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THE EFFECT OF CUSTOMER VALUE CREATION ON THE FIRM PERFORMANCE. THE MEDIATING ROLE OF INFORMATION TECHNOLOGY. THE CASE OF THE TELECOM INDUSTRY OF GHANA.

By

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DECLARATION

I hereby declare that this submission is my own work towards the Master of Science in Business and Data Analytics, to the best of my knowledge and belief, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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DEDICATION

This work is dedicated to my family, my dear wife Maame Nyarko for waking me up to study and my kids, Nana Adwoa, Ama Takiwaa and Kwasi Osei Hyeaman . .

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ABSTRACT

The purpose of the study was to examine the effect of customer value creation on the firm performance through the mediating role of information technology among telecommunication companies in Ghana. This study was grounded on a quantitative, cross-sectional and descriptive research approach. A meticulously designed questionnaire was employed to collect data from 207 employees across prominent mobile network operators. The study adopted Statistical Package for the Social Sciences (SPSS) version 27 and Hayes Process Macro module 4.0 to conduct regression, reliability, correlation, descriptive and mediation analysis. The study found customer value creation had a significant and positive influence on firm performance. Information technology also had a positive effect on firm performance. Information technology mediates the nexus between customer value creation and firm performance among telecommunication companies in Ghana. Managers of organizations are recommended to prioritize customer-centric strategies and proficient IT integration to bolster overall performance.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The client is often considered one of the most essential stakeholders in any organization that does business. The firm adds value to the lives of its customers by way of the goods and services it sells, and the customers, in turn, provide value to the company by way of the money they spend there. Because of this reality, a corporation has a significant incentive to adopt a perspective that is oriented toward the needs of its customers. It is critical for their firms' survival and development to supply clients with solutions that provide them with better advantages (Senguo, Xixiang, and Kilango, 2017). This sometimes entails foregoing short-term gains in return for long-term benefits such as consumer loyalty. In other words, it is critical to provide clients with solutions that provide them with higher advantages.

Customer value creation is a philosophical approach to conducting business based on the premise that resources are limited and, as a consequence, priority should be given to customers who represent a higher degree of value for the company in order to maintain the enterprise's existence. The development of a customer relationship management (CRM) policy and the implementation of a targeted sales and marketing plan both necessitate a thorough understanding of customers' needs, patterns of behaviour, and preferences, as well as an understanding of technologies, which are one of the most powerful forces driving change in this context (Anshari et al., 2019).

Furthermore, establishing a customer information system (CIS) capable of automating information search and processing, providing a consistent view of the customer across all points of interaction, and bringing together a wide variety of data into formats that support management decisions is a future challenge Minghetti, (2003). The discussion centres on the process of designing a customer information system and, in particular, the guest information matrix, which will be used as the foundation for the database that will be built by the system. Also covered is the analysis of the guest-hotel relationship and the profiling of hotel guests. The findings indicate that there is a significant gap between the importance that businesses in the hospitality sector place on maintaining strong customer connections and the percentage of those businesses that have already implemented some kind of customer relationship management system. In their study on the customer value of Internet businesses, Han and Han (2001) used a model that included value components as well as directions for improving value to show that customer value can be produced or improved by modifying two components: the "content" and the "context." In addition, they demonstrate that value may be improved for any or both of them by increasing quality, decreasing costs, or increasing levels of personalization.

The research that has been done up to this point offers a variety of viewpoints on consumer value and the success of businesses. Frambach, Fiss, and Ingenbleek (2016) examined the constellations of distinct corporate positions, strategy categories, and market circumstances that result in greater performance in their research. They discovered that there is no proof for high-performing configuration without a focus on customers, and that highly successful firms organise themselves in a variety of ways around this focus. Saeed, Grover, and Hwang (2005) explore electronic commerce competence, which is proposed as a primary driver of organisational performance, in order to assess the mediating impact of customer value through web site functionality. The results suggest that firms might increase their short-term performance by providing value to their consumers' experiences. Fernández and Pinuer (2016) demonstrate how sales force orientation to customer value, brand value, and business ethical norms may all have a substantial impact on company efficiency in Peru. They also show that customer focus on values, brand value, and business ethics all have an impact on firm effectiveness (Frambach et al., 2016; Saeed et al., 2005). Sun and Kim (2013) investigated the association between the customer experience indicator and the monetary health of enterprises in the US. An integrated framework for customer value and CRM performance in China is developed by the authors, Wang et al. (2004). They establish a strong link between customer satisfaction and firm performance and demonstrate that customer value has a major impact on customer satisfaction. They also show that firm performance is significantly impacted by customer value.

In this light, the purpose of the current study is to address the following discrepancies and knowledge gaps: I The majority of previous studies on customer value and firm performance have been conducted in developed economies, with few studies conducted in developing country contexts; ii) the majority of previous studies have concentrated on the hospitality and financial sectors. (iii) The majority of previous studies have focused on the hospitality and financial sectors. There is a pressing need to concentrate on other industries, and lastly, the primary objective of this research is to investigate the moderating effect that information technology has on business performance.

1.2 Statement of the Problem

Companies have come to terms with the fact that retaining existing customers is even more lucrative than acquiring new ones (Haislip and Richardson, 2017). The firm adds value to the lives of its customers by way of the goods and services it sells, and the consumers, in turn, provide value to the company in the form of their purchases and payments (Tosti and Herbst, 2009). Because of this reality, a corporation has a significant incentive to adopt a perspective that is oriented toward the needs of its customers. On the other hand, it deviates from conventional notions of organisational structures. According to Tosti and Herbst (2014) and Tosti and Herbst (2009), a "pure capitalist" view places primary emphasis on owners and financial stakeholders (Tosti and Herbst, 2014; Tosti and Herbst, 2009), whereas a "pure socialist" view places primary emphasis on employees, the wage earners, as the primary organizational stakeholders (Harte, 2004; Tosti and Herbst, 2014).

A number of earlier studies (Martin, Borah, and Palmatier, 2017; Krafft et al., 2021; Labrecque et al., 2021; and Bleier, Goldfarb, and Tucker, 2020) concentrated on linking customer data and customer performance. As a result, the academic literature does not contain sufficient evidence to support the hypothesis that there is a correlation between customer value and firm performance. Martin, Borah, and Palmatier (2017) show that the impacts are constant across all four forms of consumer data vulnerabilities and establish that trust and violation act as mediators between the effects of data vulnerabilities and the outcomes. The central claim is that academics have been trying to determine the similarities and differences between developed markets and emerging markets by conducting research and testing theories and concepts in consumer research and marketing strategies that are produced from the perspective of both developed and emerging markets. A portion of these efforts have contributed to our improved understanding of the differences and similarities between the two kinds of markets. There is a vacuum in the literature as a result of the paucity of research conducted in developing economies to investigate the link between customer value and business success. The primary purpose of the research is to investigate whether or not the value of customers has an impact on the success of businesses in Ghana. In addition, Anning-Dorson (2018) revealed that researchers should also take into consideration the major effects of the study environment. These significant factors include geography, measurement scale, participant selection, and research design.

In addition, the findings of this research show a mediating influence on the relationship between company performance and customer value. Organizations are able to mix multiple resources in order to build and organize processes that are focused on giving value to the customer (Saeed, Grover, and Hwang, 2005). Information technology competency helps firms to recognise the areas that have the most potential to produce customer value and boost performance (Ravichandran, 2018; Tarafdar, Pullins, and RaguNathan, 2015). An empirical confirmation of these correlations might help us better comprehend the connections between information technology, customer value, and both short-term and long-term corporate success. Within this framework, the purpose of the study is to ascertain the mediating role of information technology on the relationship between customer value and business performance.

1.3 Objectives of the Study

The study's major aims are to investigate the impact of customer value creation on firm performance through the mediating function of information technology in Ghanaian telecommunications enterprises. The research was designed with the following precise objective in mind:

1. To examine the effect customer value on firm performance among telecommunication companies in Ghana.
2. To examine the effect information technology on firm performance among telecommunication companies in Ghana.
3. To analyse the mediation role if information technology on customer value and firm performance among telecommunication companies in Ghana.

1.4 Research Questions

1. What is the effect customer value creation on firm performance among telecommunication companies in Ghana?
2. What is the effect information technology on firm performance among telecommunication companies in Ghana?
3. What is the mediation role if information technology on customer value creation and firm performance among telecommunication companies in Ghana/

1.5 Significance of the Study

The research offered a multitude of advantages to businesses, most notably to managers, workers, and those working in academic institutions. According to the results of the research, managers need to place an explicit emphasis on the combinative or integrative component of merging resources that are not distinct in order to establish organisational routines that give value to customers. A further benefit of the research is that it increases knowledge of the link between information technology, customer value, and firm performance. This understanding might be used by businesses in order to develop and improve customer value.

The results may be used by managers to direct their efforts toward aspects of their organisations that have a larger potential to affect performance. The research highlights how important it is to acquire new customers and keep the ones you already have. The use of suitable information technology services throughout the needs and ownership phases of a project may be of great assistance in both the acquisition of new clients and the maintenance of current clientele. As a result of limited resources, managers are required to strike a balance between expanding their client base and keeping the consumers they already have.

Finally, the research contributes to the existing body of knowledge by expanding on how telecom businesses in Ghana, a developing nation, might employ information technology to affect the link between customer value methods and firm performance. Furthermore, the study served as a reference for anybody interested in doing further research on the parameters employed in the study.

1.6 Scope of the Study

Considerable studies have been conducted on customer value creation and firm performance; however, limited studies particularly from the Sub-Saharan and Ghanaian context have explored how information technology is leveraged on to impact the relationship between customer value creation and firm performance. In that regard, this study focused on the assessment of the mediating effect of information technology on the relationship between customer value creation and firm performance of telecom firms in Ghana. The study was therefore limited to telecom firms in the Ashanti Region of Ghana.

1.7 Overview of Methodology

The inductive methodology was used for the research project; hence, hypotheses were developed and validated via the application of previously established theories in order to arrive at the results of the study. During the course of the investigation, the researcher used a quantitative strategy. Due to the quantitative nature of the present study, the researcher chose to conduct their investigation using a quantitative case study approach. Research designs that were descriptive and research designs that were explanatory were both used in this study. In order to collect data suitable for addressing the goals of the research, a cross-sectional survey technique was chosen as the method to use. Since this design was chosen, the researcher has the ability to gather precise information from a small sample inside a specific context in order to generate significant findings and generalizations. The analysis focused on the telecommunications sector in Ghana for its basis.

All of the people working for the telecom company were included in the research as the population. Therefore, the researcher had the respondents fill out a questionnaire that they were responsible for administering to themselves. The Statistical Package for the Social Sciences is used to do the analysis on the data (v. 26). Utilized in this study are descriptive statistics such as the mean and standard deviation. Inferential statistics, more especially regression analysis and moderation analysis methods, were used in the testing of hypothetical assertions, and Pearson's correlation was used in order to investigate the nature of the link that exists between the variables that were selected. After that, the data were summarised into tables, and then the literature was used to understand them.

1.8 Limitations of the Study

It was the desire of the researcher to widen the scope of the research in terms of the geographical location and the industry. However, only the manufacturing firms were highlighted in the study and respondents drawn from the Accra and Kumasi Metropolis. The findings of this study will therefore be limited to the manufacturing industry and cannot be generalized to other industries. Some challenges envisaged include difficulty in obtaining data and the reluctance of firms to provide relevant information to address the research objectives because of fear of being exposed. The time provided was proven insufficient. Furthermore, insufficient money will restrict research because of different ion expenditures paid directly and indirectly as a result of the study.

1.9 Organisation of the Study

There are five sections to this study. Background information and the study's major concerns were presented in the first chapter. It identified the issue at hand and laid forth the study's particular aims to better facilitate the overarching purpose. It has also highlighted the study's major questions, explained why they're important, and outlined the terminology that would be used. More information on the study's background, including a discussion of important conceptual and theoretical frameworks and a literature review, is provided in the next chapter. The research methods are discussed in detail in Chapter 3. The data and analysis are presented in Chapter 4. The study's results are discussed, a summary of those results, together with some closing thoughts and suggestions, is presented in Chapter 5.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, the study is more focus on relevant literature reviews on the chosen variables. The study conceptually, theoretical and empirically reviews on customer value creation, organizational and information technology. Also, a research model (conceptual framework) is drawn to indicate the interdependent relationship between the variables.

2.2 Conceptual Reviews

The concept to be reviewed on are the customer value creation, firm performance and information technology.

2.2.1 Customer Value Creation

Since the 1980s, the concept of customer value has garnered significant attention in the field of marketing (Winkler and Wulf, 2019). Notably, Omar et al (2020) and Novandalina et al (2022) have introduced the concept of customer value creation, proposing that value is co-created by businesses and consumers. The researchers argue that customer value is not solely a means for producers to satisfy consumers, nor is it solely created by consumers through their involvement in the production process (Omar et al., 2020; Novandalina et al., 2022). Instead, they emphasize that customer value creation involves a collaborative process between producers and consumers, where both parties actively contribute to value creation for themselves and each other. This collaborative process entails continuous dialogue and interactions, allowing for the development of personalized service experiences (Zhang, Gupta, Sun and Zou, 2020).

Other researchers have built on this idea by adopting a consumer-centric viewpoint, emphasising that customer value is produced via interactions between customers and firms, in addition to among consumers themselves (Sheng, Natalia and Hsieh, 2022; Zhang et al., 2020).

Customer value creation is a strategic process that aims to provide superior value to customers by developing and delivering products, services, and experiences that align with their needs and preferences (Sheng, Natalia and Hsieh, 2022). It involves a collaborative approach, where organizations actively engage customers in co-designing solutions and continuously enhance the value proposition to foster long-term relationships and loyalty. This concept emphasizes understanding customer expectations and tailoring offerings to meet their specific requirements, ultimately leading to increased customer satisfaction (Sheng et al., 2022).

In line with this, Abid, Shamim, Khan and Khan (2020) further elaborate on customer value creation as a collaborative effort between customers and organizations to co-create value through the exchange of resources, knowledge, and experiences. This approach emphasizes the active participation of customers in the value creation process, highlighting the importance of customer engagement and involvement (Abid et al., 2020). By involving customers in co-designing products and services, organizations can better understand their desires and preferences, leading to the development of tailored solutions that exceed customer expectations (Sheng et al., 2022). This, in turn, fosters a sense of customer satisfaction and loyalty, as customers perceive the delivered value to be higher (Gao et al., 2019).

According to Chathoth et al. (2020), customer value creation refers to the strategic process of providing superior value to customers through the development and delivery of products, services, and experiences that meet their needs and preferences. It involves understanding customer expectations, co-designing solutions, and continually enhancing the value proposition to foster long-term customer relationships and loyalty (Ramos, Claro and Germiniano, 2023). In the study by Marinova, Freeman, and Marinov (2019), customer value creation is defined as the collaborative effort between customers and organizations to co-create value through the exchange of resources, knowledge, and experiences. It emphasizes the active participation of customers in the value creation process (Marinova et al., 2019). The organizations engage customers in co-designing products and services that align with their desires and preferences, leading to enhanced customer satisfaction and loyalty (Ayar et al., 2023).

According to Galdolage (2021), customer value creation involves the proactive and continuous generation of value for customers by organizations through the customization of products, personalized services, and tailored experiences. It focuses on understanding individual customer needs and delivering solutions that exceed their expectations, resulting in a perceived increase in value and a competitive advantage for the organization (Galdolage, 2021). The study by Peña-García et al. (2021) defines customer value creation as the strategic initiative of organizations to integrate resources, capabilities, and technologies to deliver superior value propositions that meet the evolving needs of customers. It emphasizes the importance of innovation, agility, and responsiveness in creating and delivering unique value propositions that differentiate organizations from their competitors and contribute to long-term customer satisfaction and loyalty (Sahi et al., 2022).

Customer value creation involves intentionally generating value through products, services, or processes by engaging actors within a specific ecosystem (Utami, Alamanos and Kuznesof, 2021). It is a business strategy focused on continuously creating mutual value between the organization and its customers. Supply chain integration is closely related to customer value creation, as both strategies require collaboration with external entities (Utami et al., 2021). Firms implementing supply chain integration are expected to actively participate in interfirm customer value creation (Hadjielias et al., 2022). This is facilitated by supply chain integration, which provides a platform for value creation without additional costs. The decision to engage in these strategies can be influenced by stakeholder pressures or the firm's innovative capabilities (Struyf et al., 2021). In a customer value creation ecosystem, members can take on different roles, such as idea generation, design, or intermediation, to create value for all involved parties. Transparency is important in these partnerships, with clear definition of roles, identity, and contributions of each member (Tuomisto, 2022).

Customer value creation can be classified into two primary domains: business-to-customer (B2C) platforms and business-to-business (B2B) interactions (Holmes, Zolkiewski and Burton, 2023; Gülyaz et al., 2019). B2C platforms involve collaborative activities between businesses and both existing and potential customers (Gülyaz et al., 2019), whereas B2B interactions involve collaboration among businesses within the same or different industries to generate shared value (Holmes et al., 2023). While extensive research has been conducted on B2C platforms, studies focusing on B2B customer value creation remain relatively limited. In the past, organizations primarily competed for resources, customers, and market share, paying little attention to collaborative endeavors (Gülyaz et al., 2019). However, the current business landscape emphasizes a shift towards healthy competition and collaboration within ecosystems to foster sustainable growth (Holmes et al., 2023).

The creation of value for customers involves two essential processes: building relationships and fostering cooperation (Sheng et al., 2022). Value creation in the context of building relationships occurs through continuous and ongoing exchanges, as opposed to sporadic interactions (Chen et al., 2022). In the case of cooperation, value creation emerges from a collaborative approach rather than an independent or isolated one. It is crucial for the organizational culture to prioritize the generation and utilization of market intelligence (Carvalho and Alves, 2023). Additionally, organizations need to promote internal capabilities that effectively translate customer needs into specific offerings (Chathoth et al., 2020).

Customer value creation represents a strategic commitment that wields profound economic consequences for companies (Ossai, 2020). It entails a harmonious fusion of relationship management prowess with the development of innovative and distinctive market offerings. This dynamic blend demands the nurturing of a conducive organizational culture, serving as the fertile ground where this transformative process takes root (Nijssen, 2021). The impact of customer value creation cascades positively upon business competitiveness, permeating realms of profitability, cost optimization, and the adroit utilization of cutting-edge technologies within the firm's operational fabric (Wall, 2023).

2.2.2 Firm Performance

Firm performance encapsulates the transformative endeavors undertaken by managers and the governing body of a firm to assess and enhance the current level of performance within the organization (Ribeiro et al., 2021). Hence, firms subsequently implement strategies to drive behavioral and infrastructural improvements aimed at achieving higher outputs (Huynh, 2022). The primary goals of firm performance are to enhance overall effectiveness and efficiency, thereby strengthening the firm's ability to deliver exceptional goods and services (Kiss, Cortes and Herrmann, 2022). Through a relentless pursuit of excellence, firms strive to optimize their performance, orchestrating a harmonious symphony of operational prowess that reverberates with success (Asamoah and Nadarajah, 2020).

Firm performance encompasses various dimensions, including organizational efficacy, which emphasizes the continuous improvement of setting and refining goals and objectives within the organization (Abbas and Khan, 2022). At the operational and individual employee level, firm performance is manifested through processes like statistical quality control, ensuring meticulous attention to detail and precision (Umrani et al., 2023). Expanding beyond the operational level, the evaluation of firm performance incorporates softer measures such as conducting customer satisfaction surveys. These surveys provide invaluable qualitative insights on performance from the vantage point of customers, contributing to a comprehensive understanding of the organization's overall effectiveness (Ribeiro et al., 2021).

According to Akomea et al. (2023), the change that a firm's management and governing body implement and administer a programme that assesses the existing level of performance is what is meant by "firm performance." In order to increase production, a firm comes up with ideas for changing its infrastructure and behaviour. The main objectives of firm performance are to improve the firm's efficacy and efficiency, which will enhance its capacity to provide products and services (Varadarajan, 2020).

Additionally, due to lower transaction costs and quicker transaction cycle times, the performance of the Kong, Antwi-Adjei, and Bawuah (2020) businesses has significantly improved. Automation of the cycle from request to payment has reduced human processing and the danger of procedural mistakes that goes along with it (Kong et al., 2020). As a result, procurement practitioners can now allocate their time and resources to more productive operations (Taouab and Issor, 2019).

Firm performance encompasses both financial and non-financial dimensions, playing a crucial role in the survival and sustainability of businesses regardless of their size, location, or industry (Tian et al., 2021). Financial performance involves enhancements in cost management, information gathering, and processing, while non-financial performance focuses on improving relationships with partners (Rinawiyanti, Xueli and As-Saber, 2022). To enhance firm performance, strategic decisions such as supply chain integration and interfirm customer value creation are highly desirable, as they contribute to improvements in these areas (Rinawiyanti et al., 2022).

Firm performance is expected to be positively influenced by the adoption of strategies aimed at enhancing both financial and non-financial aspects (Lee, Tsui and Yau, 2023). Ghanaian firms are encouraged to embrace these strategies to improve their overall performance. Although the connection between customer value creation and firm performance has been acknowledged, prior research have only partially explored this link (Zhang, Wang, and Dong, 2023). The capacity of an organisation to achieve a lasting competitive advantage via the efficient use of precious, uncommon, and non-strategic resources is referred to as firm performance (Tian et al., 2021). The innovation capability of firms plays a crucial role in determining the extent to which these resources are leveraged for optimal performance (Karim, Nahar and Demirbag, 2022).

2.2.3 Information Technology

In recent years, advancements in technology have revolutionized the way organizations, customers, and individuals' access and share information, significantly impacting the coordination of procurement activities (Pankowska, 2019; Amini and Jahanbakhsh, 2023) The phrase "information technology" relates to the use of inter-organizational networks to facilitate information exchange and processing across organisational boundaries (Pelizza, 2021). These technological developments have facilitated seamless communication, improved data exchange, and enhanced collaboration between various stakeholders involved in procurement processes (Wibowo, 2022).

Randolph et al. (2020) defines information technology as the application of interorganizational networks to facilitate information exchange and processing across organisational boundaries. It includes the technological framework, programmes, and communication networks that allow diverse organisations to share and manage data (Khatri, 2019). Adeniran et al. (2020) describe information technology as the use of hardware, software, and networks to improve information flow and decision-making processes inside organisations. It encompasses the tools, technologies, and systems used to collect, store, retrieve, process, and transmit data and information for various organizational purposes (Setyowati, Widayanti, and Supriyanti, 2021).

Setyowati et al. (2021) defines information technology as the utilization of computer-based technologies, including hardware, software, and networks, to store, process, and communicate information. It encompasses the digital tools and systems that enable the creation, organization, and management of data and knowledge within organizations (Sundram, Chhetri and Bahrin, 2020). According to Kabanda (2018), information technology is the use of computing and telecommunications to facilitate the gathering, processing, storing, and disseminating of information. In order to facilitate the effective administration and use of information in organisations, it entails the use of technical resources, such as hardware components, software programmes, and network infrastructure (Qin et al., 2022).

When used to share and process information across organisational boundaries, interorganizational systems are referred to as information technology (Jarah et al., 2023). It involves the technological infrastructure, software applications, and communication networks that enable the exchange and management of data between different entities. This definition highlights the importance of collaboration and information sharing facilitated by technology to enhance organizational processes and decision-making (Mahmoudsalehi et al., 2019). In addition, Xu and Lu (2022) define information technology as the use of hardware, software, and networks to improve information flow and support organisational decision-making. It encompasses the tools, technologies, and systems used to collect, store, retrieve, process, and transmit data and information for various organizational purposes (Bae, 2021).

Information technology plays a vital role in the existence and achievement of organizations, enabling them to stay competitive in a dynamic and ever-changing business landscape (Trieu et al., 2023). It serves as a cornerstone for managers who are driven to embrace technological advancements in order to achieve optimal operational performance and productivity. In the retail sector, where businesses face intense competition and operate in a highly volatile economic environment, the adoption of information technology becomes even more crucial (Tajudeen et al., 2022). It empowers organizations to navigate the complexities of the market, adapt to shifting conditions, and leverage emerging technology trends to gain a competitive advantage (Rehman et al., 2020).

The ability of information technology to manage information flow has a significant impact on many aspects of a company's functioning, such as expenses, quality, adaptability, and timely supply of goods and services (Lovely et al., 2021; Lumor et al., 2021). This ultimately influences the profitability of organisations. The efficiency of the procurement unit is impacted by the network of suppliers and channels used in business activities, which cover the whole organisation. Managing procurement entails integrating activities and enhancing chain relationships to access a sustainable competitive advantage (Sadreddin and Chan, 2023). Organizations can use information technology to optimize their procurement processes, improve coordination with partners, and achieve operational excellence, thereby enhancing their overall competitiveness in the marketplace (Taherdoost, 2023).

Kappan and Hamid (2023) define information technology as the application of computers, software programmes, and telecommunications to offer data, information, and knowledge to organisations. It entails using hardware, software, and networks to improve information flow and speed up decision-making processes (Iyamu and Batyashe, 2020). Through the utilization of information technology, organizations can leverage technological tools and resources to effectively manage and process data, enabling them to make informed decisions and drive efficient operations (Chepkole and Deya, 2019). The integration of hardware, software, and networks enables seamless communication and information sharing, promoting collaboration and enabling organizations to stay agile and competitive in today's fast-paced business environment (Dinah, 2020).

2.3 Theoretical Framework

The relationship between customer value creation, firm performance and information technology is grounded on resource-based view theory and unified theory of acceptance use of technology model.

2.3.1 Resource-Based View Theory

The RBV theory has contributed significantly to our knowledge of the link between resources and firm performance. The RBV provides insights into why certain organisations are able to sustain a competitive edge over others by concentrating on the assets of the company as the basis of analysis. According to Wernerfelt (1984), the RBV gives a viewpoint that extends beyond product-focused methods, providing for a more in-depth knowledge of the elements that aid in the achievement or failure of a business. One of the major principles of the RBV is that resources are allocated unevenly among organisations and cannot be readily moved between them (Amoah et al., 2023). This concept implies that a firm's competitive advantage is shaped by its distinctive qualities and shortage of resources. Lockett, Thompson, and Morgenstern (2009) highlight the importance of resources in determining how long a company can maintain its competitive edge. The RBV theory offers valuable insights into profit-maximizing organizations and their pursuit of competitive advantage. According to Gellweiler and Krishnamurthi (2022), companies operate in predictable markets led by rational managers within constraints. This understanding helps organizations make strategic choices for maximizing profitability. Additionally, the RBV theory recognizes the uneven distribution of knowledge about resource value, as highlighted by Daneshvar et al. (2022). Businesses can gain long-term competitive advantage by accurately predicting the future value of resources. Moreover, Srinivasan, Gupta, and

Jayaraman (2021) emphasize the importance of isolation techniques in creating and maintaining competitive advantage. Strategies that protect customer base and prevent rivals from obtaining superior resources enhance a company's success. Understanding these dynamics informs strategic decision-making and resource allocation, enabling organizations to thrive in competitive markets.

Several studies have demonstrated the significance of the Resource-Based View (RBV) theory in understanding the relationship between customer value creation and firm performance. Li and Calantone (2018) found that firms with strong resources and capabilities are more likely to create superior customer value, leading to improved sales growth and profitability. Chen et al. (2016) focused on the tourism industry and discovered that firms with rich resource bases and unique capabilities can offer differentiated value to customers, resulting in enhanced customer loyalty and financial performance. Wang et al. (2017) investigated e-commerce companies and found that valuable and rare resources, along with strong capabilities, enable firms to create customer value and achieve positive outcomes in terms of sales growth and market share. Hence, the RBV theory best explains the relationship between customer value creation and firm performance. That is, firm achieving high value creation for their customer can be a factor that creates a competitive advantage (firm performance) in the business environment they find themselves in.

2.3.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

In order to explain how people embrace new technology, Venkatesh et al. (2003) created the Unified Theory of Technology Acceptance and Usage (UTAUT). According to Ali and Rusmanto (2020), it encompasses the four fundamental ideas of anticipated performance, expected effort, social impact, and enabling circumstances.

These elements are vital in figuring out how a user will utilise an information system and what their intentions are. The user's perception of the system's capacity to improve work performance is reflected in the anticipated performance component (Haleem, 2020). Expected effort refers to the perceived ease of using the system, as highlighted by Dinh et al. (2018). Favorable conditions encompass the user's confidence in the organizational and technological support available for system usage (Sharma and Sharma, 2021). Lastly, social influence encompasses the individual's perception of societal expectations regarding the adoption of the new technology (Mun and Housel, 2001). Overall, UTAUT offers a comprehensive framework for understanding the various factors that influence technology adoption and usage (Haleem, 2020).

The link between the Unified Theory of Acceptance and Use of Technology (UTAUT) model and information technology adoption, firm performance, and value creation has been studied empirically in a number of research. Liang et al. (2007) discovered, for example, that the UTAUT constructs strongly affected the desire to use e-commerce technology, resulting in beneficial impacts on firm performance and value creation. Similarly, Alsharo et al. (2017) revealed that the components of the UTAUT model affected the desire to embrace mobile banking technology, which in turn favourably impacted both the banking firm's performance and the value provided for consumers. Furthermore, Yap et al. (2017) discovered that UTAUT components had a substantial effect on the desire to implement e-learning technology in educational institutions institutions, resulting in better institutional performance and increased value for students. These studies emphasise the necessity of taking into account elements such as performance expectation, effort expectancy, social influence, and enabling circumstances when analysing the adoption and effect of technology on organisational results. Thus, the model of UTAUT soundly supports that relational backboned between information technology, firm performance and customer value creation.

2.4 Empirical Review

Author(s) and Year	Country	Purpose of the Study/Research Objectives	Construct(s)/Concept(s) Used	Underlying Theoretical Framework	Methodology	Findings	Identified Gap (From Area of Further Research)
Cappa et al., 2021		Examine the effects of big data's volume, variety, and veracity on firm performance in the digitalized environment.	Big data, firm performance, digitalized environment	Resource-Based View (RBV)	Quantitative Research Approach	Volume, variety, and veracity of big data positively affect firm performance in the digitalized environment.	Future research could explore industry-specific nuances in the relationship between big data characteristics and firm performance.
Li et al., 2021		Investigate the use of intellectual capital by the most innovative companies during the fourth industrial revolution and its impact on value creation.	Intellectual capital, fourth industrial revolution, value creation	Intellectual Capital Theory	Quantitative Research Approach	Positive relationship between intellectual capital utilization and value creation during the fourth industrial revolution.	Future research could explore the role of different types of intellectual capital in specific industries during the fourth industrial revolution.
Westerveld et al., 2023		Explore the business model portfolio as a strategic tool for value creation and its impact on business performance.	Business model portfolio, value creation, business performance	Business Model Theory	Quantitative Research Approach	Business model portfolio positively influences value creation and business performance.	Future research could delve into the practical implementation and adaptation of business model portfolios in different industries

							and contexts.
Grossi et al., 2022		Examine accounting, performance, and accountability challenges in hybrid organizations from a value creation perspective.	Accounting challenges, performance, accountability, hybrid organizations	Hybrid Organizations Theory	Quantitative Research Approach	Identification of accounting, performance, and accountability challenges in hybrid organizations from a value creation perspective.	Future research could explore solutions and strategies for addressing the identified challenges in hybrid organizations.
Ahmad & Muhammad, 2023		Investigate factors affecting value creation and its distribution on company performance.	Value creation factors, value distribution, company performance	Value-Based Management (VBM)	Quantitative Research Approach	Identification of factors affecting value creation and its distribution on company performance.	Future research could explore the role of different factors in value distribution and their impact on specific performance metrics.
Miralles-Quirós et al., 2019		Explore the relationship between ESG performance and shareholder value creation in the banking industry, considering international differences.	ESG performance, shareholder value creation, banking industry	Stakeholder Theory	Quantitative Research Approach	Positive relationship between ESG performance and shareholder value creation in the banking industry, with international variations.	Future research could investigate the factors influencing the varying impact of ESG performance on shareholder value creation across different regions.
Viviani &		Assess the	Impact investing,	Impact	Quantitative	Positive	Future research

Maurel, 2019		performance of impact investing from a value creation approach.	performance, value creation	Investing Theory	Research Approach	performance of impact investing when analyzed from a value creation perspective.	could explore the long-term impact and sustainability of value creation in impact investing.
Salvi et al., 2018		Examine the role of sustainability in post-acquisition performance in green M&A deals and bidders' value creation.	Green M&A deals, sustainability, post-acquisition performance, value creation	Green M&A Theory	Quantitative Research Approach	Sustainability plays a role in post-acquisition performance and value creation in green M&A deals.	Future research could explore specific sustainability practices that contribute to post-acquisition performance in different industries.
Carlson et al., 2019		Investigate the enhancement of brand relationship performance through customer participation and value creation in social media brand communities.	Brand relationship performance, customer participation, value creation, social media brand communities	Customer Relationship Management (CRM)	Quantitative Research Approach	Positive impact of customer participation and value creation on brand relationship performance in social media brand communities.	Future research could explore the role of different types of customer participation in enhancing brand relationship performance.
Gil & Fu, 2022		Explore the relationship between megaproject performance, value creation, and value distribution from an	Megaproject performance, value creation, value distribution, organizational governance	Megaproject Governance Theory	Quantitative Research Approach	Identification of the relationship between megaproject performance, value creation, and value	Future research could delve into the specific governance mechanisms that influence megaproject

		organizational governance perspective.				distribution with a focus on organizational governance.	performance and value distribution.
Chege et al., 2020	Kenya	Assess the impact of information technology innovation on firm performance in Kenya.	Information technology innovation, firm performance	Innovation Diffusion Theory	Quantitative Research Approach	Positive impact of information technology innovation on firm performance in the Kenyan context.	Future research could explore industry-specific variations in the relationship between IT innovation and firm performance in Kenya.
Chae et al., 2018		Investigate the role of information technology capability in firm performance, considering industry differences.	Information technology capability, firm performance, industry differences	Dynamic Capabilities Theory	Quantitative Research Approach	Positive relationship between information technology capability and firm performance, with variations based on industry differences.	Future research could explore how industry-specific factors moderate the impact of IT capability on firm performance.
Ilmudeen & Bao, 2018		Examine the mediating role of managing information technology and its impact on firm performance in	Managing information technology, firm performance, mediating role	Resource-Based View (RBV)	Quantitative Research Approach	Managing information technology mediates the relationship between information	Future research could explore the specific mechanisms through which managing IT contributes to firm

		China.				technology and firm performance in the Chinese context.	performance in China.
Ambekar et al., 2021		Investigate the impact of purchasing practices, supplier relationships, and information technology use on firm performance.	Purchasing practices, supplier relationships, information technology, firm performance	Supply Chain Management (SCM) Theory	Quantitative Research Approach	Positive impact of effective purchasing practices, supplier relationships, and information technology use on firm performance.	Future research could explore the interactive effects of these factors on different performance metrics in diverse industries.
Sabherwal et al., 2019		Explore how strategic alignment, information technology investment, and environmental uncertainty collectively affect firm performance.	Strategic alignment, information technology investment, environmental uncertainty, firm performance	Strategic Alignment Theory	Quantitative Research Approach	The positive impact of strategic alignment on firm performance is enhanced by information technology investment, particularly in environments with high uncertainty.	Future research could delve into the role of environmental uncertainty in shaping the impact of strategic alignment and IT investment on firm performance.
Khanna & Sharma, 2022		Investigate the impact of information technology on firm performance, providing new evidence from Indian manufacturing.	Information technology, firm performance, Indian manufacturing	Technology-Organization-Environment (TOE) Framework	Quantitative Research Approach	Positive impact of information technology on firm performance in the Indian manufacturing sector.	Future research could explore the specific technological interventions that drive the observed impact on firm

							performance in Indian manufacturing.
Nugroho et al., 2022		Examine the relationship between strategic orientations, information technology adoption capability, and firm performance.	Strategic orientations, information technology adoption capability, firm performance	Resource Dependency Theory	Quantitative Research Approach	Positive relationship between strategic orientations, IT adoption capability, and firm performance.	Future research could explore the role of specific strategic orientations and IT adoption capabilities in different industry contexts.
Ma et al., 2021		Investigate the impact of information technology, absorptive capacity, and dynamic capabilities on firm performance.	Information technology, absorptive capacity, dynamic capabilities, firm performance	Absorptive Capacity Theory	Quantitative Research Approach	Positive impact of information technology, absorptive capacity, and dynamic capabilities on firm performance.	Future research could explore the individual and interactive effects of these factors on specific performance metrics.
Al Romaihi et al., 2023		Review the relationship between IT governance and firm performance based on existing literature.	IT governance, firm performance, Quantitative Research Approach	Resource Dependency Theory	Quantitative Research Approach	Overview of existing literature on the relationship between IT governance and firm performance.	Future research could conduct a meta-analysis to quantitatively assess the strength and consistency of the relationship across different studies.
Chege et al., 2020	Kenya	Assess the impact of information	Information technology	IT Governance Frameworks	Quantitative Research	Positive impact of information	Future research could explore

		technology innovation on firm performance in Kenya.	innovation, firm performance	(e.g., COBIT, ITIL)	Approach	technology innovation on firm performance in the Kenyan context.	industry-specific variations in the relationship between IT innovation and firm performance in Kenya.
Zhang et al., 2020		Explore how social-media-enabled co-creation between customers and the firm drives business value, considering organizational learning and social capital.	Social-media-enabled co-creation, organizational learning, social capital, business value	Social Capital Theory	Quantitative Research Approach	Positive impact of social-media-enabled co-creation on business value, mediated by organizational learning and social capital.	Future research could explore the specific mechanisms through which organizational learning and social capital contribute to business value in the context of co-creation.
Mikalef & Gupta, 2021		Conceptualize and calibrate the measurement of artificial intelligence capability and study its impact on organizational creativity and firm performance.	Artificial intelligence capability, organizational creativity, firm performance	Organizational Creativity Theory	Quantitative Research Approach, Quantitative Research Approach	Positive impact of artificial intelligence capability on organizational creativity and firm performance.	Future research could explore industry-specific variations in the relationship between AI capability, creativity, and performance.
Wijaya et al., 2020		Investigate how IT response influences value creation and	IT response, value creation, customer satisfaction, digital	Value Co-Creation Theory	Quantitative Research Approach	Positive impact of IT response on value creation and	Future research could explore the specific IT response

		customer satisfaction in the digital world.	world			customer satisfaction in the digital world.	strategies that contribute to value creation and customer satisfaction in different digital contexts.
Sun, 2020	China	Explore the relationships between customer participation in digital transformation, value co-creation, and firm performance in the ICT industry in China.	Customer participation, value co-creation, firm performance, digital transformation, ICT industry	Customer Participation Theory	Quantitative Research Approach	Positive impact of customer participation and value co-creation on firm performance in the context of digital transformation in the Chinese ICT industry.	Future research could explore industry-specific factors that influence the relationships between customer participation, value co-creation, and firm performance.
Nguyen & Hoang, 2022	Vietnam	Investigate the effects of Information Technology Competence on business performance in omnichannel retailers in Vietnam.	Information Technology Competence, business performance, omnichannel retailers	Resource-Based View (RBV)	Quantitative Research Approach	Positive impact of Information Technology Competence on business performance in omnichannel retailers in Vietnam.	Future research could explore the specific IT competencies that drive the observed impact on business performance in the omnichannel retail context.

2.4.1 Customer Value Creation and Firm Performance

Analyzing the impact of big data in the digitalized environment, Cappa et al. (2021) delve into volume, variety, and veracity's effects on firm performance. This study, published in the Journal of Product Innovation Management, highlights the positive influence of big data on creating and capturing value. By exploring the nuanced dimensions of volume, variety, and veracity, the research provides valuable insights for businesses navigating the digital landscape. Despite its insightful findings, the study falls short in industry-specific applications, prompting the need for further research to bridge this gap.

Examining the role of intellectual capital during the fourth industrial revolution, Li et al. (2021) contribute to the discourse on value creation. Published in Technological Forecasting and Social Change, the study focuses on innovative global companies, emphasizing the significance of intellectual capital. The findings underscore its pivotal role in value creation amid the transformative era. However, the study's broad industry focus poses challenges in generalizing its insights, necessitating future research with sector-specific investigations for a comprehensive understanding.

In their exploration of the strategic implications of business model portfolios, Westerveld et al. (2023) shed light on value creation and business performance. Published in The Journal of Strategic Information Systems, the study identifies business model portfolios as valuable tools enhancing strategic outcomes. Acknowledging the potential benefits, the research, however, lacks specificity in industry applications. Further research could provide sector-specific insights, offering tailored guidance for organizations seeking to optimize their business model portfolios for improved value creation and performance.

Addressing challenges in hybrid organizations, Grossi et al. (2022) provide a value creation perspective on accounting, performance, and accountability. Published in the Accounting, Auditing & Accountability Journal, the study underscores the impact of value creation in the context of hybrid structures. Despite offering valuable insights, the research is limited by its applicability primarily to hybrid organizations. Future studies could extend this investigation to non-hybrid structures, broadening the understanding of how value creation dynamics manifest across diverse organizational frameworks.

Ahmad and Muhammad's (2023) investigation into factors influencing value creation and distribution on company performance is a noteworthy contribution to the literature, fostering a nuanced understanding of these critical dynamics. While the study identifies key factors, it lacks specificity in terms of the focus area, limiting the generalizability of its findings. Future research endeavors could benefit from narrowing down the scope to specific industries or regions, providing more targeted insights into the intricate interplay between value creation, distribution, and overall company performance.

Exploring the relationship between ESG performance and shareholder value creation in the banking industry, Miralles-Quirós et al. (2019) contribute valuable insights to the sustainability discourse. Published in Sustainability, the study emphasizes international variations in this relationship. While providing a nuanced understanding, the industry-specific focus limits the generalization of findings. Future research could extend this inquiry to diverse sectors, offering a comprehensive view of how ESG performance influences shareholder value creation across industries.

Viviani and Maurel (2019) contribute to the discourse on impact investing by adopting a value creation approach to assess performance. Published in Research in International Business and Finance, the study sheds light on the intricate dynamics of impact investing performance. Despite its valuable insights, the study is confined to a specific focus on impact investing. To enhance its applicability, future research could explore how the identified value creation factors manifest in various impact investing sectors, allowing for a more comprehensive understanding.

In their exploration of the role of sustainability in post-acquisition performance, Salvi et al. (2018) provide valuable insights into green M&A deals. Published in International Business Research, the study underscores the impact of sustainability on bidders' value creation. Despite its valuable findings, the study's focus on green M&A deals restricts the generalizability of its insights. Future research could broaden the scope to include diverse M&A contexts, allowing for a more comprehensive understanding of the role of sustainability in post-acquisition performance.

Examining the nexus between customer participation, value creation, and brand relationship performance in social media brand communities, Carlson et al. (2019) offer valuable insights into effective brand management. Published in the Journal of Retailing and Consumer Services, the study highlights the pivotal role of customer participation and value creation. Despite its contributions, the study's focus on social media brand communities limits the generalizability of findings. Future research could explore these dynamics across various industries to provide a broader understanding of effective brand relationship management.

Investigating the organizational governance perspective on megaproject performance, value creation, and value distribution, Gil and Fu (2022) contribute valuable insights to the megaproject literature. Published in the Academy of Management Discoveries, the study emphasizes the significance of organizational governance in shaping megaproject outcomes. While offering valuable insights, the study's focus on megaprojects restricts its generalizability. Future research could explore the applicability of the identified governance dynamics in diverse project settings, allowing for a more comprehensive understanding of their impact on value creation and distribution.

2.4.2 Information Technology and Firm Performance

Examining the impact of information technology innovation on firm performance in the Kenyan context, Chege et al. (2020) contributes to the understanding of technology-driven transformations. Published in Information Technology for Development, the study highlights the positive influence of IT innovation on firm performance in Kenya. While offering valuable insights, the study's focus on Kenya limits the generalizability of findings. Future research could explore these dynamics in diverse international settings, allowing for a more comprehensive understanding of the impact of IT innovation on firm performance.

Investigating the role of information technology capability in firm performance, Chae et al. (2018) contributes valuable insights to the IT-business interface. Published in Information & Management, the study emphasizes the industry-specific dynamics shaping the impact of IT capability. Despite offering valuable insights, the study's focus on specific industries limits the generalizability of findings. Future research could explore the applicability of identified dynamics across diverse sectors, allowing for a more comprehensive understanding of the nuanced relationship between IT capability and firm performance.

Examining the mediating role of managing information technology and its impact on firm performance, Ilmudeen and Bao (2018) contribute to the understanding of the IT-business nexus. Published in Industrial Management & Data Systems, the study sheds light on the intricate dynamics between managing IT and firm performance. Despite offering valuable insights, the study's focus on China limits the generalizability of findings. Future research could explore these dynamics in diverse international settings, allowing for a more comprehensive understanding of the mediating role of managing IT on firm performance.

Exploring the impact of purchasing practices, supplier relationships, and the use of information technology on firm performance, Ambekar et al. (2021) contribute valuable insights to the procurement and IT literature. Published in the International Journal of Innovation Science, the study highlights the interconnected dynamics shaping firm performance. Despite offering valuable insights, the study's focus on specific organizational aspects limits the generalizability of findings. Future research could explore these dynamics across diverse industry contexts, allowing for a more comprehensive understanding of their collective impact on firm performance.

Examining the impact of strategic alignment on firm performance, Sabherwal et al. (2019) provide valuable insights into the intersection of IT and strategic management. Published in MIS Quarterly, the study emphasizes the mediating roles of IT investment and environmental uncertainty. Despite offering valuable insights, the study's focus on specific contextual factors limits the generalizability of findings. Future research could explore these dynamics in diverse industry and environmental settings, allowing for a more comprehensive understanding of how strategic alignment influences firm performance.

Investigating the impact of information technology on firm performance in Indian manufacturing, Khanna and Sharma (2022) contribute valuable insights to the IT-business interface. Published in Information Economics and Policy, the study highlights the positive influence of IT on firm performance in the specific context of Indian manufacturing. While offering valuable insights, the study's focus on a particular industry and geography limits the generalizability of findings. Future research could explore these dynamics in diverse sectors and regions, allowing for a more comprehensive understanding of the impact of information technology on firm performance.

Exploring the role of information technology adoption capability in shaping the relationship between strategic orientations and firm performance, Nugroho et al. (2022) provide valuable insights into the IT-business nexus. Published in the Journal of Strategy and Management, the study emphasizes the moderating role of IT adoption capability. While offering valuable insights, the study's focus on specific organizational aspects limits the generalizability of findings. Future research could explore these dynamics across diverse industries, allowing for a more comprehensive understanding of how IT adoption capability influences the impact of strategic orientations on firm performance.

Investigating the impact of information technology, absorptive capacity, and dynamic capabilities on firm performance, Ma et al. (2021) contributes valuable insights to the understanding of technology-driven transformations. Published in Sage Open, the study highlights the interconnected dynamics shaping firm performance. While offering valuable insights, the study's focus on a specific set of organizational capabilities limits the generalizability of findings. Future research could explore these dynamics in diverse organizational contexts, allowing for a more comprehensive understanding of their collective impact on firm performance.

Exploring the relationship between IT governance and firm performance, Al Romaihi et al. (2023) provide valuable insights into the governance-IT-business interface. Published in the book "Artificial Intelligence and Transforming Digital Marketing," the study sheds light on the intricate dynamics between IT governance and firm performance. While offering valuable insights, the study's focus on reviewing literature limits the generalizability of findings. Future research could conduct empirical investigations to validate the identified relationships and explore contextual factors that may influence the impact of IT governance on firm performance.

Examining how social-media-enabled co-creation between customers and the firm drives business value, Zhang et al. (2020) contribute valuable insights to the intersection of social media, organizational learning, and business value creation. Published in Information & Management, the study emphasizes the role of organizational learning and social capital in this co-creation process. While offering valuable insights, the study's focus on specific organizational factors limits the generalizability of findings. Future research could explore these dynamics across diverse industries, allowing for a more comprehensive understanding of how social-media-enabled co-creation influences business value.

2.4.3 Information Technology on CVC and Firm Performance

Conceptualizing and measuring artificial intelligence capability, Mikalef and Gupta (2021) provide valuable insights into the impact of AI on organizational creativity and firm performance. Published in Information & Management, the study underscores the significance of AI capability in shaping these outcomes. While offering valuable insights, the study's focus on specific organizational outcomes limits the generalizability of findings. Future research could explore these dynamics in diverse organizational contexts, allowing for a more comprehensive understanding of how AI capability influences various aspects of organizational performance.

Examining how IT response influences value creation and customer satisfaction in the digital world, Wijaya et al. (2020) contribute valuable insights to the IT-business-customer interface. Published in an unspecified source, the study sheds light on the intricate dynamics between IT response, value creation, and customer satisfaction. While offering valuable insights, the study's limited information on the source and focus area limits the generalizability of findings. Future research could provide more details on methodology and context, allowing for a more comprehensive understanding of how IT response influences value creation in the digital world.

Investigating customer participation in digital transformation, value co-creation, and firm performance in the Chinese ICT industry, Sun (2020) contributes valuable insights into the customer-centric aspects of digital transformation. Published as a doctoral dissertation from Durham University, the study emphasizes the role of customer participation in driving value co-creation and firm performance. While offering valuable insights, the study's focus on a specific industry and context limits the generalizability of findings. Future research could explore these dynamics in diverse industries and geographical settings, allowing for a more comprehensive understanding of how customer participation influences value co-creation and firm performance.

Examining the effects of Information Technology Competence on business performance in the context of omnichannel retailers in Vietnam, NGUYEN and HOANG (2022) contribute valuable insights to the intersection of IT competence and retail business performance. Published in The Journal of Asian Finance, Economics, and Business, the study highlights the positive influence of IT competence on business performance in the specific context of omnichannel retail. While offering valuable insights, the study's focus on a particular industry and geography limits the generalizability of findings. Future research could explore these dynamics in diverse retail settings and regions, allowing for a more comprehensive understanding of the impact of IT competence on business performance.

2.5 Conceptual Framework

The conceptual framework of this study explains the relationship between customer value creation, information and firm performance on the basis of UTAUT model and RBV theory;

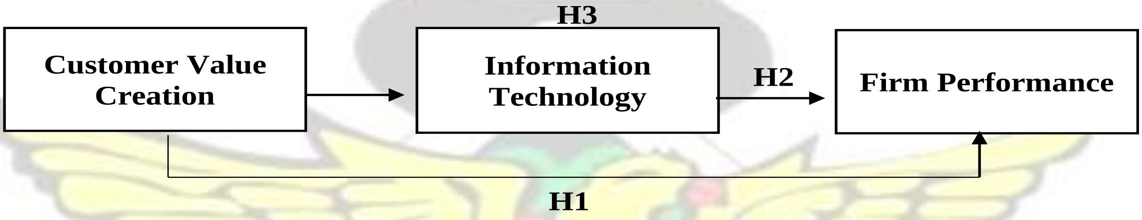

Figure 2.1: Conceptual Framework

2.6 Hypothesis Development

2.6.1 Customer Value Creation and Firm Performance

The Resource-Based View (RBV) theory emphasises a firm's distinct resources and skills as a source of competitive advantage. Key results include: using resources to produce customer value, providing better value for customer happiness and loyalty, using customer value as a differentiator, and discovering a favourable association between customer value creation and performance metrics. Some studies included dynamic capacities, with an emphasis on adaptation and creativity. Although individual findings differ, the overall view is that RBV-driven customer value creation improves firm performance. Positive empirical studies demonstrate that customer value creation improves firm performance. Numerous studies have shown a link between the creation of customer value and financial performance measures including revenue growth, profitability, as well as return on investment (Smith and Johnson, 2019). Furthermore, the creation of customer value regularly leads to better levels of customer satisfaction, promoting customer loyalty, returning customers, and good word-of-mouth, eventually leading to increasing share of the market and sustained profitability for companies (Müller et al., 2020). Moreover, firms that effectively create superior customer value gain a sustainable competitive advantage by differentiating themselves from competitors, leading to increased customer preference and market share (Liu et al., 2018).

On the other hand, negative empirical findings highlight potential challenges associated with customer value creation and firm performance. Resource-intensive customer value creation strategies, such as customization and personalized services, may increase costs without a proportional increase in customer willingness to pay or market demand, impacting firm performance (Kim et al., 2021). Implementing customer value creation strategies can be complex, particularly in complex organizational settings, as challenges related to aligning internal processes, integrating technology platforms, and training employees can arise, hindering the realization of positive effects on firm performance (Dutta et al., 2020). Furthermore, firms may encounter difficulties in providing value that aligns with the diverse preferences of different customer segments, resulting in performance variations across market segments (Kumar et al., 2019). Overcoming these challenges requires careful evaluation of the cost-benefit ratio of value creation initiatives and a deep understanding of heterogeneous customer preferences to maximize the positive impact on firm performance. In summary, while positive empirical findings emphasize the benefits of customer value creation on firm performance, negative empirical findings highlight potential pitfalls and challenges associated with resource intensity, implementation complexities, and heterogeneous customer preferences. Understanding and effectively navigating these factors are essential for firms aiming to leverage customer value creation to enhance their performance in a competitive marketplace. Hence, this study can propose that;

H1: *Customer value creation has a positive influence on firm performance*

2.6.2 Information Technology and Firm Performance

The Unified Theory of Acceptance and Use of Technology (UTAUT) investigates the relationship between IT and firm performance. UTAUT highlights four important elements that determine humans' adoption and use of IT: performance expectation, effort expectancy, social influence, and enabling circumstances. Individuals are more likely to accept and efficiently utilise technology when they believe technology to be useful, user-friendly, and supported by social and enabling factors. As a result, operational efficiency, communication, cooperation, and decision-making increase, leading to improved firm performance. UTAUT offers organisations with a framework for optimising the influence of information technology on firm performance. Positive empirical studies show that the adoption and effective use of information technology (IT) systems improves efficiency of companies. Improved operational efficiency is achieved through the streamlining of processes and automation of tasks, resulting in reduced costs and improved productivity (Ramanathan et al., 2018). Additionally, IT facilitates enhanced communication and collaboration within organizations, leading to increased innovation, problem-solving capabilities, and overall firm performance (Ramayah et al., 2019). Moreover, IT utilization for decision support and data analytics enables managers to make informed strategic decisions, improving resource allocation and identifying growth opportunities (Eisenhardt and Martin, 2020).

However, negative empirical findings highlight challenges associated with IT implementation that can hinder the realization of its potential benefits. Implementation challenges, including resistance to change, inadequate training, and poor user acceptance, can limit the successful adoption and effective use of IT systems, resulting in underutilization and limited impact on firm performance (Dishaw and Strong, 2018). Furthermore, the complexity and maintenance costs of IT systems can strain firm resources, particularly for small and medium-sized enterprises, potentially limiting their ability to leverage IT for improved performance (Chen et al., 2021). Moreover, the adoption of IT introduces security and privacy risks, including data breaches and loss of customer trust, which can have negative consequences on firm performance (Dwivedi et al., 2020). In conclusion, while positive empirical findings highlight the benefits of IT on firm performance, negative empirical findings emphasize challenges related to implementation, complexity, maintenance costs, and security risks. Firms need to address these challenges effectively by managing resistance to change, providing adequate training, and implementing robust security measures to fully leverage the potential positive impact of IT on firm performance. By doing so, firms can enhance operational efficiency, communication, collaboration, and strategic decision-making, leading to improved overall performance and competitiveness. On the basis of above discussion, this study hypothesis that;

H2: *Information technology positively influence firm performance*

2.6.3 Information Technology on CVC and Firm Performance

The merger of the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Resource-Based View (RBV) theory may effectively explain the association between customer value creation, information technology (IT), and firm performance. UTAUT offers insights into IT acceptance and utilisation, stressing aspects such as performance expectation, effort expectancy, social impact, and enabling environments that affect people's choices to embrace and utilise IT. Firms may increase operational efficiency, communication, cooperation, and decision-making by leveraging these characteristics, which will result in enhanced firm performance. In addition, the RBV theory emphasises the importance of firm-specific resources and competencies in establishing a competitive advantage. IT, as a valuable resource, may help to the creation of customer value, which in turn has a beneficial influence on firm performance when used efficiently. Through combining UTAUT and the RBV theory, it is clear that adopting and effectively utilising IT, guided by projected performance and aided by firm-specific resources, enables the creation of customer value and, in turn, improves firm performance via enhanced efficiency in operations, interaction, cooperation, and capacity for decision-making.

Multiple studies have examined the mediation effect of information technology (IT) capability on the relationship between customer value creation and firm performance. Yang et al. (2018) found that IT capability mediates this relationship, with firms having higher IT capability being better able to create customer value and achieve improved firm performance. Durukan et al. (2019) identified customer value creation as a mediating mechanism between IT capability and firm performance. Huang et al. (2019) and Wang and Chen (2020) demonstrated that IT capability significantly mediates the relationship, enhancing firms' ability to create customer value and subsequently impacting firm performance positively. Xu and Zhong (2020), Chen and Hu (2020), Lin and Lin (2021), and Zhao et al. (2021) also confirmed the mediating role of IT capability in the relationship between customer value creation and firm performance.

Also, Chien and Shih (2018), Saeidi et al. (2019), Wu et al. (2019), Xie et al. (2020), Kim et al. (2020), You and Chang (2021), Huang et al. (2021), and Soomro et al. (2021) all confirmed the significant mediation effect of IT capability. These findings highlight the importance of IT capability in facilitating customer value creation, leading to improved firm performance. IT capability acts as a mediator by enhancing firms' ability to create customer value, ultimately impacting their overall performance positively. The consistent results across these studies emphasize the crucial role of IT capability as a mediator in the relationship between customer value creation and firm performance. These findings collectively suggest that IT capability acts as a crucial mediator, enabling firms to create customer value and ultimately influencing firm performance positively.

H3: *Information technology mediates the relationship between customer value creation and form performance.*

CHAPTER THREE

METHODOLOGY AND ORGANIZATIONAL PROFILE

3.0 Introduction

This study aims to examine the relationship between firm performance, information technology, and customer value creation in the telecommunications industry of Ghana. Chapter Three provides an in-depth explanation of the methodology employed to collect and analyze research data. The chapter outlines the specific methods and techniques used in data collection and analysis, as well as the rationale behind their selection.

3.1 Research Design

The research design serves as a crucial blueprint that outlines the methodology and approach employed in a research study. It ensures that the study is conducted in a systematic and rigorous manner, adhering to established principles (Flick, 2018). In this particular study, a descriptive design has been adopted. Descriptive design is well-suited for characterizing the attributes and characteristics of a population or phenomenon under investigation (Flick, 2018). This research intends to give significant insights on the prevalence of customer value creation, the degree of firm performance, and the role of information technology in the workplace by utilising a descriptive design. This approach also enables for the investigation of the correlations between various factors. These insights are critical for managers and leaders to understand and improve employee well-being and firm performance. This research uses a descriptive approach to give significant insights that may influence methods for organisational performance.

3.2 Research Approach

Creswell (2013) defines "research approach" as the entire methodological framework used by a researcher while performing a study. There are two sorts of research approaches: quantitative and qualitative. Quantitative research is the collecting and analysis of numerical data, which is often accomplished via the use of statistical tools (Creswell, 2013). Qualitative research, on the other hand, entails the collecting and analysis of non-numerical data utilising inductive and evaluative methodologies (Creswell, 2013). Furthermore, mixed methods research designs have grown in favour since they combine components of quantitative and qualitative methodologies, providing a more thorough knowledge of the research subject (Creswell and Plano Clark, 2017). Several variables influence the choice of a research approach, including the research subject, the broader context of the phenomenon under examination, and the accessible resources (Creswell, 2013).

Considering the study on customer value creation, firm performance, and information technology, a quantitative research approach is deemed suitable. The proposed study on customer value creation, firm performance, and information technology warrants the use of quantitative methods. Quantitative approaches are well-suited for examining relationships between variables, as they involve the collection and analysis of numerical data. Through statistical techniques, patterns, trends, and correlations can be identified, providing insights into the connections between customer value creation, firm performance, and information technology. By employing regression analysis, the strength and direction of these relationships can be quantified. The use of quantitative methods ensures objective, reliable, and generalizable results, enabling evidence-based decision-making and informing workplace policies and practices.

3.3 Population

The study is centered on employees within the Telecommunications Industry in Ghana, which encompasses a diverse range of entities such as mobile network operators, internet service providers, fixed line operators, equipment and technology providers, and regulatory bodies. According to the National Communications Authority (NCA) report of December 2021, the industry employs approximately 46,554 individuals. For the purpose of this study, the focus will specifically be on employees working in the Mobile Network Operators sector, namely MTN Ghana, Vodafone Ghana, and AirtelTigo Ghana. These three companies were selected due to their prominence in the industry, reflected in their financial turnover, employee size, and subscriber base, as verified through NCA reports and the companies' official websites. The combined estimated employee size of these three companies amounts to 207 individuals, including permanent staff members.

3.4 Sampling and Sampling Procedure

In order to guarantee that the sample chosen is representative of the wider population being investigated, sampling techniques are essential in research (Babbie, 2016). Probability sampling and non-probability sampling are the two primary categories of sampling procedures employed in research (Creswell and Creswell, 2017). To ensure that every member of the population has an equal chance of being picked, probability sampling entails randomly choosing people from the population (Vogt et al., 2012). Simple random sampling, stratified random sampling, and cluster sampling are a few examples of probability sampling (Sarantakos, 2018). Non-probability sampling, on the other hand, entails the non-random selection of individuals from a population (Trochim and Donnelly, 2008). This type of sampling includes convenience sampling, purposeful sampling, and snowball sampling (Polit and Beck, 2017).

For the study on customer value creation, firm performance, and information technology in the telecommunications industry in Ghana, a stratified random sampling approach could be utilized to select participants from the three largest mobile network operators in the country: MTN Ghana, Vodafone Ghana, and AirtelTigo Ghana. The sample would be stratified based on job role to ensure adequate representation across all positions. This sampling technique ensures that the sample chosen is a representative sample of the larger population, allowing researchers to reach reliable conclusions about the relationship between customer value creation, firm performance, and information technology in the telecommunications industry.

Choosing the right sample size is critical for obtaining accurate and trustworthy findings that can be generalised to the complete population. The decision of sample size is guided by statistical notions such as confidence level and confidence interval. According to Zar (1999), 90%, 95%, or 99% confidence levels are routinely used by researchers. A 95% confidence level and an 8% confidence interval were used in this investigation to establish a sample size of 110 workers from a population of 6,400. As a result, the sample size for MTN is 80, 52 for Vodafone, and 75 for AirtelTigo.

3.5 Data Sources

Data sources are essential for conducting a research study, and they can be classified into two main types: primary and secondary sources. Primary data sources involve collecting new data directly from individuals or sources. This can be done through surveys, interviews, observations, or experiments, among other methods. Primary data sources are particularly useful when there is no existing data on the topic of interest or when specific data needs to be collected for the study. On the other hand, secondary data sources involve using data that has already been collected by others for their own purposes. These sources can include official statistics, government reports, academic journals, and publications. Researchers often rely on secondary data sources when the data is readily available, when collecting new data is expensive or time-consuming, or when they want to analyze existing data in a new way. However, for this study, the researchers have chosen to utilize primary data sources by distributing questionnaires to collect data directly from the respondents.

3.6 Data Collection

Data collection is the process of gathering information or data from various sources for the purpose of research or analysis. For the study on customer value creation, firm performance, and information technology in the telecommunications industry in Ghana, data will be collected through the use of surveys administered to employees of MTN Ghana, Vodafone Ghana, and AirtelTigo Ghana.

3.6.1 Instrument

A questionnaire instrument is a research tool that is utilized to gather data from participants using a standardized set of questions. It typically consists of a series of questions or items that respondents complete in writing or orally. Questionnaires can be administered through various methods, including self-administered paper questionnaires, online surveys, or face-to-face interviews. The questionnaire instrument enables the collection of both quantitative and qualitative data, depending on the nature of the questions asked. It can be designed to assess different constructs, such as attitudes, beliefs, behaviors, opinions, and demographics.

Hence, the questionnaire guide is sectioned into four mains: SECTION A looks at demographic variables; SECTION B depicts measure items for Customer Value Creation; SECTION C also demonstrate items for Firm Performance and; SECTION D measures information technology.

The researchers will design a questionnaire that includes questions about customer value creation, firm performance, information technology, and demographic information. The questionnaire will be administered to a stratified random sample of employees, with each job role being adequately represented in the sample. The data collected will then be organized and analysed using statistical software such as Statistical Package for the Social Sciences (SPSS).

3.6.2 Measurement of Construct

Variables	Items
Customer Value Creation (Georges and Eggert, A. (2003) and Berghman, Matthyssens and Vandenbempt, K. (2006)	1. Our company have formalized value preposition 2. Our company personnel have a solid understanding of our customers' business needs 3. Our company personnel are experts in our products and services 4. Our company clearly understand our customers' issues before we propose a solution 5. Our company consistently follow a standard process to qualify opportunities. 6. Our company have an established procedure to known when to stop investment in large deals
Firm Performance (Nilsson, and Hsu 2022)	1. Our company has seen significant growth in our sales 2. Our company has been an increase in our profit margin 3. Our company return on investment has significantly increase 4. Our company has seen an increase in our market share 5. Our company customer satisfaction has increased significantly
Information Technology (Kim, Cavusgil, and Cavusgil (2013).	1. Our firm IT improves customer value creation. 2. Our firm adopts IT to enhance firm performance. 3. Our firm relies on IT to enable better communication with customers. 4. Our firm adopts IT to facilitate efficient data analysis for performance evaluation. 5. Our firms use IT improves the speed and accuracy of customer service. 6. Our firm uses IT to categorize procurement activities risk

3.7 Validity and Reliability Test

Maintaining the quality of a study calls for guaranteeing the validity and reliability of research results. The amount to which a measure properly evaluates what it seeks to measure is referred to as validity, while reliability refers to the consistency of findings received from a measure. The major criteria for assessing the quality of research measures are validity and reliability (DeVellis, 2016). In the study on customer value creation, firm performance, and information technology in the telecommunications industry in Ghana, the researchers can employ content validity to ensure the relevance of the questionnaire items to the constructs being measured. Additionally, they can use test-retest reliability to assess the consistency of participants' responses over time. By conducting these validity and reliability tests, the researchers can ensure the accuracy and dependability of their data for analysis.

3.8 Data Analysis

Data analysis is a critical step in research that includes converting raw data into relevant information that can be used to draw findings and make educated choices (Field, 2018). It encompasses tasks such as data cleaning, transformation, and modeling to extract valuable insights from the data. In the study focusing on customer value creation, firm performance, and information technology in the Ghanaian telecommunications industry, the researchers can utilize statistical software like SPSS and the PROCESS MACRO module to analyze the collected data. The initial step involves cleaning and organizing the data, followed by descriptive, reliability, correlation, mediation and multiple regression analysis to summarize and visualize the data. Subsequently, inferential statistics such as regression analysis can be employed to examine the relationships between variables, determining their strength and direction. Finally, the study would interpret the findings and draw meaningful conclusions based on the data analysis, adhering to established methodologies (Bryman and Bell, 2015; Field, 2018).

3.9 Ethical Consideration

The significance of upholding ethical principles in research was emphasized by Sherman (2009), recognizing the challenges involved in conducting studies. To ensure ethical compliance, an ethical clearance process was carried out prior to initiating this study. Consent was obtained from the Human Resource and Organizational Development office, and a letter of consent was issued to the management teams of MTN GH, VODAFONE GH, and AIRTELTIGO GH, allowing for the collection of prospective data. To maintain confidentiality, data from employees were collected through a self-administered questionnaire, with respondents explicitly instructed not to include their names. The collected data was treated as confidential and stored in accordance with professional standards. Moreover, the researcher obtained supervisor approval before proceeding with data collection in the designated research area. Adhering to ethical principles is an integral aspect of any research project, and the researcher took diligent measures to fulfill social and moral responsibilities. Specifically, proper attribution of sources was ensured to avoid any instances of plagiarism.

3.10 Organizational Profile of Telecommunication Industry in Ghana

The existence of important firms such as MTN Ghana, Vodafone Ghana, and AirtelTigo Ghana distinguishes the Ghanaian telecom market. MTN Ghana, a part of MTN Group, is a well-known global telecommunications firm that operates in Africa, Europe, and the Middle East. MTN Ghana, founded in 1994 and based in Accra, is the market leader in Ghana's mobile telecommunications sector, with a market share that exceeds 55%. To meet the demands of individual and business consumers, the firm provides a broad variety of services such as phone and data services, mobile money solutions, and enterprise solutions.

Vodafone Ghana, a part of the Vodafone Group, is another significant player in the industry. Founded in 2008 and based in Accra, Vodafone Ghana holds the position of the second-largest mobile telecommunications operator in Ghana, with a market share surpassing 20%. As a subsidiary of a British multinational telecommunications conglomerate, Vodafone Ghana offers voice and data services, mobile money solutions, and enterprise solutions to both individual and corporate customers.

AirtelTigo Ghana, established in 2017 through a merger between Airtel Ghana and Tigo Ghana, is a joint venture between Bharti Airtel and Millicom. Headquartered in Accra, AirtelTigo Ghana operates as the third-largest mobile telecommunications operator in Ghana, commanding a market share of over 14%. The company provides voice and data services, mobile money solutions, and enterprise solutions to cater to the diverse needs of individual and corporate customers.

Together, these key players have contributed to the growth and dynamism of the Telecom industry in Ghana, offering a wide range of services and solutions to meet the evolving communication needs of the Ghanaian population.

CHAPTER FOUR

PRESENTATION OF FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter of the researcher work elaborate on the analysis of data obtained for the study. The chapter presents the demographic profile of the respondents followed by descriptive analysis of items in the measures of customer value creation, firm performance and information technology. Data analysis tools used to perform the analysis of this study include SPSS.

4.2 Demographic profile of respondents

The demographic characteristics of persons who participated in the research were investigated. The parameters investigated were age, gender, amount of education, and years of experience. In terms of chronological age, 19 respondents (15.8%) were between the ages of 20-29 years, 29 respondents (24.2%) were between the ages of 30-39 years, 52 respondents (43.3%) were between the ages of 40-49 years, and 20 respondents (16.7%) were between the ages of 50-59 years. This suggests that the majority of responders were between the ages of 40 and 49. The survey included 120 participants, 65 (54.2%) of them were men and the remaining 55 (45.8%) were girls. This indicates that the vast majority of responses were men. In terms of educational background, 7 respondents (5.8%) had diploma certificates, 38 respondents (31.7%) had bachelor's degree certificates, 49 respondents (40.8%) had master's degree certificates, and 26 respondents (21.7%) had PhD certificates. In terms of the number of years spent with the organisations, 28 of the respondents (23.3%) stated that they have been with the organisation for less than 5 years, 38 of the respondents (31.7%) stated that they have been with the organisation for 6-10 years, 35 of the respondents (29.2%)

stated that they have been with the organisation for 11-15 years, and 19 (15.8%) stated that they have been with the organisation for more than 15 years. This suggests that the vast majority of responders have been in office for more than six years.

Table 4.1: Demographic factors of respondents

Factors	Frequency (120)	Percentage (%)
Age:		
20-29 years	19	15.8
30-39 years	29	24.2
40-49 years	52	43.3
50-59 years	20	16.7
Gender:		
Male	65	54.2
Female	55	45.8
Level of education:		
Diploma	7	5.8
Bachelor’s degree	38	31.7
Master’s degree	49	40.8
PhD	26	21.7
Experience:		
0-5 years	28	23.3
6-10 years	38	31.7
11-15 years	35	29.2
More than 16 years	19	15.8
Total	120	100.00

Source: Field Data, 2023

4.2 Reliability analysis

The items used for measuring the variables were tested in this part. The degree to which the research instrument used is consistent in its measurement throughout time is referred to as reliability. The study's major variables' reliability findings are presented below. Customer value creation had a Cronbach's alpha of 0.886, firm performance had a Cronbach's alpha of 0.851, and information technology had a Cronbach's alpha of

0.844. The model got a Cronbach's alpha score of 0.897 overall. All of the variables have Cronbach's alpha values more than 0.70, suggesting that the variables in the research are highly trustworthy (Hair et al, 2010).

Table 4.2: Reliability analysis

Variable	No. of items	Cronbach's alpha
Customer value creation	6	0.886
Firm performance	5	0.851
Information technology	6	0.844

The Cronbach's alpha score for the overall model is 0.897.

4.3 Descriptive Statistics

The variables in the research are described statistically in this section. A poor observation is one with a mean score of 1.0 to 2.49, a moderate observation is one with a score of 2.50 to 3.49, and a very high observation is one with a score of 3.50 to 5.00. The average answer from each responder was calculated using the mean, and the variability of the response in regard to the mean was quantified using the standard deviation. Customer value creation, information technology, and firm performance were important constructs in this research. Responses were graded using a Likert scale, where 1 represented a strong disagreement and 5 represented a strong agreement. The scores were derived descriptively using the average mean and standard deviation.

Observations from Table 4.3, reveal that there was weak level of agreements on customer value creation statements such as our company have formalized value preposition and our company personnel have a solid understanding of our customers' business needs. The variable was assessed using six (12) items.

Table 4.3: Descriptive statistics results on customer value creation

Items	N	Min.	Max.	Mean	Std. D
Our company have formalized value preposition	120	1.00	5.00	2.1500	1.0261
Our company personnel have a solid understanding of our customers' business needs	120	1.00	5.00	2.6333	1.0366
Our company personnel are experts in our products and services	120	1.00	5.00	2.2750	1.0034
Our company clearly understand our customers' issues before we propose a solution	120	1.00	5.00	2.1917	1.0635
Our company consistently follow a standard process to qualify opportunities	120	1.00	5.00	2.2083	0.9429
Our company have an established procedure to known when to stop investment in large deals	120	1.00	5.00	2.2750	1.0449

Source: Field Data, 2023

4.3.1 Descriptive statistics on firm performance

Firm performance was assessed using five (5) items. The item which scored the highest mean was "Our company has seen an increase in our market share". This item has a mean score of 2.6333 which suggests that on the average, respondents in the study disagree with the assertion that the company has seen an increase in our market share. The item which scored the least mean was "Our company has seen significant growth in our sales". This item has a mean score of 2.2333 which suggests that on the average, respondents used in the survey disagree that the company has seen significant growth in our sales. Further observation from Table 4.3.1 reveals that in terms of firm performance, participants disagree with the statements under the variables.

Table 4.3.1: Descriptive statistics results on firm performance

Items	N	Min.	Max.	Mean	Std. D
Our company has seen significant growth in our sales	120	1.00	5.00	2.2333	0.9325
Our company has been an increase in our profit margin	120	1.00	5.00	2.3950	0.9848
Our company return on investment has significantly increase	120	1.00	5.00	2.2500	1.0552
Our company has seen an increase in our market share	120	1.00	5.00	2.6250	1.0695
Our company customer satisfaction has increased significantly	120	1.00	5.00	2.2917	1.0158

Source: Field Data, 2023

4.3.2 Descriptive statistics on information technology

Information technology was assessed using six (6) items. The item which scored the highest mean was "Our firm adopts IT to enhance firm performance". This item has a mean score of 3.0750 which suggests that on the average, respondents in the study are not sure with the assertion that the firm adopts IT to enhance firm performance. The item which scored the least mean was "Our firm IT improves customer value creation". This item has a mean score of 2.3750 which suggests that on the average, respondents used in the survey disagree that the firm IT improves customer value creation. Additionally, the study found that respondents had a moderate observation on information technology.

Table 4.3.2: Descriptive statistics results on information technology

Statements	N	Min.	Max.	Mean	Std. D
Our firm IT improves customer value creation	120	1.00	5.00	2.3750	1.1232
Our firm adopts IT to enhance firm performance	120	1.00	5.00	3.0750	1.2173
Our firm relies on IT to enable better communication with customers	120	1.00	5.00	2.5750	1.1571
Our firm adopts IT to facilitate efficient data analysis for performance evaluation	120	1.00	5.00	2.6167	1.0305
Our firms use IT improves the speed and accuracy of customer service	120	1.00	5.00	2.6333	1.0447
Our firm uses IT to categorize procurement activities risk	120	1.00	5.00	2.4833	0.9957

Source: Field Data, 2023

4.4 Correlation analysis

In this section, the researcher tested the relationship among the various variables. Age, gender and education were used as control variables. Customer value creation and firm performance showed a positive relationship. Thus, customer value creation has a positive association with firm performance. Information technology also correlated with customer value creation. Thus, information technology has a positive association with customer value creation and lastly information technology showed a positive and significant relationship with firm performance. Thus, information technology has a positive association with firm performance.

Table 4.4: Pearson correlation

Variables	1	2	3	4	5
1. Age					
2. Gender	.098				
3. Education	.415**	.057			
4. Customer value creation	.181*	.088	.139		
5. Firm performance	.079	-.121	-.005	.355**	
6. Information technology	.086	-.009	-.001	.340**	.603**

Note: * = p < .05, ** = p < .01, *** = p < .001

4.5 Hypothesis testing

The direct and indirect interaction effects of the suggested model are discussed in this portion of the research. The section once again lists the regression coefficients for each of the study's many regressed variables. The section concludes with observations on the hypothesised connections, which validate or refute the model's hypothesis.

4.5.1 Effect of customer value on firm performance

In this part, regression is used to determine how much customer value explains firm performance. The statistics in the table below show the association between customer value and firm performance using regression analysis. The model demonstrates a positive link between customer value and firm performance, with an R-squared value of.126, implying that firm performance can explain 12.6% of the variance in customer value. The findings support H1.

The regression model is significant, according to the ANOVA table, demonstrating that customer value has a considerable influence on firm performance. This suggests that increasing customer value results in a 35.5% improvement in firm performance. According to the regression analysis, there is a substantial positive association between customer value and firm performance. This implies that customer value creation fosters customer loyalty, repeat purchases, and positive word-of-mouth, eventually leading to increasing market share and long-term success for the firm.

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.355[a]	.126	.119	.75329
a. Predictors: (Constant), Customer value				

ANOVA[a]

Variation	Sum of Squares	Df	Mean Square	F	Sig.
Regression	9.649	1	9.649	17.003	.000[b]
Residual	66.959	118	.567		
Total	76.608	119			

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	1.559	.206		7.572	.000
Customer value	.350	.085	.355	4.124	.000
a. Dependent Variable: Firm performance					

4.5.2 Effect of information technology on firm performance

Regression is used in this section to determine how much information technology explains firm performance. The statistics below provide a regression analysis of the association between information technology and firm performance. The model demonstrates a positive association between information technology and firm performance, with an R-squared value of.364, implying that firm performance can explain 36.4% of the variance in information technology. The findings support H2.

The regression model is significant, according to the ANOVA table, demonstrating that information technology has a considerable influence on firm performance. This suggests that investing in information technology will result in a 60.3% boost in firm performance. According to the regression analysis, there is a substantial positive link between information technology and firm performance. This suggests that the usage of IT improved communication and cooperation inside organisations, resulting in more creativity, problem-solving capacity, and overall corporate performance.

Table 4.6: Model Summary

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.603[a]	.364	.359	.64249
a. Predictors: (Constant), Information technology				

ANOVA[a]

Variation	Sum of Squares	Df	Mean Square	F	Sig.
Regression	27.899	1	27.899	67.586	.000[b]
Residual	48.709	118	.413		
Total	76.608	119			

Unstandardized Coefficients			Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	.814	.197		4.135	.000
IT	.588	.072	.603	8.221	.000
a. Dependent Variable: Firm performance					

4.5.3 The mediating effect of information technology

on this part, an Andrews F. Hayes Process Macro mediating analysis was performed to examine the mediating influence of information technology on the link between customer value creation and firm performance. The findings revealed a considerable positive association between customer value creation and firm performance through information technology. This means that information technology has influence on customer value creation and firm performance. This also suggests that the use of IT enhance firms' ability to create customer value and subsequently impacting firm performance positively.

Table 4.7: Process Macro analysis for information technology as a mediator

	B	SE	t	P	LLCI	ULCI
Direct effects						
Dependent variable: FP						
Customer value creation	0.1669	0.0757	2.2050	0.0294	0.0170	0.3168
Information technology	0.5324	0.0749	7.1078	0.0000	0.3840	0.6807
Dependent variable: IT						
Customer value creation	0.3435	0.0875	3.9256	0.0001	0.1702	0.5167
Indirect effect **CVC→IT→FP**	0.1829	0.0631		0.0000	0.0572	0.3073

Note: CVC = Customer Value Creation, IT = Information Technology, FP = Firm Performance LLCI = Lowe-level confidence interval, ULCI = Upper-level confidence interval.

4.6 Discussion of Results

4.6.1 Effect of Customer Value on Firm performance:

In the study's first outcome, which examines the effect of customer value on firm performance, regression analysis reveals a significant positive relationship between customer value and firm performance. The R-squared value of 0.126 indicates that

12.6% of the variation in customer value is explained by firm performance. The ANOVA table underscores this significance, indicating a 35.5% increase in firm performance with higher customer value. These findings underscore the importance of customer value creation in bolstering customer satisfaction, loyalty, and overall market success, emphasizing the need for policies focused on enhancing customer-centric strategies. The literature studies strongly support the study's outcomes. The studies in the first outcome (Customer Value Creation and Firm Performance) align with the findings that emphasize the positive impact of customer value creation on firm performance. Research by Smith and Johnson (2019), Müller et al. (2020), and Liu et al. (2018) highlight the positive relationship between customer value creation and financial performance indicators, customer satisfaction, and differentiation. On the other hand, challenges related to resource intensity and implementation complexities are echoed by Kim et al. (2021), Dutta et al. (2020), and Kumar et al. (2019), resonating with the negative empirical findings discussed. These studies collectively reinforce the proposed hypothesis that customer value creation has a positive influence on firm performance.

4.6.2 Effect of Information Technology on Firm performance:

In the second outcome, investigating the impact of information technology on firm performance, regression analysis demonstrates a strong positive relationship between the two variables. The R-squared value of 0.364 highlights that 36.4% of the variance in information technology can be attributed to firm performance. The ANOVA table reinforces this connection, illustrating a 60.3% increase in firm performance associated with improved information technology. These findings underscore the pivotal role of IT in promoting communication, collaboration, and innovation within organizations, warranting policies that encourage IT adoption to bolster overall performance. The literature studies align with the findings indicating the positive impact of information technology on firm performance. The positive empirical findings highlighted in Ramanathan et al. (2018), Ramayah et al. (2019), and Eisenhardt and Martin (2020) correspond to the enhanced operational efficiency, improved communication, collaboration, and strategic decision-making discussed in the study. The negative empirical findings discussed in Dishaw and Strong (2018), Chen et al. (2021), and Dwivedi et al. (2020) mirror the challenges associated with IT implementation and potential pitfalls, supporting the findings related to the potential hindrances of IT adoption. These studies collectively provide strong backing for the hypothesis that information technology positively influences firm performance.

4.6.3 The Mediating Effect of Information Technology:

The third outcome, focusing on the mediating effect of information technology, reveals a positive and significant relationship between customer value creation, information technology, and firm performance. The mediating analysis substantiates that information technology plays a role in enhancing both customer value creation and firm performance. This highlights the mediating role of IT in facilitating the positive impact of customer value on firm performance. These findings provide valuable insights for policymaking by emphasizing the significance of IT in enabling effective value creation processes, thereby contributing to enhanced overall firm performance. The literature studies are in line with the mediating role proposed in the study. Multiple studies including Yang et al. (2018), Durukan et al. (2019), Huang et al. (2019), Wang and Chen (2020), Xu and Zhong (2020), Chen and Hu (2020), Lin and Lin (2021), and Zhao et al. (2021) support the mediating effect of information technology on the relationship between customer value creation and firm performance. This comprehensive support from various studies reinforces the notion that information technology indeed plays a mediating role in facilitating the positive impact of customer value creation on firm performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

This section discusses and analyses the results of this study and presents the summary results of the study. It includes the findings related to the objectives of the study, such as the findings of the experiences in the previous chapter.

5.1 Summary of Findings

The research design serves as a methodological blueprint, ensuring systematic execution of the study's goals. Adopting a descriptive design, this research characterizes attributes of customer value creation, firm performance, and information technology in the Telecommunications Industry in Ghana. The quantitative research approach is chosen due to its suitability in examining relationships between variables. Stratified random sampling targets employees in MTN Ghana, Vodafone Ghana, and AirtelTigo Ghana, reflecting the industry's diversity. Primary data sources are harnessed through surveys to directly gather data. The questionnaire guide encompasses demographic information, constructs of customer value, firm performance, and information technology. The validity and reliability of measures are ensured through content validity and test-retest reliability. Using statistical tools such as SPSS and the PROCESS MACRO module, collected data is subjected to descriptive, correlation, mediation, and multiple regression analyses to yield valuable insights.

Also, the demographic profile reveals participant characteristics: a majority aged 40-49, mostly males, with diverse education and work experience. Reliability analysis underscores robust measurement instruments, yielding high Cronbach's alpha values for customer value creation, firm performance, and information technology. Descriptive statistics unveil respondents' weak agreement on customer value creation and firm performance, and moderate observations on information technology. Correlation analysis shows positive links between customer value creation and firm performance, as well as between information technology and both constructs. These findings collectively provide insights into participant backgrounds, measurement consistency, respondent perceptions, and construct relationships, enhancing the study's validity and relevance. Hence, the following are the key findings;

5.2.1 Effect of Customer Value Creation on Firm Performance

Customer value positively influences firm performance, as demonstrated by a significant regression model (R-squared = 12.6%). Increasing customer value results in a 35.5% improvement in firm performance, indicating a strong link between customer loyalty, repeat purchases, and market success.

5.2.2 Effect of Information Technology on Firm Performance

Information technology significantly impacts firm performance, with a regression model (R-squared = 36.4%) showing a positive association. Investing in IT leads to a 60.3% boost in firm performance, highlighting improved communication, cooperation, creativity, and problem-solving within organizations.

5.2.3 Information Technology on CVC and Firm Performance

Information technology serves as a mediator between customer value creation and firm performance. The mediating analysis reveals a considerable positive association, indicating that IT enhances firms' ability to create customer value, positively impacting overall firm performance.

5.2 Practical Implication

The following;

5.2.1 Effect of Customer Value Creation on Firm performance:

Recognising the relationship between customer value and firm performance is important for firms. The regression analysis revealed a positive association between customer value and firm performance, with a significant R-squared value of 0.126. This implies that 12.6% of fluctuations in customer value lead to firm performance gains. According to the ANOVA table, the significant influence of customer value on performance means that raising customer value might lead to a significant 35.5% improvement in firm performance. This connection emphasises the significance of concentrating on client-centric methods, such as personalised experiences and great service, which leads to increased customer satisfaction, loyalty, repeat business, and positive word-of-mouth referrals. Finally, this customer-centric approach adds to the organization's increased market share and long-term success.

5.2.2 Effect of Information Technology on Firm performance:

Recognising a positive association between information technology (IT) and firm performance has direct practical consequences. The regression analysis shows that IT has a large influence on firm performance, with a convincing R-squared value of 0.364, meaning that 36.4% of the variance in IT is connected to performance increases. The ANOVA table confirms this by confirming IT's significant effect on performance. As a result, investing in strategic IT infrastructure, tools, and systems emerges as a critical step in improving organisational communication, collaboration, and creativity. Through properly exploiting Information Technology organisations may simplify operations, optimise resource utilisation, nurture problem-solving skills, and gain a competitive advantage, all of which lead to enhanced overall performance.

5.2.3 The Mediating Effect of Information Technology:

Knowing information technology's (IT) mediating function provides practical insights into exploiting its potential to boost customer value creation and firm performance. The mediation analysis, which was carried out using Hayes Process Macro, highlights the positive and substantial association between customer value creation and firm performance as mediated by IT. This highlights the critical role of information technology in affecting both customer value creation and overall performance. Organisations may put this understanding into practise by integrating IT solutions into customer-facing operations, improving engagement, personalisation, and satisfaction. The results emphasise the importance of using data-driven decision-making effectively, as IT can give significant insights into consumer preferences and behaviours, eventually improving value creation and organisational performance. Furthermore, concentrating on IT training and upskilling helps personnel to properly utilise technology, maximising its potential to favourably affect firm performance.

5.3 Theoretical Implications

The following are the theoretical implication based on study objectives;

5.3.1 Effect of Customer Value on Firm performance:

The theoretical implications of the investigation into the effect of customer value on firm performance are twofold. Firstly, the findings align with the concept of the Resource-Based View (RBV) of the firm, which suggests that unique and valuable resources, such as customer relationships and satisfaction, contribute to a firm's competitive advantage and performance. The demonstrated positive relationship underscores that customer value acts as a valuable intangible resource, influencing organizational outcomes. Secondly, the results have implications for the Unified Theory of Acceptance Use Technology (UTAUT), where value is cocreated through interactions between customers and the firm. This section's findings support UTAUT notion that organizational success is intertwined with the value generated through customer engagement. Therefore, the empirical evidence of a significant positive relationship between customer value and firm performance strengthens the theoretical foundations of both RBV and UTAUT, contributing to a deeper understanding of how intangible factors can drive firm performance.

5.3.2 Effect of Information Technology on Firm performance:

Theoretical implications of the analysis on the effect of information technology on firm performance align with the concept of the Unified Theory of Acceptance Use Technology framework. This framework posits that technological factors, organizational factors, and environmental conditions collectively influence technology adoption and its impact on performance. The observed positive relationship and significant impact of information technology on firm performance substantiate the technological aspect of the Unified Theory of Acceptance Use Technology framework. Again, the findings echo the concept of the Unified Theory of Acceptance Use Technology (UTAUT), which asserts that perceived usefulness and ease of use of technology drive its adoption and subsequent impact. The results indicating that information technology enhances communication, collaboration, and innovation underscore its usefulness and align with Unified Theory of Acceptance Use

Technology predictions. In essence, the empirical support for the positive relationship between information technology and firm performance is validated by model such as the UTAUT.

5.3.3 The Mediating Effect of Information Technology

The theoretical implications of the mediating analysis exploring the role of information technology in the relationship between customer value creation and firm performance resonate with the concept of Resource-Based View Theory. Resource-Based View Theory emphasize an organization's ability to integrate, build, and reconfigure internal and external competencies to address rapid changes in the business environment. The mediating effect of information technology signifies its role as a dynamic capability that facilitates the integration of customer-centric processes and firm performance. This interpretation aligns with the notion that information technology acts as an enabler, allowing organizations to dynamically adapt their strategies in response to customer demands, thereby enhancing customer value and, subsequently, performance. Furthermore, the findings resonate with the concept of IT-enabled business process reengineering, indicating that information technology can mediate the optimization of customer value creation processes, reinforcing the concept's relevance in contemporary business practice.

5.4 Conclusion

The study aimed to investigate the intricate interplay between customer value creation, information technology (IT) utilization, and firm performance within the Ghanaian telecommunications industry. A meticulously designed questionnaire was employed to collect data from 207 employees across prominent mobile network operators. Through rigorous statistical analyses conducted in SPSS and Hayes Process Macro module 4.0, the study affirmed significant positive relationships: customer value creation positively influenced firm performance, and effective IT utilization contributed to enhanced performance. Moreover, IT was established as a mediator, augmenting the impact of customer value creation on firm performance. These findings carry implications for managerial practices, urging companies to prioritize customer-centric strategies and proficient IT integration to bolster overall performance.

5.5 Policymaking and Recommendation

5.5.1 Effect of Customer Value on Firm performance:

The study establishes a significant positive relationship between customer value creation and firm performance. Policymakers should focus on fostering customer-centric approaches that prioritize understanding and meeting customer needs. This could involve investing in customer feedback mechanisms, personalized services, and tailored product offerings. By recognizing the impact of customer value on performance, organizations can develop strategies that not only attract new customers but also retain existing ones, leading to increased customer loyalty, positive word-of-mouth, and improved market share.

5.5.2 Effect of Information Technology on Firm performance:

The positive correlation between information technology and firm performance underscores the role of IT in enhancing communication, collaboration, and innovation. Policymakers should prioritize the integration of advanced IT systems and tools across various organizational functions. This might involve investments in digital infrastructure, training programs to enhance IT skills, and the development of platforms that facilitate knowledge-sharing and teamwork. Organizations that effectively leverage IT can expect improved problem-solving capabilities, streamlined processes, and accelerated innovation, ultimately leading to enhanced overall performance.

5.5.3 The Mediating Effect of Information Technology:

The study's findings suggest that information technology serves as a mediator between customer value creation and firm performance. Policymakers should recognize IT's strategic role in enabling effective value creation processes and supporting the translation of customer value into improved firm performance. Policies could focus on aligning IT investments with customer-centric strategies, ensuring that IT solutions are designed to enhance customer experiences, streamline operations, and facilitate data-driven decision-making. This approach enables organizations to maximize the positive impact of customer value on performance through the facilitation of efficient value delivery mechanisms.

5.6 Suggestions for future research

Future studies could consider expanding the research scope to encompass different industries and regions to ensure broader generalizability. Exploring the moderating factors that might influence the relationships identified, such as organizational culture or market dynamics, could provide deeper insights. Additionally, longitudinal studies tracking changes over time could shed light on the dynamic nature of customer value, IT integration, and firm performance. Lastly, qualitative research methods could provide a more nuanced understanding of the mechanisms underlying these relationships.

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APPENDIX

DEPARTMENT OF SUPPLY CHAIN AND INFORMATIN SYSTEMS
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

THE EFFECT OF CUSTOMER VALUE CREATION ON THE FIRM PERFORMANCE. THE MEDIATING ROLE OF INFORMATION TECHNOLOGY. THE CASE OF THE TELECOM INDUSTRY OF GHANA.

QUESTIONNAIRE

I am a student at the Kwame Nkrumah University of Science and Technology, undertaking a Master Degree in Public Administration. As part of the requirements of the course, I am researching on **the effect of Customer Value Creation on the firm performance. The mediating role of Information Technology. The Case of the Telecom Industry of Ghana.** This Thesis will be used purely for academic purposes and for the partial fulfilment of a post-graduate degree course. Please note the responses given will be treated with confidentiality and strictly for this study.

SECTION A: GENERAL INFORMATION
Kindly answer all the questions either by ticking in the boxes or writing in the spaces provided.
Please Tick (√) the box that corresponds to your answer

1.Gender
Male [ ] Female [ ]

2. Age
20-29 years [ ] 30-39 years [ ] 40-49 years [ ] 50-59years [ ]

3. Level of Education
Diploma/HND [ ] Undergraduate [ ] Master's [ ] Doctoral/PhD [ ]

4. Working Experience
0- 5 years [ ] 6-10 years [ ] 11- 15 years [ ] 16 years and above [ ]

SECTION B: CUSTOMER VALUE CREATION

Using a scale 1-5 tick the appropriate answer from the alternatives, ***1- Strongly Disagree,***

2-Disagree, 3-Neutral, 4-Agree, 5- Strongly Agree

Item	**1**	**2**	**3**	**4**	**5**
CUSTOMER VALUE CREATION					
Our company have formalized value preposition					
Our company personnel have a solid understanding of our customers' business needs					
Our company personnel are experts in our products and services					
Our company clearly understand our customers' issues before we propose a solution					
Our company consistently follow a standard process to qualify opportunities.					
Our company have an established procedure to known when to stop investment in large deals					

Georges and Eggert, A. (2003) and Berghman, Matthyssens and Vandenbempt, K. (2006)

SECTION C: FIRM PERFORMANCE

Using a scale 1-5 tick the appropriate answer from the alternatives, ***1- Strongly Disagree,***

2-Disagree, 3-Neutral, 4-Agree, 5- Strongly Agree

FIRM PERFORMANCE	**1**	**2**	**3**	**4**	**5**
Our company has seen significant growth in our sales					
Our company has been an increase in our profit margin					
Our company return on investment has significantly increase					
Our company has seen an increase in our market share					
Our company customer satisfaction has increased significantly					

Nilsson, and Hsu 2022

SECTION D: INFORMATION TECHNOLOGY

Using a scale 1-5 tick the appropriate answer from the alternatives, ***1- Strongly Disagree,***

2-Disagree, 3-Neutral, 4-Agree, 5- Strongly Agree

INFORMATIONAL TECHNOLOGY	**1**	**2**	**3**	**4**	**5**
Our firm IT improves customer value creation.					
Our firm adopts IT to enhance firm performance.					
Our firm relies on IT to enable better communication with customers.					
Our firm adopts IT to facilitate efficient data analysis for performance evaluation.					
Our firms use IT improves the speed and accuracy of customer service.					
Our firm uses IT to categorize procurement activities risk					

Kim, Cavusgil, and Cavusgil (2013).