostly brought about by exporting of e-waste to developing countries which lack technology to properly dispose of it, planned obsolescence, the cost associated with repairs and ignorance. Likewise, the study findings showed that food wastage and losses at consumer and production levels exerts undue pressure on the lands for higher production of food to feed the ever-growing population and this was in agreement with (Freund, 2018) who revealed that wastage and loss not only leave the people hungry with inadequate food to consume but also exerts undue pressure on the lands for higher production of food to feed the ever-growing population. Likewise, the study findings acknowledged that **s**ocial norms and community standards are the primary determinants of our consumption behaviour, especially when it concerns the environment and this was related to (Gilmer, (2019) who revealed that having a community that keeps one accountable is incredibly influential which is why it's important to seek out like-minded people wherever one can and with online communities brightly growing every day, it will not be hard to find a squad to cheer one on.

Lastly, the study findings agreed that there is lack of awareness of consumers as to the importance of sustainable consumption in communities and this was related to Sedlacko, (2014), who revealed that the lack of awareness of policymakers about the urgency of sustainability issues can delay or hinder the implementation of effective regulations and policies.

5.1.3 The possible ways of ensuring sustainable production and sustainable consumption

From the study findings, most of the respondents agreed and strongly agreed that **b**alancing the use of natural resources can foster growth and the efficient use natural resources and this was related to (Noble, (2017) who acknowledged that consistently negative saving rates indicate diminishing wealth and unsustainable development. Positive savings form the basis for future growth. More so, the study indicated that proper planning, inventory management, sharing of surplus food, freezing of foodstuffs, feeding of scraps to animals, being creative with leftovers are some of the ways to minimize food loss and waste and this was similar to (Gaffney, 2017) who stressed that minimizing food loss and waste is crucial and involves addressing decreases in food quantity and quality at all stages of the supply chain. This problem is evident not only in our homes but especially in catering companies that waste unconsumed food daily due to excessive production. Likewise, the study findings showed

that optimizing the current use of fossil fuels can help to minimize the consumption of energy and this was agreement with (Heavey, 2017) who revealed that there seems to be little argument that we are close to peak oil that is availability, when half of the world's known oil reserves have been consumed. The only argument left is when the supply crunch will start, or if it has already begun.

Lastly, the study findings, stressed that encouraging the purchase of energy star rated electronics from companies that encourage buy-backs can minimize increase of e-waste and this was similar to Bengtsson. (2014) who said that to minimize e-waste, we need to raise awareness of its improper management in developing countries, promote the purchase of energy star rated electronics from companies that encourage buy-backs, and emphasize recycling, repair, and repurposing of equipment.

5.2 Conclusion

From the study findings, the factors for achieving sustainable production included**;** Resource efficiency not only looks to minimize waste but also reduce exhaustion of non-renewable resources, Eco-efficiency not only aims to prevent waste and increase resource productivity but also to ensures minimal impact towards ecology, Incorporation of green practices into supply chain management activities can enable organizations meet goals associated with environmental and social sustainability, Adopting low-carbon technologies can help reduce energy consumption and promote sustainable development, The practice of sustainability reporting ensures accountability, transparency and compliance, Adopting process design strategies and standardization plays a crucial role in the promotion of sustainable production and external pressure from stakeholders, international and domestic regulations to influence the adoption sustainable manufacturing processes.

Also the study findings highlighted that the challenges encountered in implementing sustainable consumption included; There is application of excessive fertilizers and pesticides to improve crop production that has negative environmental implications, Lack of e-waste management has led to an increase in resource depletion, green-house gas emissions, soil contamination, water and air pollution, Food wastage and losses at consumer and production levels exerts undue pressure on the lands for higher production of food to feed the ever-growing population, The negative perception of sustainability labels can create distrust and result in consumers opting for less eco-friendly options, There is limited retail of green products which makes it incredibly difficult and inconvenient to shop consciously, **S**ocial norms and community standards are the primary determinants of our consumption behaviour, especially when it concerns the environment, Green products are usually more expensive compared to traditional products and this limits consumers from purchasing sustainable products and there

is lack of awareness of consumers as to the importance of sustainable consumption in communities.

Lastly, the study findings indicated that the possible ways of ensuring sustainable production and sustainable consumption included; Balancing the use of natural resources can foster growth and the efficient use natural resources, Proper planning, inventory management, sharing of surplus food, freezing of foodstuffs, feeding of scraps to animals, being creative with leftovers are some of the ways to minimize food loss and waste, Well-designed and enforced policies and regulations can compel both the consumers and producers to adopt sustainable practices, Incorporating reduction, recycling, repurpose, repair and reuse in our processes and products can help to minimize waste by fostering end-of-life management, Raising awareness among customers about the environmental consequences of their consumption choices can foster the adoption of sustainable, Optimizing the current use of fossil fuels can help to minimize the consumption of energy and Encouraging the purchase of energy star rated electronics from companies that encourage buy-backs can minimize increase of e-waste.

5.3 Recommendations

There is need to Improve financing mechanisms to promote technology transfer and innovation. The current financing modes in Uganda are not favourable. The interest rates charged by commercial banks in Uganda are exorbitant and as a result, this has made it very difficult for manufacturing firms like Coca-Cola Company to invest in new and up-to-date manufacturing technologies.

Management of Coca-Cola company should Carry out Cleaner Production Assessments and prepare industry specific Environmental Management Plans; develop a code of conduct that could be abided by the industry and promote labelling and recognition mechanisms that recognises continuous improvements by the manufacturing industry; promote lifecycle assessments in the sector. This in turn may enhance efficiency of resource consumption in the manufacturing subsector while minimizing adverse environmental impacts and thus increase productivity.

There is need for strengthening awareness creation and trainings in the areas of waste management like the application of circular models where waste is used as an input as opposed to the current traditional linear model of take make and waste which being applied in most manufacturing firms of Uganda. Knowledge generation through research should go hand in hand with strategies to create the capacity to apply and roll out new knowledge to promote the implementation of sustainability practices.

5.4 Areas for further study

Transforming systems of consumption and production for achieving the sustainable development goals.

Making Sustainable Consumption and Production the Core of Sustainable Development Goals.

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APPENDIX 1 Questionnaire

Dear respondent,

My name is **Asiimwe Loreta Tiga**, a student of Uganda Christian University carrying out a study on the impact of sustainable production on sustainable consumption a case of Coca-Cola Company Namanve branch as a partial requirement for the award of Bachelor of procurement and logistics management of Uganda Christian University.

You have been selected to participate in this study as a respondent. Kindly provide the most appropriate information as indicated in the questionnaire based on your objective experiences. The information provided shall be used for academic purpose and will be kept with utmost confidentiality.

Thank you and may the almighty reward you.

Yours faithfully,

asiimwe loreta tiga,

ASIIMWE LORETA TIGA.

SECTION A: Demographic Characteristics

Tick / fill in the most appropriate answer.

1. Gender:

a) Female ☐ b) Male ☐

2. Age

a) Below 20 years ☐ b) 20 – 25 years ☐ c) 26 – 30 years ☐

d) 31 – 35years ☐ e) 36 – 40 Years ☐ f) Above 40 years. ☐

3. Highest level of education Qualification

a) Certificate ☐ b) Diploma ☐ c) Bachelors ☐ e) Post graduate ☐ f) Others

The factors for achieving sustainable production. (Tick as Appropriate)

Indicate the extent to which you agree with the following observations on the factors for achieving sustainable production on a scale of (1) = strongly disagree, (2) = disagree, (3) = not sure (4) = agree (5) = strongly agree

	Scale					
	The factors for achieving sustainable production	**1**	**2**	**3**	**4**	**5**
A	Resource efficiency not only looks to minimize waste but also reduce exhaustion of non-renewable resources.					
B	Eco-efficiency not only aims to prevent waste and increase resource productivity but also to ensures minimal impact towards ecology.					
C	Incorporation of green practices into supply chain management activities can enable organizations meet goals associated with environmental and social sustainability.					
D	Adopting low-carbon technologies can help reduce energy consumption and promote sustainable development.					
E	The practice of sustainability reporting ensures accountability, transparency and compliance.					
F	Adopting process design strategies and standardization plays a crucial role in the promotion of sustainable production.					

G	Does external pressure from stakeholders, international and domestic regulations to influence the adoption sustainable manufacturing processes?					

If others specify

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The challenges encountered in implementing sustainable consumption (Tick as Appropriate)

Indicate the extent to which you agree with the following observations on the challenges encountered in implementing sustainable consumption on a scale of (1) = strongly disagree, (2) = disagree, (3) = not sure (4) = agree (5) = strongly agree

	Scale					
	The challenges encountered in implementing sustainable consumption	**1**	**2**	**3**	**4**	**5**
A	There is application of excessive fertilizers and pesticides to improve crop production that has negative environmental implications					
B	Lack of e-waste management has led to an increase in resource depletion, green-house gas emissions, soil contamination, water and air pollution.					
C	Food wastage and losses at consumer and production levels exerts undue pressure on the lands for higher production of food to feed the ever-growing population.					
D	The negative perception of sustainability labels can create distrust and result in consumers opting for less eco-friendly options.					

E	There is limited retail of green products which makes it incredibly difficult and inconvenient to shop consciously.					
F	**S**ocial norms and community standards are the primary determinants of our consumption behaviour, especially when it concerns the environment					
G	Green products are usually more expensive compared to traditional products and this limits consumers from purchasing sustainable products.					
H	There is lack of awareness of consumers as to the importance of sustainable consumption in communities					

If others specify

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The possible ways of ensuring sustainable production and sustainable consumption

(Tick as Appropriate)

Indicate the extent to which you agree with the following observations on the possible ways of ensuring sustainable production and sustainable consumption on a scale of (1) = strongly disagree, (2) = disagree, (3) = not sure (4) = agree (5) = strongly agree

	Scale					
	The possible ways of ensuring sustainable production and sustainable consumption	**1**	**2**	**3**	**4**	**5**
A	Balancing the use of natural resources can foster growth and the efficient use natural resources.					

B	Proper planning, inventory management, sharing of surplus food, freezing of foodstuffs, feeding of scraps to animals, being creative with leftovers are some of the ways to minimize food loss and waste.					
C	Well-designed and enforced policies and regulations can compel both the consumers and producers to adopt sustainable practices.					
D	Incorporating reduction, recycling, repurpose, repair and reuse in our processes and products can help to minimize waste by fostering end-of-life management.					
E	Raising awareness among customers about the environmental consequences of their consumption choices can foster the adoption of sustainable					
F	Optimizing the current use of fossil fuels can help to minimize the consumption of energy.					
G	Encouraging the purchase of energy star rated electronics from companies that encourage buy-backs can minimize increase of e-waste.					

If others specify.

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Thank you for your time and input.

APPENDIX II:

INTERVIEW QUESTIONNAIRE GUIDE

Following is a list of questions designed to provide information relating to the impact of sustainable production on sustainable consumption.

1. What are the factors for achieving sustainable production at Coca-Cola Company Namanve branch?

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2. What are the challenges encountered in implementing sustainable consumption at Coca-Cola Company Namanve branch?

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3. What are the ways of ensuring sustainable production and sustainable consumption at Coca-Cola Company Namanve branch?

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