

**EFFECT OF CIRCULAR BUSINESS MODELING ON COMPETITIVE  
POSITIONING OF HOSPITALITY FIRMS IN KENYA**

**BY**

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## DECLARATION

I declare that this is my original work and has not been submitted in any institution for the award of any degree.



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## **DEDICATION**

I dedicate this study first to my children, my parents, friends and my colleagues in the hospitality industry as well the university of Nairobi, Faculty of Business and Management Sciences.

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## **ABBREVIATIONS AND ACRONYMS**

<b>CBM</b>	:	Circular Business Modeling
<b>CE</b>	:	Circular Economy
<b>CSR</b>	:	Corporate Social Responsibility
<b>DW</b>	:	Durbin Watson
<b>KAHC</b>	:	Kenya Association of Hotelkeepers and Caterers
<b>RBT</b>	:	Resource Based Theory
<b>VIF</b>	:	Variance Inflation Factor

## **ABSTRACT**

The research is on exploring the effect of circular business modeling on competitive positioning of hospitality firms in Kenya. The study had two key objectives: To ascertain the key drivers of circular business modeling in hospitality industry in Kenya and to examine the effect of circular business modeling on competitive positioning in the hospitality industry in Kenya. The study's independent variables were environmental, social and economic sustainability. The research used a descriptive cross-sectional survey design. Primary data was obtained through questionnaires, and descriptive statistics applied to evaluate the data. According to the model summary, the independent variables account for 81.9% of changes in the dependent variable, as shown by the  $R^2$  value, which suggests other factors may exist but were not taken into consideration in this model and account for 18.1% of the competitive positioning of the hospitality firms in Kenya. According to the findings of the statistical inference, there is a statistically significant and positive correlation between circular business modeling and hospitality firms in Kenya. The study recommended more research to be done on circular business modeling practices in Kenya using different dependent variable as well as exploration on the challenges of adopting circular business modelling.

# CHAPTER ONE: INTRODUCTION

## 1. 1 Background of the Study

The weight on resources and the expanding human populace are leading to increased sustainability challenges for industry and society, which suggests that business cannot be conducted the same way anymore (Bocken & Short, 2016). An imperative move is indispensable on how each angle of business is undertaken (Jackson, 2009). Scholars, lawmakers and organizations have all identified Circular Business Modeling (CBM) as a driver for socio-economic and environmental protection (Geissdoerfer, Savaget, Bocken, & Hultink 2017). In order to be profitable, a firm must position itself competitively within the industry. (Porter, 1980). Firms can attain competitive positioning through the advantages of CBM means of delivery and creation of value (Bocken, Short & Rana, 2014).

Three theories formed the base of this study beginning with the triple bottom line framework by Elkington which propels the objective of sustainability in trade practices whereby firms look past economic benefits to also incorporate social as well as environmental matters to find out the total cost of conducting the business (Goel, 2010). The second one is the stakeholder theory by Edward Freeman asserting that an organization's stakeholders incorporate almost anyone influenced by the business and how it operates (Mcvea & Freeman, 2005). Thus, a focus on CBM will optimize relations with the stakeholders hence strategically positioning the business competitively. The third theory is Resource Based Theory (RBT) which holds that having strategic resources gives a firm a brilliant chance to distinguish itself from other firms. CBM would then assume the RBT to prong lifespan of the resources and thus provide sustained competitive advantage (Barney & Mackey, 2016).

Hospitality is an industry subset within the tourism sector which has a significant impact on the economy of Kenya. What justifies this is the fact that it follows agriculture as the second biggest earner of foreign exchange contributing approximately 10 percent to the country's GDP (GoK, 2019). Tourists who pay to visit various attractions provide the

necessary foreign currency. The majority of governments have implemented policies to protect wildlife and the environment as a whole after discovering the potential for the tourist and hospitality industries to generate revenue for the country's economy. One of Kenya's six main pillars of growth under its Vision 2030 is the industry of tourism, which is also an essential link to the nation's hospitality sector. So, by connecting tourism activities to local suppliers, this sector may be a key way of achieving the goal of economic development of underdeveloped regions. Hospitality firms hence need to keep on striving to ensure environmental sustainability aimed at conserving the natural resources for sustained competitive advantage.

### **1.1.1 Circular Business Modeling**

The theory relating to the closed-loop value creation, delivery, and retention processes within an organization cycle is known as CBM (Mentink, 2014). Using residual economic value of items after use to create new offerings is the conceptual basis for value creation. Since the 1990s, there has been a significant development in the writing on business models. It can be interpreted as an illustration of how a business generates and provides value to clients in order to generate revenue and build a competitive advantage sustainably (Taran, Nielsen & Montemari, 2016).

CBM encompasses three aspects namely; environmental, social as well as sustainability of the economy. The balance of social, environmental protection and economic growth will bring about a sustainable system as long as it is environmentally manageable, socially enduring, and economically equitable (Todorov & Marinova, 2011). Looking at the environmental aspect of CBM, we find three propositions holding up this concept. These are maximizing resource efficiency, protecting and enhancing natural resources, and developing systems viability (Leaders, 2016). The social pillar of sustainability in CBM underscores the positive impact of the business to the society. According to Ghisellini, Cialani, & Ulgiati, 2016, a move towards CBM is usually associated with job creation. Green jobs and links to the employment created in the eco innovations and green sectors are used as estimates of social sustainability of CBM (Marco-Fondevila, Moneva Abadía, & Scarpellini, 2018). According to Rossi, Bertassini, and Ferreira

(2020); Amaral (2020) the number of jobs created within the circular supply chain, skills created in the recycling activities and the income thereof are attributed to the social indicators of CBM. Economic sustainability is the gainful aspect of sustainable development practiced by a firm (Elkington, 1997) It is the operation of sustaining the yield of a firm by taking into consideration its environmental and social impacts spread over a duration and earning a profit (Spangenberg, 2005).

### **1.1.2 Competitive Positioning**

The positioning strategy is an idea over which firms place their competences and resources against the external environmental impact, influence of stakeholders and expectations (Johnson & Scholes 2002). Porter (1985) suggests that competitive strategy is the pursuit for an advantageous zealous positioning in the business sector. It purposes to lead to a position that is sustainable and profitable in contradiction to the industry forces of competition. Competitive positioning is a marketing strategy that denotes how an organization can differentiate itself from the competitors. Competitive positioning outlines an organization's comparative posture in competitive space (Porter, 1985). It empowers an organization to establish an invulnerable position by making aggressive or cautious steps as per the organization's potential and fragility within the industry (Porter 1980, 1985).

A firm's economic sustainability can also be impacted by the precise position it occupies within the same industry. There are different typical competitive tactics a company can use. Thompson and Strickland (2007) articulates that a firm can either adopt a cost leadership or differentiation strategy. Cost leadership concept insinuates prioritizing economic operation than the rival firms (Thompson & Strickland, 2007). According to the differentiation strategy, a business provides a unique offering that is unrivaled and highly valued by the market, allowing it to charge prices beyond the industry standard (Porter, 1985). The study aimed at exploring application of both cost leadership as well as differentiation as relative measures of cost and quality for competitive positioning.



In addition to Porter's generic strategies, the study also looked at the value discipline model for positioning strategies as introduced by Wiersema and Treacy in 1993 for measuring competitive positioning. Three value disciplines are identified by the model. These are excellence in operations, product leadership as well as intimacy in customer service delivery. The goal of operational excellence is optimization of production and delivery resulting in reliability and price competitiveness achieved with minimal difficulty (Wiersema & Treacy, 1993). A study by Sutton (2012) established a relationship between operational excellence and an advantage over competitors through organizational plan of action. The goal of product leadership is to make the competitors' offers obsolete by striving to have a leading-edge product that consistently enhances consumers' experience (Wiersema & Treacy, 1993). A study by Hunt and Morgan (1995) in the Netherlands identified a noteworthy link connecting competitive advantage and product leadership. New as well as best product innovations have optimized operational efficiency and added value for the clients, Sorescu et al (2011). Customer intimacy involves creating competitive value through tailor made offers to build relationships with customers hence achieving profit over the lifetime through repeat business, customer recommendation and loyalty (Wiersema & Treacy, 1993). In a study of the impact of customer intimacy to an organization, Wang, Lo and Hui (2003) noted a connection between a company and its clients.

### **1.1.3 Circular Business Modeling and Competitive Positioning**

CBM with reference to triple bottom line approach features social, economic, and environmental sustainability. Tajbakhsh and Hassini (2015) argue that adopting CBM with reference to environmental sustainability helps organizations in managing corporate strategy. Environmental sustainability is nowadays a strategic concept and a trend which is emerging around the world and therefore important for organizations to be aware of the merits to clients, employees and economically at large. Due to the continual progress of “sustainability”, firms link the significance of this concept in operations so as to appraise not only the performance but also the effect of sustainability practices to competitive positioning (Agostini, et al 2016)

In order to be competitive, an organization can choose to lead in terms of price or uniqueness (Porter, 1980). A company can position itself to be environmentally sustainable by being eco-efficient, which means using practices that help reduce the amount of waste and energy that is used. (Orsato 2006). On the other hand, an organization can advance the opportunities to achieve differentiation in line with environmental sustainability by participating in brand compliance such as eco certification thus competitively positioning itself as eco-branded to capitalize on the niche market. A study on CBM in the Service and Manufacturing Sectors by Upadhyay et al (2019) established that adopting the model would give rise to value at different stages ranging from sourcing of raw materials to the finished product. Studies from the hospitality industry exhibit organizations that practice environmental friendliness are able to both mitigate costs and enhance the brand image hence competitively position themselves (Walsh & Dodds 2017). To add more insights to the growth rate of an organization, the resource-based theory gives value as well as theoretical explanations about the direction of an organization's differentiation strategy (Andersen & Kheam, 1998). Resources are heterogeneous hence give an organization a unique proposition. Resources are a source of economic gain and can be packaged. Resource based view postulates that as organizations broaden their capabilities and resources, they achieve economies of scale by mitigating costs of operation and anchor remarkable efficiencies by common fixed assets like common production facilities, channels of distribution, as well as branding hence positioning competitively.

#### **1.1.4 Hospitality Industry in Kenya**

Hospitality and Tourism businesses fall within the Tourism Ministry in Kenya. Over time, tourism has evolved and grown, becoming one of the major drivers of the world economy. (Kiprutto, Wambui & Koome, 2011). The study focused on the hospitality firms which comprises the Hotels, Wildlife Lodges and Camps, and Beach Resorts that anchor to the tourism sector. The Hospitality sector forms a substantial part of the informal sector and a significant source of work making up 8.7% of all jobs in Kenya (KNBS, 2019). In 2020, the World Bank conducted a study which revealed that more than 90% of hotels and other hospitality businesses had to close due to Covid-19. The

Hospitality industry recorded more than 80% loss of revenue in the early months of 2020 and an estimate of more than 2 million jobs lost (Wathuja & Kariuki, 2022). According to data obtained from the KNBS, the industry had a recovery in 2021, which was reflected in an increase in both domestic and foreign tourist arrivals. The relaxation of travel restrictions and the rise in Covid-19 immunization rates were cited as the causes of this.

There has been a rapid economic growth within the hospitality sector across the globe particularly featuring the growing travelers. Included in the main goals in the hospitality sector is achieving sustainability to create satisfaction in customers thus creating a successful connection with the market. Expansion within the hospitality sector around the world has demonstrated that there are chances for economic development in the sector (Daracha, 2013). The hospitality sector in Kenya enjoys a blend of both domestic and international customers. The overall bed occupancy rate increased from 18% in 2020 to 20% in 2021. The greatest hotel bed occupancy in 2021 was 27% in December, followed by 25% in June. The World Rally Championship (WRC), which was contested in June 2021, drew competitors from all around the world, increasing the number of beds occupied in that month. The lowest bed occupancy rate in 2021 was recorded in April, at 14%.

## **1.2 Research Problem**

Positioning within an industry is influenced by the industry forces. According to Porter (1979), The combined resistance of the five industry forces determines whether a sector will remain viable. The generic competitive strategy would see an organization adopt either cost leadership or differentiation to position itself in the market space. The scramble for natural resources increases competition due to the increased pressure. CBM advocates for environmental and social sustainability with economic value. Similar studies conducted on sustainability have focused either on environmental, social or economic aspects. Adopting a holistic concept such as CBM will be more informative to an organization to develop competitive positioning.

The hospitality sector, which is a significant element of the sector of tourism in Kenya, has made the management of environment a key concept. According to Erdogan and Baris, (2007), hospitality firms use a lot of water, waste generating consumable goods and energy due to the lavish nature of their operations, features, and services, which has a considerably greater adverse environmental effects as well as the cost of doing business than is typically thought. There is economic and competitive advantage for hospitality firms in addition to environmental and social benefit of lowering consumption of energy, water and managing wastes. On the basis of environmental conditions, numerous financial institutions and insurance providers are beginning to change their rates (Rajak, 2020). Nowadays, customers in the hospitality sector are becoming environmentally responsive, therefore making the demand for eco-friendly products increase. As a result, many firms within the hospitality industry are adopting sustainability principles (Karim & Islam, 2020).

There is insufficient research on CBM in hospitality. A few studies that focused on environmental sustainability include a research by Kimeu, (2015) who investigated how efficiency in operation is impacted by waste management and looked into the strategies used by Mombasa County's hotels. He found out that waste management had a moderating impact on operational effectiveness. A study on good environmental practices among beach resorts in Kenya by Osiako and Kummitha (2020) found out that most properties take measures to conserve water and energy. A research by Kariuki, (2014) looked into the connection between eco-friendly practices and how well hotels in Kenya's coastline perform operationally. He demonstrated a link between operational success and green practices. This study's objective is to demonstrate CBM strategies and how they can help an organization position competitively in the marketplace as there is no measure of excellent environmental and social performance that will give longevity to a firm that is unsustainable economically. This research intends to respond to the following inquiries. What degree has the hospitality industry in Kenya adopted CBM? Does adoption of CBM have an effect on competitive position amongst Kenya's hospitality firms?

### **1.3 Study Objectives**

The study's aims were as follows:

- i. To ascertain the key drivers of circular business modeling in hospitality industry in Kenya
- ii. To examine the effect of circular business modeling on competitive positioning in the hospitality industry in Kenya

### **1.4 Value of the Study**

The findings of this study will be of use to many stakeholders. First, the research findings will be beneficial to researchers in the academic discipline who may develop interest to carry out additional related research within this area thus use this document as a reference.

This research will also help the government in the articulation of related policies that may be aligned to the benefits of CBM such as matters on environmental concerns and natural resources protection. Moreover, the management will also be able to further identify aspects of CBM that positively impacts the performance of operations management that can potentially position the firm competitively hence allocate more time on research and development on matters concerning CBM within the hospitality sector.

Kenya's hospitality businesses will comprehend CBM then adopt the best circular business practices that have mutual benefits. Other firms, as well as the general public will also understand the significance of aspects of CBM that cater for social, environmental and natural resources protection while also economically benefiting them.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

In this chapter, the primary goal is to explore the narrative review done by other researchers and scholars as well as theories that support CBM by Hospitality firms by checking on the practices undertaken that have environmental and socio economic benefits. This includes theories upon which the study is based, empirical literature review and the theoretical underpinnings.

### **2.2 Theoretical Foundation of the Study**

Any study needs to be premised or anchored on certain guiding theories. The research is supported by three theories which are; the triple bottom line framework, stakeholder theory and resource based theory.

#### **2.2.1 Elkington's Triple Bottom Line Framework**

The triple bottom line framework is a contrive that is interconnected to sustainability invented by Elkington (1997). Tracing the genesis of sustainability dates back to more than 130 years from the spaceship earth idea (Alhaddi, 2015). This theory has evolved over the years and gained more significance especially on the emergence of the phrase sustainable development (World Commission on Environment and Development & Brundtland, 1987) that described it as the growth that meets present-day generations wants without affecting the potential of the upcoming generations to meet their own wants.

Essentially, the triple bottom line framework exhibits further development of environmental sustainability to encompass social and economic lines. Elkington applied the terms planet, people and profit in the definition of triple bottom line.

Steered by continuity, the triple bottom line theory gives a foundation for accessing success with the business performance featuring the lines of environmental, social and

economic (Goel, 2010). This study mirrored environmental, social, and economic aspects to refer to planet, people, and profit respectively.

### **2.2.2 Stakeholder Theory**

The stakeholder theory was first done by Eric Rhenman (1964), a Swedish scholar who acknowledged the significance of both external and internal stakeholders. Two decades later, Edward Freeman then pinned the stakeholder framework to his work (Freeman & Moutchnik, 2013). The groundbreaking work of Edward Freeman (1984) then made famous the stakeholder theory and became a reference to academicians.

According to the theory, a firm's stakeholders encompass nearly anybody impacted by the business as well as its undertakings. Freeman (2012) points out that stakeholders of a firm to be those groups, without whom the organization could not continue. Included in reference are suppliers, customers, employees, local communities, financial institutions, political action groups, environmental groups, the media, etc. Essentially, this maps the corporate environment as an ecological community of interconnected groups, who should be regarded and content to retain the organization in good shape and victorious persistently (Quazi, et al 2015) Stakeholder theory acknowledges that there exists a dynamic and multiplex relation linking firms and their stakeholders (Gray, Owen & Adams 1996) thus putting more stress on the management of the interrelation (Friedman & Miles 2002).

A firm must not only understand the requirements and desires of its many stakeholders, but also interact with them so as to generate value that can be advantageous to all parties involved (Kramer & Porter, 2011). This study related the interaction of a firm to its stakeholders for opportunities to create value for competitiveness.

### **2.2.3 Resource Based Theory**

The resource based theory started to shape up in the 1980s with ancestry roots to Theory of the Growth of the Firm. Subsequently, Barney's critical work in the 1990s trumpeted the emergence of resource based theory thus creating a paradigm shift in the strategic

planning and management. The theory gives a framework upon which a firm can envision the essentials of competitiveness and performance by leveraging the capabilities of internal resources. It focuses on detailing imperfectly imitable resources of the firm that could possibly enhance the starting point of continued competitive advantage (Barney, 1991).

The resource based theory postulates resources are heterogeneous and thus the possession of specific resources by a firm can potentially create a skills advantage thus competitively position it in trading. Porter (1989), highlighted that the internal factors of an organization such as capabilities and resources can influence the organization's profit. Company resources that are uncommon, difficult to copy, valuable and not easy to replace thus the key origin of a firm's sustainable competitiveness and higher performance (Barney, 1991). These resources would include; geographical location, capital resources such as assets, equipment and plants and technology, Human capital resources such as knowledge, skills and insights, Organizational administrative and learning resources.

## **2.3 Constructs of Circular Business Modeling**

The constructs of CBM encompass sustainability in terms of the environment, society, and economy. Development that is sustainable was formerly looked at as a resolution of environmental, social and economic goals (World Commission on Environment and Development & Brundtland, 1987)

### **2.3.1 Environmental Sustainability**

The environmental aspect of triple bottom line theory features undertaking operations that prohibit impacting the natural resources negatively for the sake of next generations. This includes careful use of energy resources, watching the carbon footprints etc. (Goel, 2010). A study by (Kearney & Porter 2009) revealed that organizations that practice environmental sustainability and improve the social welfare of the stakeholders and investors value, outmatch their industry competitors economically. This economic advantage comes from mitigated costs of operations e.g., monitored consumption of



energy, water and recycling etc. Revenues increased as a result of the development of cutting-edge green products. (Kearney & Porter 2009).

CBM with regards to environmental sustainability can be attributed to the efforts of eco-innovations which include renewable energy, waste recycling and conservation of water . A study by (Alonso-Almeida, et al 2016) found that some organizations began putting into practice eco-innovations such as rain water storage. In trying to find out the different designs that have minimal impact on the environment, (Costa, 2022) established that creativity relative to forms of CBM had been used in property renovations, construction, and within operations. Sources of renewable energy include: wind and solar energy, hydroelectric energy, and biogas. The fundamental advantage of sources of renewable energy compared to non-renewable, is the truth that renewable energy sources cannot be depleted in time. However, it is conceivable to completely deplete their potential. Therefore, there needs to be greater care in location, selection and actualization of renewable energy related projects like hydro-electric power. Notable demerit of renewable energy sources is that it is impossible to store and transport them within their natural state eg. Solar radiation and wind energy (Gracan, et al 2008). For the case of water, the paramount issue in CBM is the hierarchy of waste that gives prevention a priority, then reuse preparation, then recycling, and lastly energy recycling and disposal.

### **2.3.2 Social Sustainability**

The social aspect in the triple bottom line features administering advantageous and equitable operations of the business to the community, employees and labor which have value to the society (Elkington, 1997). According to James, Andy, & Steger, 2015, social sustainability aspects that would align to the hospitality industry include: labor rights, cultural competence, health equity, human rights, place making social equity, community development, social justice, social capital, livability, community resilience, and human adaptation.

Social responsibility has also proven to be vital to the good of the business and ignoring would have economic implications. The performance of the social aspect gives attention

of the organization to the community and handles the welfare of the employees, community as well as reasonable wages (Goel, 2010).

### **2.3.3 Economic Sustainability**

The aspect of economic line within the triple bottom line framework touches on the influence of business activities of the firm upon the industry (Elkington, 1997). It refers to the potentiality of the economy as a sustainability submatrix to pull through and advance to sustain future generations (Spangenberg, 2005). It connects the growth of the firm to development of the economy and how the firm positions itself to support it.

There are six economic sustainability benefits relative to the hospitality industry that firms can benefit by adopting CBM (Zhu-Bandelier, 2021). These include; sustaining ecotourism, utilizing renewable energy, recycling garbage, rethinking consumer goods, and satisfying customer demand. Properties in the hospitality industry usually require heavy capital expenditure in building and design as well as operations and usually have a short lifespan thus incurring huge costs in renovations. A change to adopting materials within a Circular Economy (CE) will ensure long term sustainability (Zhu-Bandelier, 2021). With regards to renewable energy, a study by Zhu-Bandelier, (2021) noted that there is a huge consumption of energy in hospitality firms to meet the luxury demands such as 24hr lighting, laundry operation. In CBM, the benefit of renewable forms of energy would mitigate the costs. Waste is generated on a large scale within the hospitality industry leading to less cost efficiency but there is a chance that the wastes can be recycled into usefulness in a circular business model e.g. making compost for vegetable gardens, making biogas (Zhu-Bandelier, 2021). Hospitality industry as well uses consumable products which includes laundry chemicals and toiletries which are expensive. A shift in CBM would see an adoption of sustainable products and dramatically mitigate the costs. CBM when fully adopted would also capitalize on the niche market segment of eco-tourism and be financially sustainable. Lastly, there are more consumers now than ever before who are becoming sensitive about environmental sustainability and thus taking the CBM approach would be a marketing tool to position the firm competitively (Zhu-Bandelier, 2021)

## **2.4 Empirical Literature Review**

This section explores the research carried out in relation to CBM practices within hospitality firms. In a study on 50 largest hospitality firms in the world, Hsieh (2012) embraced a substance investigation about website contents to distinguish the clear individual significance of different environmental sustainability inventiveness. The outcome showed that efficient use of water and consumption of energy as well as management of waste, were undertaken by these hospitality firms. The findings were underpinned by openly available marketing material, which noted that these leading hospitality firms progressed sustainability of environment policy around the principle of efficiency as a way to position competitively within their markets. The study found out that environmental sustainability solutions that mitigate costs and progress economic performance of the hospitality firms are significantly positively correlated.

A case study by Bradford University in 2019 on a chain of hotels in Finland, Denmark, Sweden and Norway whereby a team of executives in sustainability, corporate, commercial operations, positions representing near 50 per cent of the Scandinavian hotel market total bed volume took part in the research established that the application CBM framework in the hospitality industry through adopting mitigation of cost on operating expenses was practically viable and achieving competitive advantage with potential customers, through circular or sustainability market segmentation (Sorin & Sivarajah, 2021).

A case study on Hilton, Melia and Sun Hotels by Victoria Matteucci in 2020 on how the hospitality sector can boost company value in accordance with the goals of sustainable development aimed to establish gains hospitality firms would achieve as a result of their Corporate Social Responsibility (CSR) dedications and to look into more beneficial opportunities for the firms by a distinct approach in their choice of sustainable initiatives. The study concluded that by amalgamating sustainability efforts to brand their promise, hospitality firms can design authentic objectives, strategically encompassing the vision of the brand, building up brand equity and value generation, while growing the loyalty of customers (Matteucci, 2020)

A study by the European commission on CE in Africa pointed out elements in the transition of the Kenyan economy adopting CBM in different fields. By basing on the triple bottom line effects, CBM was seen to potentially create new business ventures, enhance international competitiveness of some industries and grow exports, and transform waste to valuable revenue creating projects. An example was Safi Organics which generated an inventive the waste management value chain by applying technology to make natural fertilizer. Adoption of CBM established a market for farm trash by purchasing leftover rice husks, hence within the economic sustainability line and certainly factoring in environmental aspects by converting 150 tons of waste into beneficial material. (European Commission, et al 2020)

Alternative studies carried in Kenya mainly focused on green practices implementation in the hospitality industry to adopt sustainability. Example, a study by Gitobu and Njoroge, (2015) on application of green marketing techniques by Mombasa County hotels revealed that cost-saving and positive brand perception as a benefit of adopting the green practices. A case study by Irungu, (2016) on the adoption of environmentally friendly design in Kenya's hospitality sector featuring Serena group of hotels found out that the advantages would benefit both the industry and consumers. This study, on the other hand, intends to concentrate on taking the advantage of Elkington triple bottom line expansion to holistically encompass environmental, social and economic sustainability of CBM for competitive advantage.

## 2.4 Summary of Literature Review

**Table 1: Summary of Literature Review**

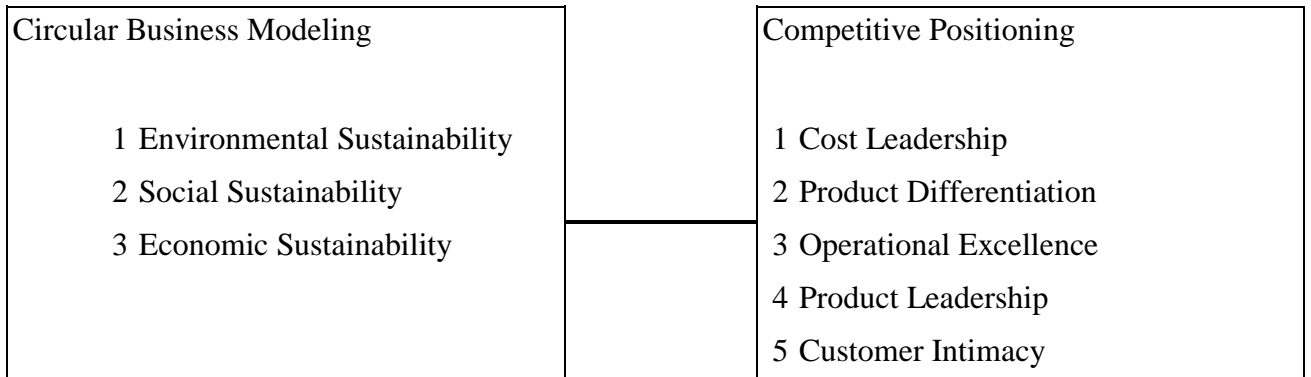
Author	Title of the study	Methodology	Key findings	Knowledge Gap
Hsieh (2012)	Environmental awareness and commitment of Hospitality firms	Content analysis	Significant positive correlation between approaches for environmental sustainability and economic success of the hospitality firms	No social dimension of CBM
(Sorin & Sivarajah 2021).	Examining the CE in the hospitality sector with data from Scandinavian hoteliers	Empirical	Confirmed the potential for the CE to generate value for hotel owners	The context within the Hospitality industry in Kenya
Victoria Matteucci (2020)	How can the hospitality sector improve corporate value in line with the objectives of sustainable development? Samples drawn from the Hilton, Meliá, and Sun	Empirical	Amalgamating sustainable efforts to brand their promise, hospitality firms can design authentic goals, strategically encompassing the brand's mission, enhancing brand equity, delivering value, and increasing consumer loyalty	The context within the Hospitality industry in Kenya
European Commission, (2020)	CE in Africa	Concept paper	Kenyan economy adopting CBM in different fields	Action plan in the Hospitality industry
Gitobu Joyce, (2014)	Hospitality firms in the County of Mombasa adopting green marketing principles	Census survey, descriptive analysis	Mitigation of costs and positive image are benefits of adopting the green practices.	Single focus on the environmental line. No broadness to social and economic lines
Pauline Irungu (2014)	Adoption of environmentally friendly design in Kenya's hospitality sector featuring Serena group of hotels	Case study	Social and economic advantages would benefit both the industry and consumers	No linkage on leveraging economic dimension of CBM

## 2.5 Conceptual Framework

Below is the conceptual framework to link CBM to competitive positioning. Competitive positioning was the dependent variable while CBM was the independent variable. CBM was expected to have an effect on competitive positioning in hospitality firms in Kenya.

Independent Variable

Dependent Variable



**Figure 1: Conceptual Framework**

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This section involved an examination of the demographic and sample, an evaluation of the research methodology, and the suitability of the design. The chapter gives a synopsis of the methods that was put to use during the research, including a strategy for choosing the sources and categories of data to address the study's objectives and respond to its research questions as well as a framework for defining the relationships between its variables. The chapter discussed several elements of the target population, methodologies for gathering and analyzing data.

### **3.2 Research Design**

The phrase "research design" describes the overall strategy selected so as to incorporate many study components in a logical and coherent manner, ensuring successful addressing of the research topic (Mugenda & Mugenda, 2003). Cross-sectional survey methodology was applied to the research which is a descriptive study that paints a picture or gives a description of a business component at a specific time. (Arthur, et al 2011). Quantitative data can be collected effectively using the approach. (Mugenda & Mugenda, 2003). In addition, this design allowed data collection and making assumptions at one stage regarding the population being surveyed.

### **3.3 Population of the Study**

The study population is defined as the subjects which the study would like to research on to get more information. In this case the study population included all hospitality firms in Kenya listed by Kenya Association of Hotel Keepers (KAHC) which were 189 hospitality firms at the time of the study. Appendix II enlists these firms. This was a census study.

### **3.4 Data Collection**

The means of gathering data applied by the researcher was the primary data collection method using structured questionnaires crafted to have the study objectives focusing on the effects of CBM to competitive positioning. The questionnaire had three segments which include, general information, CBM practices and competitive positioning. According to Kothari (2004), given its ability to quickly collect a large amount of data, this is the best tool for data collection. This included sending the questionnaires via email to the relevant correspondents.

### **3.6 Validity and Reliability Test**

Validity is the capacity of the research instruments to quantify the objectives of the researcher. (Bolarinwa, 2015). To evaluate the validity of the study, criterion validity was used. Criterion validity describes how well an instrument predicts a person's performance. The study applied Cronbach's alpha coefficient to examine the validity of the questionnaire's metrics. The reliability test was performed on 10% of the sample size, hence, 19 hotels participated in the test research. The respondents were not incorporated into the final collection of data. A reliability test cutoff value of 0.7 or higher is applied for Cronbach's alpha. (Bonett & Wright, 2015). A newly constructed questionnaire should have a coefficient of 0.7 or higher. Prior to using the instrument for the last data collection activity, it was suitably changed in light of the evaluation.



### 3.7 Operationalization of Study Variable:

**Table 2: Operationalization of Study Variable**

Latent Construct	Sub - Constructs	Operational Variables	Source / Authority	Measurement	Scale	Questionnaire Item
CBM	Environmental sustainability  Social sustainability  Economic sustainability	Renewable energy, waste recycling and conservation of water Green jobs, attention to community, employee welfare investing sustainably, using renewable energy, recycling garbage, reevaluating consumer goods, and promoting ecotourism and meeting demands of consumers who are environmental sensitive	Almeida (2016)  Goel (2010)  Zhu-Bandelier, (2021)	Likert scale	Interval	Section B
Competitive Positioning	Cost leadership  Product differentiation  Operational excellence  Product leadership  Customer leadership	Mitigate costs, economies of scale  Eco certification for brand image  Optimization of production and delivery  Innovation for operation efficiency  Tailor made offers and loyalty programmes to build relationships with customers	Walsh and Dodds (2017) Treacy & Wiersema, (1993) Sorescu et al (2011)	Likert scale	Interval	Section C

### 3.8 Data Diagnostics:

Prior to estimating the equation, it was crucial to ensure that none of the traditional linear regression model's underlying assumptions have been violated in order to reduce the

likelihood of generating inaccurate, ineffective, and unreliable parameter estimates (Beggs, 1988). Therefore, tests for normality, linearity, autocorrelation, heteroscedasticity, and multicollinearity were carried out to verify that model test assumptions are taken into account before running any regression model. The Kolmogorov-Smirnov test was used to verify the normality test. If the data being considered are primary data and come from more than 100 observations, the approach is appropriate. Given the cross-sectional nature of the data, the Durbin Watson (DW) test was used to check for autocorrelation. The value of the Durbin-Watson statistic will always fall between 0 and 4. A score of 2.0 implies that the sample contains no autocorrelation. Heteroscedasticity was measured using the Koenker test. The Variance Inflation Factor (VIF) was used in the study to assess multicollinearity. The table 3 below summarizes the test, test statistic, decision criteria and conclusion

**Table 3: Summary of Diagnostic Tests**

<b>Test</b>	<b>Test Statistic</b>	<b>Decision Criteria</b>	<b>Conclusion</b>
Normality Tests	Kolmogorov Smirnov test	$p > 0.05$	Normally distributed
Linearity Tests	Deviation from Linearity	$p > 0.05$	Linear relationship
Autocorrelation	Durbin Watson (DW) test	$1.5 \geq DW < 2.5$	No autocorrelation
Heteroscedasticity	Koenker Test	$(p > 0.05)$	Data is homoscedastic
Multicollinearity	Variance Inflation Factor	$VIF < 10$	No Multicollinearity

### **3.9 Data Analysis**

The information gathered during the research was mainly quantitative data from primary sources. The data was then subjected to processing for comprehensiveness, consistency and accuracy. To prepare the data for analysis, processing entails editing, coding, classification, and tabulation (Kothari, 2004). The researcher employed descriptive

statistics to examine the data which included frequencies, percentages, mean score and standard deviation. The researcher used frequency and percentages to explore the firms' information while standard deviation and average score were used to establish the effect of CBM to competitive positioning among hospitality firms in Kenya. Moreover, to gauge how closely the study's variables are related, the researcher used correlation and regression analysis in the below form:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3$$

Where by:

Y = Competitive positioning

$\beta_0$  = Constant

X1= Environmental sustainability

X2 = Social sustainability

X3 = Economic sustainability

## CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

### 4.1 Introduction

The goal of this study sought to ascertain the impact of CBM on competitive positioning among the hospitality firms in Kenya. Chapter four analyzed the collected data on CBM practices. To obtain and summarize the descriptive statistics, the researcher used SPSS and presented the findings in tables and graphs. The studies and analyses of the research descriptive and inferential data were used to guide the discussions for each objective. The chapter begins by examining the respondents' response rate.

### 4.2 Response Rate

The target demographic of the research was 189 firms in the hospitality industry in Kenya. The general managers, operation managers, and marketing managers made up the main respondents. As indicated in table 4, 116 from distributed 189 questionnaires were completed and submitted. A return rate of 61.4% was obtained from the 116 firms who completed the survey.

**Table 4: Response Rate**

<b>Distributed Questionnaires</b>	<b>Frequency</b>	<b>Percentage</b>
Submitted	116	61.4%
Not submitted	73	38.6%
<b>Total</b>	<b>189</b>	<b>100%</b>

### 4.3 General Information on Respondents

This section highlights the contents of section A of the questionnaire. This included the classification of the hotel, length of operation, current bed occupancy, knowledge of negative effects on environment, and environmental certification.

#### 4.3.1. Classification of Hotel

The questionnaire had classification of the hotels from 2 star to 5 star. Out of the 116 submissions, 2 were 2 star representing 1.7%, 51 were 3 star representing 44%, 47 were 4 star representing 40.5% and 16 were 5 star representing 13.8% as illustrated in table 5.

**Table 5: Classification of Hotel**

<b>Classification of Hotel</b>	<b>Frequency</b>	<b>Percentage</b>
2 Star Classified	2	1.7%
3 Star Classified	51	44%
4 Star Classified	47	40.5%
5 Star Classified	16	13.8%
<b>Total</b>	<b>116</b>	<b>100%</b>

#### 4.3.2 Duration of Operation

This part of the questionnaire asked how long the respondent's firm has been in business under choices of; less than 5 years, between 5 to 10 years and over 10 years. Of the 116 submissions, 7 had been in operation under 5 years, representing 6%, 13 had been in operation between 5 to 10 years representing 11.2% and 96 had been in operation above 10 years representing 82.8% as illustrated in table 6

**Table 6: Duration of Operation**

<b>Duration of Operation</b>	<b>Frequency</b>	<b>Percentage</b>
Less than 5 years	7	6%
Between 5 to 10 years	13	11.2%
Above 10 years	96	82.8%
<b>Total</b>	<b>116</b>	<b>100%</b>

### 4.3.3 Bed Occupancy

This section of the survey asked the current bed occupancy at the time of filling in the survey form. Table 7 below indicates the outcome.

**Table 7: Bed Occupancy**

<b>Bed Occupancy</b>	<b>Frequency</b>	<b>Percentage</b>
Below 50%	6	5.2%
Between 50% to 75%	45	38.8%
Between 75% to 90%	51	44.0%
Above 90%	14	12.0%
<b>Total</b>	<b>116</b>	<b>100%</b>

### 4.3.4 Knowledge on Negative Effects on Environment

This survey segment purposed to check if the participants knew about the adverse environmental implications of hospitality operations. Out of the 116 respondents, 104 said they were aware of the negative effects while 12 said they were not aware. This represented 89.7% and 10.3% respectively as shown in the table 8 below. For the respondents who said they were aware of the adverse environmental impact, the researcher further asked them to name some of the effects. The notable effects that were mentioned were generation of huge amounts of wastes, air pollution by emission of carbon, huge consumption of energy and natural resources, poor solid waste management, effluent discharge, destruction of wildlife habitat.

**Table 8: Knowledge on Negative Effects on Environment**

<b>Knowledge</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	104	89.7%
No	12	10.3%
<b>Total</b>	<b>116</b>	<b>100%</b>

### 4.3.5 Environmental Certification

This part of the research questionnaire was to find out if the hospitality firm of the respondent had earned an environmental certification from a reputable organization. Of the 116 respondents, 65 confirmed to have been certified representing 56% while 51 said no, representing 44% as shown in the table 9 below. The certification organizations mentioned included, Eco rating, Travel Life, EDL Certification, IHG Green Engage system, Center for Responsible Travel, and ECOsmart Accreditations.

**Table 9: Environmental Certification**

<b>Environmentally Certified</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	65	56%
No	51	44%
<b>Total</b>	<b>116</b>	<b>100%</b>

### 4.4 Descriptive Statistics

The objective of the research was to ascertain circular business modeling affected Kenyan hospitality businesses. To be able to assess the parties' level of adoption of circular business modeling approaches, they were asked to rate a range that was linked with information on the practices their firms engaged in. A total of 22 components made up the measurement. The elements were rated based on the Likert scale of 1 to 5, with 1 denoting "not at all" and 5 denoting "to a very large extent." Circular business modeling practices were defined by 3 three pillars of sustainability: social, environmental, and economic. Using the mean scores for the 3 elements, the aggregate score for circular business modeling practices was calculated. Statements with a high mean ( $>3.00$ ) suggested that the participants were in agreement, while those with a low mean ( $<3.00$ ) are a true representation of participants disagreeing. The standard deviation serves as a proxy for dispersion that demonstrates how far the data values are from the mean, (Cooper and Schindler, 2006). When the standard deviation (SD) is small ( $<1$ ), the sample mean is more likely to be near to the population mean than when the SD is large

(>1). The outcomes of the three circular business modeling constructs are shown in the subsequent tables.

#### 4.4.1 Environmental Sustainability

The outcome tabulated on table 10 below indicates that Guest Sensitization is the most practiced form of environmental sustainability with an average score of 4.2241. Second to that was Green Team Waste Management Practices with a mean of 3.9828. Conservation of Water had a mean score of 3.6724 while Use of Renewable Forms of Energy had a mean of 3.1638. Lastly, Recycling and Reuse of Waste had a mean score of 3.0603. The mean average score for environmental sustainability practices was 3.6207 which show that the majority of the hospitality companies in Kenya are adopting environmental sustainability practices.

**Table 10: Means and Standard Deviation for Environmental Sustainability Practices**

<b>Environmental Sustainability Practices</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Use of Renewable Forms of Energy	116	3.1638	1.10291
Green Team Waste Management Practices	116	3.9828	1.10322
Recycling and Reuse of Waste	116	3.0603	1.19629
Conservation of Water	116	3.6724	1.19983
Guest Sensitization	116	4.2241	1.08817
<b>Average Mean Score</b>		<b>3.6207</b>	

#### 4.4.2 Social Sustainability

The outcome tabulated on table 11 below indicates that Creation of Extra Jobs is the strongest anchor of social sustainability related to the hospitality firms with a mean score of 4.3190. Second to that was Green Team Waste Management Practices. Stakeholder



Co-operation with a mean of 3.8190. Lastly, CSR had a mean score of 3.6552. The mean average score for social sustainability practices was 3.9310 which indicates that most of the Hospitality firms in Kenya positively contribute to social sustainability particularly by creation of jobs.

**Table 11: Means and Standard Deviation for Social Sustainability Practices**

<b>Social Sustainability Practices</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Creation of Extra Jobs	116	4.3190	0.97445
Stakeholder Co-operation	116	3.8190	1.00086
Corporate Social Responsibility	116	3.6552	1.15799
<b>Average Mean Score</b>		<b>3.9310</b>	

#### **4.4.3 Economic Sustainability**

The outcome tabulated on table 12 shows that use of Bio-Friendly products is remarkably being adopted as a form of economic sustainability with a mean score of 3.9224. Second to that was Sustainable Investment Practices with a mean of 3.7241. Eco-branding for Eco-tourism had a mean score of 3.6207 while including CBM in Business Strategy had a mean of 3.4397.

The mean average score for economic sustainability practices was 3.6659 which indicates that most of the hospitality firms in Kenya are implementing CBM economic sustainability practices.

**Table 12: Means and Standard Deviation for Economic Sustainability Practices**

<b>Environmental Sustainability Practices</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
CBM in Business Strategy	116	3.4397	1.18900
Sustainable Investment	116	3.7241	1.10009
Bio-Friendly Products	116	3.9224	1.06445
Eco-branding for Eco-tourism	116	3.6207	1.18436
<b>Average Mean Score</b>		<b>3.6659</b>	

#### **4.4.4 Competitive Positioning**

The study was conducted to ascertain the firm’s competitive positioning associated with circular business modeling. This was assessed using the following five competitive positioning indicators: Cost Mitigation, Product Differentiation, Operational Excellence, Product Leadership, Customer Relationship. The outcome tabulated on table 13 below indicates the mean scores which ranged between 3.3707 and 3.7155. The highest score was on Operational Excellence (3.7155) followed by Customer Relationship (3.6638). The mean average score for Competitive Positioning was 3.5897.

**Table 13: Means and Standard Deviation for Competitive Positioning**

<b>Environmental Sustainability Practices</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Cost Mitigation	116	3.5431	1.09855
Product Differentiation	116	3.3707	1.29568
Operational Excellence	116	3.7155	1.02835
Product Leadership	116	3.6552	1.11202
Customer Relationship	116	3.6638	1.12632
<b>Average Mean Score</b>		<b>3.5897</b>	

#### 4.4.5 Drivers of Adoption of Circular Business Modelling

This part of the research questionnaire intended to inquire the motivation to adopt CBM practices. The range of factors were: Government Regulation, Cost Mitigation, Market Trend and Consumer Demand, Environmental Conservation and Institutional Requirements.

The results shown on table 14 below shows that Market Trend and Consumer Demand was the key driver for adoption with a mean of 4.5086 followed by Environmental Conservation with a mean of 4.3448.

**Table 14: Means and Standard Deviation for Adoption of Circular Business Modelling**

<b>Environmental Sustainability Practices</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
Government Regulation	116	3.7155	1.09855
Cost Mitigation	116	4.1207	1.29568
Market Trend and Consumer Demand	116	4.5086	1.02835
Environmental Conservation	116	4.3448	1.11202
Institutional Requirements	116	4.1034	1.12632

#### 4.5 Validity and Reliability Tests

Validity test instruments were verified by the supervisor. The researcher employed Cronbach's alpha to measure reliability and found it to be 0.942 for all the four items as shown on table 15 below.

**Table 15: Reliability test Results**

<b>No of Items</b>	<b>Respondents</b>	<b>Cronbach's Alpha</b>	<b>Comment</b>
4	116	0.942	Reliable

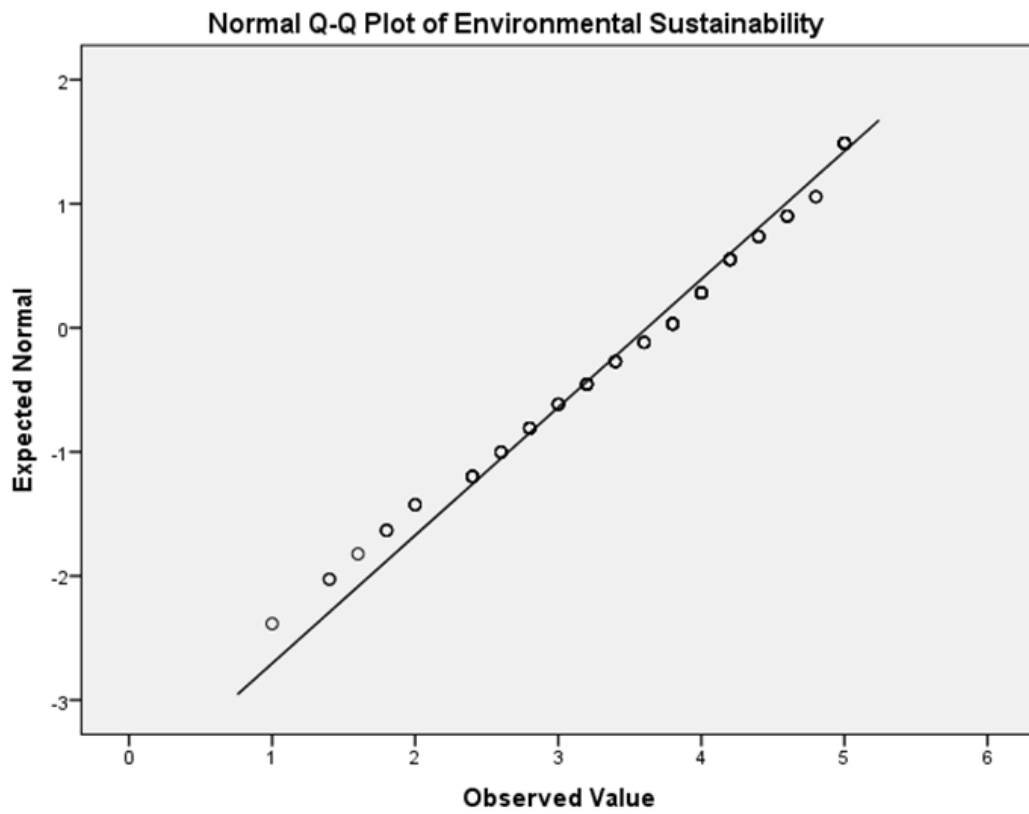
Table 15 above findings show that the entries had a 0.942 Cronbach's alpha rating. A reliability indicator is an alpha coefficient above 0.7.

#### **4.6 Diagnostic Tests**

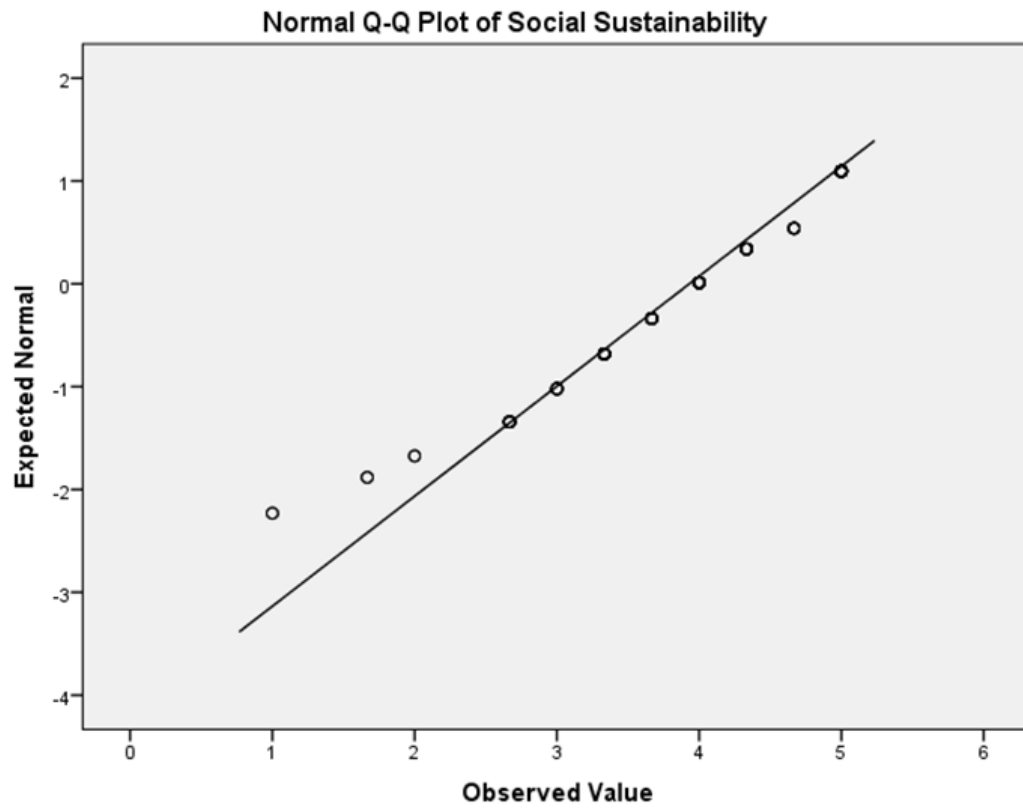
The diagnostics that were tested are shown in this section and consist of, normality, autocorrelation, heteroscedasticity, and multicollinearity.

##### **4.6.1 Normality Test Q-Q Plot**

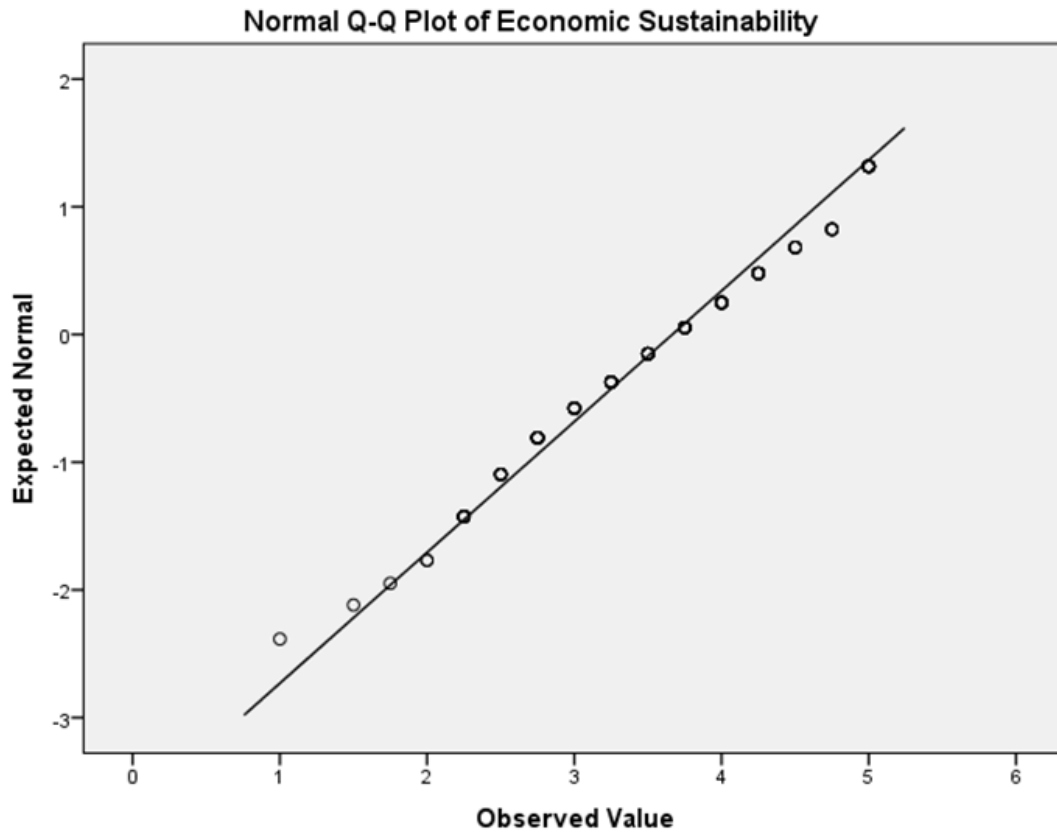
Using the normal Q-Q plot, it was determined whether the data were normally distributed. The alternative theory is that data do not originate from a population that is normally distributed. The graphical method of determining normalcy is a typical Q-Q plot. The data points will be close to the diagonal line if the data are from a normal distribution, and they will disperse away from the line if they are not. The following normal Q-Q plots show that data is not normally distributed thus rejecting the null hypothesis.



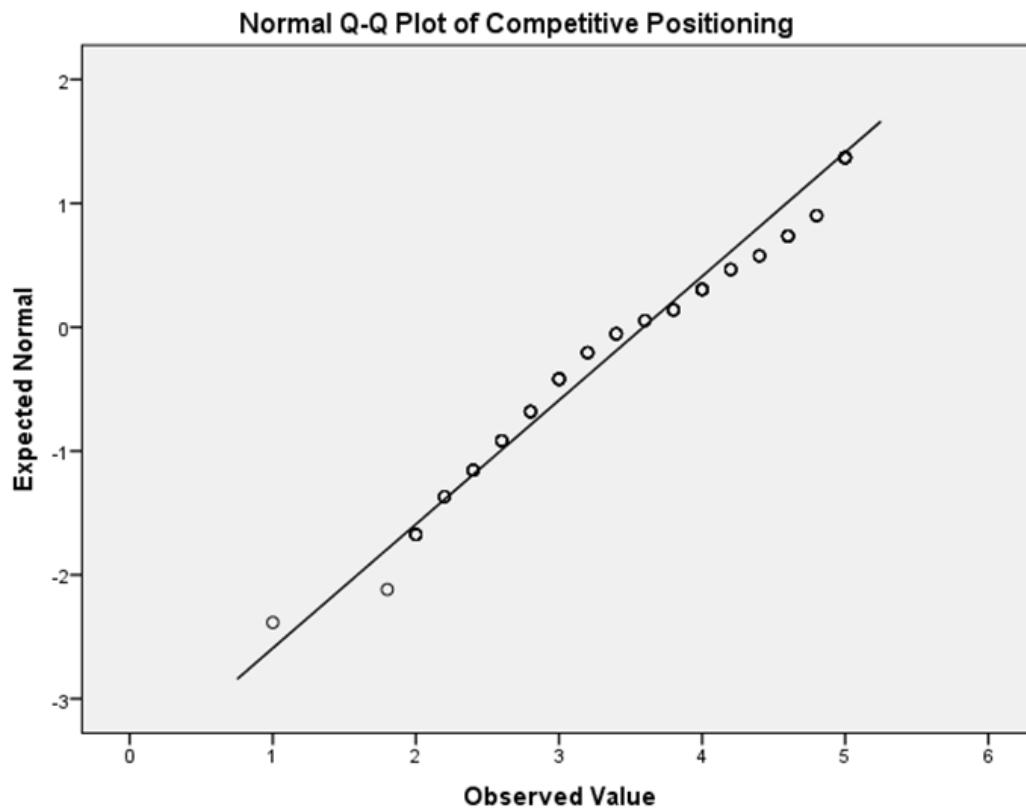
**Figure 2: Normal Q-Q plot for Environmental Sustainability**



**Figure 3: Normal Q-Q plot for Social Sustainability**



**Figure 4: Normality Test Q-Q Plot for Economic Sustainability**



**Figure 5: Normal Q-Q plot for Competitive Positioning**

#### **4.6.2 Autocorrelation**

Data can exhibit autocorrelation, which is a correlation between the values of related variables that is dependent on linked objects. It happens in the kinds of data-sets when the data is drawn from the same region rather than being randomly chosen. However, the researcher does not anticipate the existence of autocorrelation. Data dependencies are the primary culprit. The Durbin-Watson statistic is used to determine whether the results of a regression model are autocorrelated. A DW statistic value of 2.0, which ranges from zero to four, denotes 0% autocorrelation. Values below 2.0 show positive autocorrelation, and values above 2.0 demonstrate negative autocorrelation.



**Table 16: Autocorrelations Model Summary**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin - Watson
	.905a	.819	.814	.43125	1.563

Table 16 shows that Durbin - Watson  $d=1.563$  which is between 1.5 to 2.5 hence no first order of linear autocorrelation

**4.6.3 Heteroskedasticity**

Uneven dispersal is a sign of heteroscedasticity. A fundamental tenet of linear regression states that the residuals can't be heteroscedastic. In simple terms, this indicates that the variance of the residuals should not rise as the fitted values of the response variable do. This is seen from the perspective of the residuals in regression analysis. Heteroscedasticity is best understood as a systematic alteration to the residuals' spread over the selection of measured values. The Koenker test was used to measure heteroskedasticity.

**Table 17: Koenker test statistics and sig-values**

	LM	Sig
Koenker	6.616	.085

From table 17 above, the Koenker test has a sig-value of 0.085 which is higher than 0.05, hence no heteroskedasticity.

**4.6.4 Multicollinearity**

A point of significant connections and linkages between the independent variables in a multivariate regression model is called multicollinearity, also known as collinearity. This

implies that the one can be reasonably anticipated linearly from the others. Confidence intervals and hypothesis tests are affected by multicollinearity because these factors lead to unstable estimates and inaccurate variances. The zero value of a variable's coefficient is the null hypothesis. Regression analysis helps to explain the strong correlations between two or more independent variables and precisely determine the impact of independent variables. The study used the Variance Inflation Factor (VIF) to evaluate multicollinearity.

**Table 18: Table of Coefficients for Multicollinearity**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-.231	.179		-1.293	.199		
Environmental Sustainability	.213	.082	.206	2.589	.011	.255	3.920
Social Sustainability	.351	.067	.328	5.263	.000	.416	2.402
Economic Sustainability	.456	.081	.446	5.617	.000	.257	3.884

From the table above, the outcome indicates VIF values less than 10 ranging from 2.402 to 3.920 implying no existence of multicollinearity.

#### 4.7 Data Analysis

To create assumptions and predictions about the research population, inferential statistics using the regression model was employed.

### 4.7.1 Regression Analysis

Competitive positioning of the hospitality industry in Kenya was regressed against Environmental sustainability, Social sustainability and Economic sustainability. The research produced the model summary data shown in table 19 below.

**Table 19: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.905 <sup>a</sup>	.819	.814	.43125	.819	168.408	3	112	.000

The variation in response caused by changes in the predictor variables is shown by the coefficient of determination R squared. The value of R squared was 0.819 implying that 81.9 percent of the deviations in competitive positioning of the hospitality firms in Kenya are caused by Environmental sustainability, Social sustainability and Economic sustainability. Other factors outside the model account for 18.1 percent of the variations in the competitive positioning. The correlation value of 81.9% in the results also shows a considerable relationship between the independent variables chosen and competitive positioning of the hospitality firms. The study's ANOVA results are displayed in Table 20 below.

**Table 20: ANOVA Table**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	93.959	3	31.320	168.408	.000
Residual	20.829	112	.186		
Total	114.788	115			

A significance value of 0.000, which is smaller than  $p=0.05$ , was found. This suggests that the model was statistically significant in predicting how environmental, social, and economic sustainability affect the competitive positioning of hospitality firms in Kenya.

The relevance of each individual variable considered in this study as a predictor of the competitive positioning of hospitality firms in Kenya was determined by the researcher using a t-test. Figures in table 21 below indicate that the p value was less than 0.05 at 95% confidence level implying a measure of statistical significance.

**Table 21: Coefficients of the Regression Model**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.231	.179		-1.293	.199
Environmental Sustainability	.213	.082	.206	2.589	.011
Social Sustainability	.351	.067	.328	5.263	.000
Economic Sustainability	.456	.081	.446	5.617	.000

Results above indicate that environmental sustainability had a positive and statistically significant relationship on competitive positioning for hospitality firms in Kenya ( $r = .213$ ,  $p = .011$ ), social sustainability had positive and statistically significant relationship on competitive positioning for hospitality firms in Kenya ( $r = .351$ ,  $p = .000$ ), economic sustainability had positive and statistically significant relationship on competitive positioning for hospitality firms in Kenya ( $r = .456$ ,  $p = .000$ ) The estimated regression equation is as follows.:

$$Y = -0.231 + 0.213X_1 + 0.351X_2 + 0.456X_3$$

Where by:

Y = Competitive positioning

X<sub>1</sub> = Environmental sustainability

X<sub>2</sub> = Social sustainability

X<sub>3</sub> = Economic sustainability

Using the aforementioned calculated regression model, the constant = -0.231 indicates the competitive positioning of the hospitality firms in Kenya if the independent variables (environmental sustainability, social sustainability and economic sustainability) were set to zero. The competitive position of the hospitality firm in Kenya would grow by 0.213 units for every unit increase in environmental sustainability. A further increase in social sustainability one unit results in increased competitive positioning of the hospitality firm in Kenya by 0.351. Last but not least, a unit gain in economic sustainability would result in an increase of 0.456 in the competitive positioning of the hospitality firm in Kenya.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This section gives an overview of all the findings addressed in the previous chapter, draws conclusions, and lists the study's limitations. Additionally, the report provides policy suggestions for this topic that many stakeholders could adopt.

### **5.2 Summary**

The main purpose of the research was to ascertain the key drivers of adoption of circular business modeling and to examine the effect on competitive positioning for the hospitality firms in Kenya. The study put in place a conceptual framework whereby the independent variables were environmental sustainability, social sustainability and economic sustainability. The outcome of the descriptive statistics indicated significant practices of circular business modeling within the hospitality firms in Kenya with environmental sustainability recording a mean of 3.6207, social sustainability had a mean of 3.9310 and economic sustainability had a mean of 3.6659. From the statistical inference, the study established a positive correlation between circular business modeling constructs and competitive positioning. The p values for all the constructs was less than 0.05 at 95% confidence level implying a measure of statistical significance.

The findings of the study showed that a good number of the hospitality firms in Kenya from the respondents adopt circular business model practices. The key driver of adoption was market trend and consumer demand with a mean of 4.5086 followed by environmental conservation with a mean of 4.3448. Cost mitigation and institutional requirements also had a significant influence. The research's model summary established that 81.9% of the deviations in competitive positioning which is the dependent of the hospitality firms in Kenya are caused by environmental sustainability, social sustainability and economic sustainability. The regression model indicated that circular

business model constructs had a positive and statistically significant relationship on competitive positioning for hospitality firms in Kenya.

### **5.3 Conclusion**

Conclusion from the study can be drawn that competitive positioning of the hospitality firms in Kenya is significantly influenced by environmental sustainability practices, social sustainability practices and economic sustainability practices. From the study, it was established that a unit higher in environmental sustainability influences a positive change in competitive positioning by 0.213 units. The study also established that a unit higher in social sustainability influences a positive change in competitive positioning by 0.351 units. Furthermore, the study found out that a unit higher in economic sustainability influences a positive change in competitive positioning by 0.456 units.

The research outcome concurs with Hsieh (2012) study on 50 largest hospitality firms around the world that found out that environmental sustainability solutions that mitigate costs and progress economic performance of the hospitality firms are significantly positively correlated. The study findings also agreed with (Sorin & Sivarajah, 2021) research on a chain of hotels in Finland, Denmark, Sweden and Norway which established that the application circular business modeling framework in the hospitality industry through adopting mitigation of cost on operating expenses was practically viable and achieving competitive advantage with potential customers, through circular or sustainability market segmentation

### **5.4 Recommendations**

Following the conclusions made from section 5.3, the study recommends that hospitality firms should foster adopting the circular business model as it not only advocates for better environmental and social sustainability but also positions the firm competitively in the market space and sustains it economically. This echoes the study foundation on triple bottom line theory which gives a framework for accessing success with the business

performance featuring the lines of environmental, social and economic lines (Goel, 2010).

The study also recommends that more awareness be created to hospitality business owners to understand the importance of factoring the pillars of circular business model then align the business in the same direction. The study as well encourages managers to operationalize circular business model practices. Lastly, the study recommends that the government should enforce the legislations already in place that advocate for circular business model and furthermore incentivise quick adoption. The government should as well help build the circular economy by facilitating local innovations that support the needs of hospitality supply chains practicing circular business model

### **5.5 Limitations of the Study**

Despite the study being successful, there were some limitations. A few of the respondents declined to take part in the survey as they were reserved with company information to strangers despite reaffirming to them that the purpose of data collection was purely for academic reasons. The research was also conducted in a limited time and was covering a large population frame. Lastly, the study was dependent on primary data which at times can suffer from biases.

### **5.6 Suggestions for Further Research**

The research will serve as a point of reference for the future studies that will be undertaken on circular business model and competitive positioning for hospitality firms in Kenya. The study recommends that more research be done on circular business model in the hospitality industry in Kenya referencing different dependent variables so as to holistically expand the scope of sustainability and move away from seeing it as green practices only. The study also recommends an exploration of the government policies on circular economy already legislated but not fully implemented then made aware to hospitality firms. Lastly, the study recommends future research on the challenges of



adopting circular business model for the hospitality industry in Kenya and possible solutions.

## REFERENCES

- Agostini, C. A., Nasirov, S., & Silva, C. (2016). Solar PV Planning Toward Sustainable Development in Chile: Challenges and Recommendations. *The Journal of Environment & Development*, 25(1), 25–46.
- Alhaddi, H. (2015). Triple Bottom Line and Sustainability: A Literature Review. *Business and Management Studies*, 1(2), 6-10.
- Alonso-Almeida, M. D. M., Rocafort, A., & Borrajo, F. (2016). Shedding light on eco-innovation in tourism: A critical analysis. *Sustainability*, 8(12), 1262.
- Andersen, O., & Kheam, L. S. (1998). Resource-based theory and international growth strategies: an exploratory study. *International Business Review*, 7(2), 163-184.
- Arthur, C., Kable, A., & Levett-Jones, T. (2011). Human patient simulation manikins and information communication technology use in Australian schools of nursing: A cross-sectional survey. *Clinical Simulation in Nursing*, 7(6), e219-e227.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Barney, J. B., & Mackey, A. (2016). Text and metatext in the resource- based view. *Human Resource Management Journal*, 26(4), 369-378.
- Beggs, J. J. (1988). Diagnostic testing in applied econometrics. *Economic Record*, 64(2), 81-101.
- Bocken, N. M. P., Short, S. W. (2016). Towards a sufficiency-driven business model: Experiences and opportunities. *Environmental Innovation and Societal Transitions*, 18, 41-61
- Bocken, N.M.P., Short, S.W., Rana, P., Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production* 65, 42–56.
- Bolarinwa, O. A. (2015). Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. *Nigerian Postgraduate Medical Journal*, 22(4), 195.

- Bonett, D. G., & Wright, T. A. (2015). Cronbach's alpha reliability: Interval estimation, hypothesis testing, and sample size planning. *Journal of organizational behavior*, 36(1), 3-15.
- Costa, B. (2022, May). Circular Economy in the Portuguese hotel industry—an Empirical Overview. In *International Conference on Tourism Research* (Vol. 15, No. 1, pp. 65-73).
- Daracha, D. K. (2013). *Determinants of performance of the tourism industry in Kenya: A case of Kakamega County* (Doctoral dissertation, University of Nairobi).
- Elkington, J. (1997). *Cannibals with Forks: The Triple Bottom Lines of 21st Century Business*. Capstone Publishing, Oxford.
- Erdogan, N., & Baris, E. (2007). Environmental protection programs and conservation practices of hotels in Ankara, Turkey. *Tourism Management*, 28(2), 604–614. Retrieved from <https://doi.org/10.1016/j.tourman.2006.07.003>
- European Commission, Directorate-General for Environment, Karcher, S., Wekesa, Z., Waweru, J. (2020). *Circular economy in the Africa-EU cooperation : country report for Kenya*, Publications Office. Retrieved from <https://data.europa.eu/doi/10.2779/751082>
- Freeman, E., & Moutchnik, A. (2013). Stakeholder management and CSR: questions and answers. *uwf UmweltWirtschaftsForum*, 21(1-2), 5-9.
- Friedman, A. L., & Miles, S. (2002). Developing stakeholder theory. *Journal of management studies*, 39(1), 1-21.
- Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2017). The circular economy—A new sustainability paradigm? *Journal of Cleaner Production*, 143, 757–768. <https://doi.org/10.1016/j.jclepro.2016.12.048>
- Ghisellini, P., Cialani, C., Ulgiati, S. (2016), A review on circular economy: the expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production*, 114, 11-32,
- Gitobu, J., & Njoroge, J. M. (2015). Adoption of green marketing practises by hotels in Mombasa County, Kenya.

- Goel, P. (2010). Triple bottom line reporting: An analytical approach for corporate sustainability. *Journal of Finance, Accounting, and Management*, 1(1), 27-42.
- GoK. (2019). *Kenya tourism performance report 2019*. Government of Kenya. kenya-tourism-sectorperformance-report-2019-v1.pdf
- Gracan, D., Alkier Radnic, R., & Bogdan, S. (2008). Restorable energy sources as a factor of the competitive improvement ability of a tourist destination. *Tourism and hospitality management*, 14(2), 263-270.
- Gray, R., Owen, D., & Adams, C. (1996). *Accounting & accountability: changes and challenges in corporate social and environmental reporting*. Prentice hall.
- Hsieh, Y. C. (2012). Hotel companies' environmental policies and practices: a content analysis of their web pages. *International journal of contemporary hospitality management*, 24(1), 97-121.
- Hunt, S. D., & Morgan, R. M. (1995). The Comparative Advantage Theory of Competition. *Journal of Marketing*, 59(2), 1–15.
- Irungu, P. N. (2016). *Adoption of Green Design in the Hospitality Industry in Kenya (a Case Study of Serena Group of Hotels, Lodges and Resorts)* (Doctoral dissertation, University of Nairobi).
- Jackson, T. (2009). *Prosperity without growth: Economics for a finite planet*. Routledge.
- Johnson, G. and Scholes, K. (2002). *Exploring Corporate Strategy*. Prentice Hall
- James, P., Magee, L., Andy, S., Steger, M. B. (2015). *Urban Sustainability in Theory and Practice: Circles of Sustainability*. London: Routledge.
- Karim, R. A., & Islam, M. W. (2020). Assessing customer demand and customer satisfaction through social and environmental practices in the hotel sector of Bangladesh. *GeoJournal of Tourism and Geosites*, 30(2), 843-851.
- Kariuki, E. K. (2014). *Relationship between green practices and operational performance of hotels in the coastal region, Kenya* (Master's thesis, University of Nairobi). Retrieved from [repository.uonbi.ac.ke/bitstream/handle/11295/75568](https://repository.uonbi.ac.ke/bitstream/handle/11295/75568)

- Kearney, M., Shine, R., & Porter, W. P. (2009). The potential for behavioral thermoregulation to buffer “cold-blooded” animals against climate warming. *Proceedings of the National Academy of Sciences*, *106*(10), 3835-3840.
- Kenya National Bureau of Statistics (2019), *Economic Survey*. Nairobi: Government Printer.
- Kimeu, D. M. (2015). *Effect of waste management practices on the operational performance of hotels in Mombasa County, Kenya* (Master’s thesis, University of Nairobi). Retrieved from [erepository.uonbi.ac.ke/handle/11295/93978](https://erepository.uonbi.ac.ke/handle/11295/93978)
- Kiprutto, N., Wambui Kig, F., & Koome Riungu, G. (2011). Evidence on the adoption of e-tourism technologies in Nairobi. *Global Journal of Business Research*, *5*(3), 55-66.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Kramer, M. R., & Porter, M. (2011). *Creating shared value (Vol. 17)*. Boston, MA, USA: FSG.
- Leaders, Y. G. (2016). World Economic Forum Annual Meeting 2016 Mastering the Fourth Industrial Revolution.
- Lobato, I., Nankervis, J. C., & Savin, N. E. (2001). Testing for autocorrelation using a modified box- pierce Q test. *International Economic Review*, *42*(1), 187-205.
- Marco-Fondevila, M., Moneva Abadía, J. M., & Scarpellini, S. (2018). CSR and green economy: Determinants and correlation of firms' sustainable development. *Corporate Social Responsibility and Environmental Management*, *25*(1), 1–16. Retrieved from <https://doi.org/10.1002/csr.1492>
- Matteucci, V. (2020). How can the hospitality industry increase corporate value aligned with sustainable development goals? Case examples from Hilton, Meliá and Sun. *Worldwide Hospitality and Tourism Themes*, *12*(5), 509-523.
- McVea, J. F., & Freeman, R. E. (2005). A Names-and-Faces Approach to Stakeholder Management: How Focusing on Stakeholders as Individuals Can Bring Ethics and Entrepreneurial Strategy Together. *Journal of Management Inquiry*, *14*(1), 57–69.

- Mentink, B. (2014). *Circular Business Model Innovation - A Process Framework and a Tool for Business Model Innovation in a Circular Economy*. Dissertation, Delft University of Technology and Leiden University, Delft.
- Mugenda, O. & Mugenda, A. (2003). *Research methods: quantitative and qualitative approaches*. (1st ed.). Nairobi: African Centre for Technology Studies (ACTS).
- Orsato, R. J. (2006). Competitive Environmental Strategies: When Does it Pay to Be Green? *California Management Review*, 48(2), 127–143.
- Osiako, P. O., & Kummitha, H. R. (2020). Environmental management practices among coastal beach hotels in Kenya. *African Journal of Hospitality, Tourism and Leisure*, 9(1). Retrived from <http://www.researchgate.net/publication/338431507>
- Porter M. E. (1980). *Competitive advantage : techniques for analysing industry and competitors*. New York: The Free Press.
- Porter M. E. (1985). *Competitive advantage : creating and sustaining superior performance*. Free Press ; Collier Macmillan.
- Porter, M. E. (1979). The structure within industries and companies' performance. *The review of economics and statistics*, 214-227.
- Porter, M. E. (1989). *From competitive advantage to corporate strategy* (pp. 234-255). Macmillan Education UK.
- Quazi, A., Nejati, M., & Amran, A. (2015). the cSr Journey. *Corporate Social Responsibility and Sustainability*, 1.
- Rajak, H. (2020). *Environmental Concerns relating to Hotel Industry - hmhub*. Hmhuh.Retrieved from <https://hmhub.in/environmental-concerns-relating-to-hotel-industry/>
- Rossi, E., Bertassini, A. C., dos Ferreira, S. C., Neves do Amaral, W. A., & Ometto, A. R. (2020). Circular economy indicators for organizations considering sustainability and business models: Plastic, textile and electro-electronic cases. *Journal of Cleaner Production*, 247, 119137. Retrieved from <https://doi.org/10.1016/j.jclepro.2019.119137>
- Sorescu, A., Frambach, R. T., Singh, J., Rangaswamy, A., & Bridges, C. (2011). Innovations in retail business models. *Journal of Retailing*, 87(1), S3-S16.

- Sorin, F., & Sivarajah, U. (2021). Exploring Circular economy in the hospitality industry: empirical evidence from Scandinavian hotel operators. *Scandinavian Journal of Hospitality and Tourism*, 21(3), 265-285.
- Spangenberg, J.H. (2005). Economic sustainability of the economy: concepts and indicators, *International Journal on Sustainable Development*, 8,(2), 47–64.
- Sutton, D. (2012). *Back to basics: A practitioner's guide to operations excellence*. Cincinnati, Ohio: Operations Excellence Services.
- Tajbakhsh, A., & Hassini, E. (2015). A data envelopment analysis approach to evaluate sustainability in supply chain networks. *Journal of Cleaner Production*, 105, 74-85.
- Taran, Y., Nielsen, C., Montemari, M., Thomsen, P. and Paolone, F. (2016), Business model configurations: a five-V framework to map out potential innovation routes. *European Journal of Innovation Management*, 19(4), 492-527. Retrieved from <https://doi.org/10.1108/EJIM-10-2015-0099>
- Thompson, A.A. and Strickland, A.J. (2007). *Strategic Management: Concepts and Cases*, 14th Ed., New York, McGraw-Hill
- Todorov, V., & Marinova, D. (2011). Modelling sustainability. *Mathematics and Computers in Simulation*, 26(7), 1397-1408.
- Upadhyay, A., Akter, S., Adams, L., Kumar, V. & Varma, N. (2019). Investigating “circular business models” in the manufacturing and service sectors. *Journal of Manufacturing Technology Management*, 30(3), 590-606. Retrived from <https://doi.org/10.1108/JMTM-02-2018-0063>
- Walsh, P. R., & Dodds, R. (2017). Measuring the choice of environmental sustainability strategies in creating a competitive advantage. *Business Strategy and the Environment*, 26(5), 672-687.
- Wang, Y., Lo, H. & Hui, Y.V. (2003), The antecedents of service quality and product quality and their influences on bank reputation: evidence from the banking industry in China, *Managing Service Quality: An International Journal*, 13 (1), 72-83.

- Wathuta, J., Karanja, M., & Kariuki, C. (2022). COVID-19, Its Effects on the Hospitality and Tourism Sector in Kenya and Recommendations Towards Recovery. In *Humanistic Perspectives in Hospitality and Tourism, Volume II: CSR and Person-Centred Care* (pp. 269-285). Cham: Springer International Publishing.
- Wiersema, F.D., & Treacy, M.E. (1993). Customer intimacy and other value disciplines. *Harvard Business Review*, 71, 84-93.
- World Commission on Environment and Development, & Brundtland, G. H. (1987). *Opening Address by Gro Harlem Brundtland... on the Occasion of the Launch of the Report " Our Common Future"*, London, England, 27 April 1987. World Commission on Environment and Development.
- Yazici, B., & Yolacan, S. (2007). A comparison of various tests of normality. *Journal of Statistical Computation and Simulation*, 77(2), 175-183.
- Zhu-Bandelier, S. (2021, April 8). *6 key ways a circular economy can benefit the hospitality industry*. CEOWORLD Magazine. Retrieved from <https://ceoworld.biz/2021/04/08/6-key-ways-a-circular-economy-can-benefit-the-hospitality-industry/>



## APPENDICES

### Appendix1: Research Questionnaire

The below questionnaire was created for purposes of gathering data on the effect of circular business modeling on competitive positioning among hospitality firms in Kenya. The details needed are for academic purposes only and no data will be passed on to a third party. Kindly take your time and fill in the questionnaire appropriately to the best of your knowledge.

#### SECTION A: GENERAL INFORMATION

1. Classification of the Hotel

- 2 Stars
- 3 Stars
- 4 Stars
- 5 Stars

2. How long has your firm been in operation? (Tick the circle)

- Upto 5 years
- 5 - 10 years
- Above 10 years

3. What is the current bed occupancy of the hotel?

.....

4. Are you aware of any negative effects of the hospitality industry on the environment?

Yes

No

If Yes, mention a maximum of five

.....  
.....  
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- 5. Has the hotel ever earned an environmental certification from a reputable organization?
  - Yes
  - No

6. If yes, mention the certifications

.....  
.....

**SECTION B: CIRCULAR BUSINESS MODELING PRACTICES**

Below is a list of circular business modeling practices as well as factors of adopting circular business modeling. Kindly tick appropriately the extent to which each of them is practiced in your organization.

(1) Not at all (2) Small Extent (3) Moderate Extent (4) Large Extent (5) Very Large Extent

<b>CIRCULAR BUSINESS MODELING PRACTICES</b>	<b>(1)</b> Not at all	<b>(2)</b> Small Extent	<b>(3)</b> Moderate Extent	<b>(4)</b> Large Extent	<b>(5)</b> Very Large Extent
<b>Environmental Sustainability</b>					
Use of renewable forms of energy					
Green team waste management practices					
Recycling and reuse of waste					
Water conservation and treatment of wastewater					
Sensitization of guests to avoid wasting natural resources					
<b>Social Sustainability</b>					
Extra jobs created especially to local community					
Cooperation with stakeholders in the supply chain					
Use of Corporate Social Responsibility Policy					
<b>Economic Sustainability</b>					
Including circular business modeling in business strategy for efficient operation					
Making sustainable investment that needs minimal maintenance cost					
Use of cheaper bio friendly sustainable consumable products					
Use of niche marketing based on eco-branding that targets eco-tourism market segment					

**SECTION C: COMPETITIVE POSITIONING**

Please indicate the extent to which your organization positions itself competitively by adopting circular business modeling

(1) Not at all (2) Small Extent (3) Moderate Extent (4) Large Extent (5) Very Large Extent

<b>COMPETITIVE POSITIONING</b>	<b>(1)</b> Not at all	<b>(2)</b> Small Extent	<b>(3)</b> Moderate Extent	<b>(4)</b> Large Extent	<b>(5)</b> Very Large Extent
Use of cost mitigation through resource efficiency					
Product differentiation through eco certification and brand image					
Operational excellence through cost efficiency achieved by management of resources					
Product leadership through innovation for operation efficiency					
Customer relationship through tailor made offers and loyalty programmes					

## D - Drivers for Adoption of Circular Business Modeling

Below is a list of factors driving the adoption of circular business modeling. Kindly tick appropriately the extent to which each of them influenced your organization to adopt circular business modeling

(1) Not at all (2) Small Extent (3) Moderate Extent (4) Large Extent (5) Very Large Extent

Government regulation					
Cost mitigation					
Market trend and consumer demand					
Conservation of the environment					
Suppliers, insurance and financial institutions requirements					

## **Appendix II: List of Hospitality Firms by KAHC**

1. The 67 Airport Hotel
2. The Aberdare Country Club
3. The Acacia Premier Hotel
4. The ACK Guest House
5. The Alliance Naromoru River Lodge
6. Amani Tiwi Beach Resort
7. Serena Amboseli
8. Serena Amboseli
9. Sopa Lodge Amboseli
10. Kichwa Tembo Camp vy andBeyond
11. The Angama Mara
12. The Arc Egerton Hotel
13. Amboseli Ashnil Aruba Lodge
14. Ashnil Mara Camp
15. Ashnil Samburu
16. Elephant Camp Atua Enkop
17. Tipilikwani Camp Atua Enkop
18. Bamburi Beach
19. Baobab Beach Resort & Spa in Diani Beach
20. Basecamp Mara
21. Best Western Premier
22. The Boma Inn - Eldoret
23. The Boma International Hospitality College
24. Campers Haven & Jamboree Resort
25. The Clarion Hotel
26. The Crowne Plaza
27. Diani Reef Beach Resort & Spa in Diani Beach
28. Diani Sea Lodge in Diani Beach
29. Diani Sea Resort In Diani Beach
30. The Driftwood Beach Club
31. Eden Beach Apartments
32. Eka Hotel
33. Elewana Elephant Pepper Camp
34. Elewana - Sand River Camp
35. Elewana Africa (Afro Chic Diani)
36. Elewana Elsa's Kopje in Meru
37. The Enashipai Resort & Spa
38. The Fairview Hotel
39. Fig Tree Camp Mara
40. Amboseli Finch Hattons Luxury Tented Camp
41. The Golden Tulip Hotel
42. Kakamega Golf Hotel

43. The Governors' Camp
44. The Great Rift Valley Lodge & Golf Resort
45. Ol Seki Hemingways
46. Watamu Hemingways Resort
47. Hemingways Hotel in Nairobi
48. The Hill Park Hotel
49. The Hilton Nairobi
50. The Intercontinental Hotel
51. The Azure Royal Orchid Hotel
52. Ilkeliani Camp, Mara
53. The International Hotel & Tourism Institute
54. The Nairobi Jacaranda Hotel
55. The Jacaranda Indian Ocean Beach Resort Diani Beach
56. Masai Mara Karen Blixen Camp
57. Karen Blixen Coffee Garden & Cottages
58. Nairobi Karen Country Club
59. Masai Mara Keekorok Lodge
60. The Kenyatta International Conference Center
61. Mara Kiboko Luxury Camp
62. Masai Mara Kicheche Safari Camp
63. Kilaguni Serena Safari Lodge
64. Kinondo Kwetu Diani Beach
65. Watamu Kipungani Explorer Malindi
66. Elewana Kitich Camp
67. The Laico Regency Hotel
68. Serena Camp Lake Elementaita
69. The Country Club Lake Naivasha
70. Lantana Galu Beach Diani
71. The Samburu Larsens Camp
72. Leisure and Travel Guides
73. Leisure Lodge Beach & Golf Resort Diani Beach
74. The Leopard Beach Resort and Spa Diani Beach
75. Meru Leopard Rock Lodge
76. Elewana Lewa Safari Camp
77. Watamu Lion in The Sun Resort & Spa
78. Amboseli Lions Bluff Lodge
79. Mara Little Governors' Camp
80. Elewana Loisaba Luxury Tented Camp & Star beds
81. The Maanzoni Lodge
82. The Engai Wilderness Lodge Mara
83. Intrepids Mara
84. Leisure Camp Mara
85. The Mara River Camp
86. Mara Safari Club
87. Serena Safari Lodge Mara
88. Simba Lodge Maasai Mara

89. Sopa Lodge Maasai Mara
90. Medina Palms Watamu
91. Merica Hotel Nakuru
92. Bamburi Milele Beach Hotel
93. Watamu Mnarani Club
94. Moffat Court Apartments Mombasa
95. Mombasa Beach Hotel
96. Continental Resort Mombasa
97. Mpata Safari Club Mara
98. The Msambweni Beach House and Private Villas
99. The Muthaiga Country Club
100. Mara Naibosho Camp
101. The Nairobi Safari Club
102. Serena Hotel Nairobi
103. Naivasha Kongoni Lodge
104. Simba Lodge Naivasha
105. Sopa Lodge Naivasha
106. NAS Airport Services - Nairobi
107. New Blue Post Hotel - Mount Kenya
108. Ngulia Safari Lodge - Amboseli - Tsavo
109. North Coast Beach Hotel - Coast
110. Ocean Sports Resort - Malindi - Watamu
111. Ol Donyo Wuas Lodge - Amboseli - Tsavo
112. Ol Tukai Lodge - Amboseli - Tsavo
113. Olare Mara Kempinski - Rift Valley
114. Ole Dume Serviced Apartments - Nairobi
115. Ole Sereni Hotel - Nairobi
116. Olumara Camp - Rift Valley
117. Pa Pweza Adamsville Beach Suites - Coast
118. Panari Hotel Nairobi - Nairobi
119. Pangoni Beach Resort and Spa - Coast
120. Park Villa Hotel - Western
121. Parklands Sports Club - Nairobi
122. Pine Court Hotel - Coast
123. Pinewood Beach Resort & Spa - Coast
124. Plaza Beach Hotel - Coast
125. Pride Inn Lantana - Nairobi
126. PrideInn Hotel Rhapta - Nairobi
127. PrideInn Hotel Westlands - Nairobi
128. PrideInn Hotel Westlands - Nairobi
129. PrideInn Lanatana Suites - Nairobi
130. PrideInn Mombasa - Coast
131. PrideInn Plus Paradise - Coast
132. Radisson Blu Hotel - Nairobi
133. Red Court - Nairobi
134. Reef Hotel Mombasa - Coast



135. Rekeru Camp - Rift Valley
136. The Rhino Watch Lodge & Tented Camps Meru
137. The Nairobi Safari Park Hotel & Casino
138. Samburu Game Lodge
139. Intrepids Samburu
140. Sopa Lodge Samburu
141. Mara Sanctuary Olonana
142. The Sankara Hotel Nairobi
143. Nakuru Sarova Lion Hill Game Lodge
144. Mara Sarova Game Camp
145. Panafric Hotel by Sarova
146. Sarova Amboseli Salt Lick Lodge
147. Sarova Shaba
148. Taita Hills Game Lodge by Sarova
149. Tamarind Mombasa
150. Sarova Whitesands Beach Resort
151. Saruni Lodge Samburu
152. Sekenani Camp Mara
153. Neptune Beach Resort Mombasa
154. Neptune Palm Beach Resort Diani
155. Neptune Paradise Village Resort Diani
156. The Serena Beach Hotel & Spa Mombasa
157. Mount Kenya Serena Mountain Lodge
158. The Severin Sea Lodge Bamburi
159. Sleeping Warrior Camp Gilgil
160. Southern Palms Beach Resort Diani Beach
161. The Southern Sun Mayfair
162. The Sovereign Suites
163. Sun Africa Beach Resort Mombasa
164. Kisumu Sunset Hotel
165. Sunset Paradise Apartments Mombasa
166. Surfside Villas Mombasa
167. Swahili Beach Resort Diani
168. Serena Sweet Waters Camp Ol Pajeta
169. The Temple Point Resort Watamu
170. The Ark Lodge
171. The Boma Hotel Nairobi
172. Fairmont Mount Kenya Safari Club Nanyuki
173. Nairobi Norfolk Hotel
174. The Sarova Stanley
175. Tamarind Group
176. Tin Tin Restaurant
177. Elewana Tortilis Camp Amboseli
178. The Travellers Beach Hotel Mombasa
179. The Tribe Hotel Nairobi
180. Watamu Turtle Bay Beach Club

181. Nairobi Utalii Hotel
182. Nairobi Villa Rosa Kempinski Hotel
183. Voi Safari Lodge
184. Voi Wildlife Lodge
185. Voyager Beach Resort Mombasa
186. Tsavo Voyager Ziwani Safari Camp
187. Nairobi Weston Hotel
188. Kisumu Wigot Gardens Hotel
189. Windsor Golf Hotel Nairobi