STRATEGIC MANAGEMENT PRACTICES AND ORGANISATIONAL PERFORMANCE OF FIRMS IN THE TELECOMMUNICATION INDUSTRY IN RWANDA

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Strategic Management Practices and Performance of Firms in the Telecommunication Industry in Rwanda

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University

Signature…… Date……

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This thesis has been submitted for examination with our approval as University Supervisors

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DEDICATION

This thesis has been dedicated to my mum, my husband and children for their emotional and financial support without which its completion would not have been achieved.

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ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
BSC	Balance Score Cards
CEO	Chief Executive Officer
CFM	Competitive Forces Model
EC	European Union
EFA	Exploratory Factor Analysis
FDI	Foreign Direct Investment
FP	Financial Performance
GDP	Gross Domestic Products
IRAs	Independent Regulatory Authorities
ISO	International Standards Organization
IT	Information Technology
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KMO	Kaiser-Meyer-Olkin
MNCs	Multinational Companies
MTN	Mobile Telephone Network
NRAs	National Regulatory Authorities

NSE	Nairobi Stock Exchange
OECD	Organization for Economic Cooperation and Development
PCA	Principle Component Analysis
RCC	Rwanda Communications Commission
RDT	Resource Dependence Theory
ROA	Return on Assets
ROI	Return on Investment
ROS	Return on Sales
SD	Standard Deviation
SMEs	Small and Medium-size Enterprises
SWOT	Strength, Weaknesses, Opportunities and Threats
TOs	Telecommunication Operators

DEFINITION OF KEY TERMS

Autocorrelation Test The relationship that exists between the observations in a series that are arranged in either space or time (Cameron and Miller, 2011).

Heteroscedasticity Test An econometric test conducted to test whether the error term does have a constant variance (Bloomfield & Fisher, 2019).

Normality tests Normality is a tests used to assess whether a data set is well modeled by a normal distribution (Bloomfield & Fisher, 2019).

Performance A set of financial and non-financial indicators, which offer information an organization on the degree of achievement of objectives and results (Lebans & Euske, 2011).

Strategic Alliance Strategic alliance are partnerships of two or more corporations or business units that work together to achieve strategically significant objectives that are mutually beneficial to the parties (Drucker, 2016).

Strategic innovation Innovation can be defined as process, product, and organizational changes that do not necessarily originate from new scientific discoveries but arise because of combining already existing technologies and their applications in new contexts (Zhou &Wu, 2010).

Strategic Marketing Strategic marketing is a market driven process of strategic development that takes into account constantly changing

environment and the need to achieve high level of customer satisfaction (Cravens, Strategic Marketing, 2000).

Strategic Planning **O**rganization process of defining its strategy or direct and making decisions on allocating its resources to pursue this strategy (Simerson, 2011).

Strategic Management Practice Refers to the critical dimensions of deliberate intent, formulation, implementation, control of a tactic for managerial decisions and actions that have a bearing on the long-term performance of an organisation (Andrews, 2010).

ABSTRACT

The purpose of this research was to determine the contribution of the telecommunication sector to industrialization and to the world at large and hence the growth of a nation's economy. The main objective of this study was designed to examine the role of Strategic Management Practices on Organizational Performance of Firms in the Telecommunication industry in Rwanda. Specific objectives include: to evaluate the influence of strategic planning, strategic innovation, strategic alliance, strategic marketing on organisational performance of firms in the telecommunication industry in Rwanda and to assess the moderating role of legal and regulatory framework on organizational performance of firms in the Telecommunication industry in Rwanda. This study applied correlational and descriptive design and utilized both qualitative and quantitative data. The distribution of questionnaires was subjected to the top middle level management teams of both MTN and Airtel as an efficient mechanism of collecting data that helped the researcher to arrive at reliable findings. The study population included the 133 Top and middle level, managers of mobile phone operator companies in Rwanda which comprised of MTN and Airtel Company Headquarter and different branches within Kigali City from which a sample size of 100 respondents was calculated using the Slovene's formula. The data collection instruments were pre-tested using the Cronbach's alpha and factor analysis of dimensions reductions to determine the validity and reliability of the tests. The data collected was analyzed and presented using tables. The results on, reliability test, descriptive results, demographic information of respondents, correlation analysis, normality test, heteroskedasticity test, and factor analysis and regression results were established on all the variables of strategic planning, innovation, alliance and strategic marketing plus the intervening variable of the legal and regulatory framework. Notably, the correlation results revealed that Strategic Planning has a positive and significant relationship with Performance of Telecommunication industries. Strategic innovation positively correlates with Performance of Telecommunication industry. Moreover, results indicate that a Strategic Alliance positively relates to Performance of Telecommunication industry. Legal & regulatory framework variable was shown to Moderate positively and significantly with Performance of Telecommunication industry. The conclusion here was that the companies benefits tremendously when the strategic planning, strategic innovation, strategic alliance and strategic marketing were taken into account for the efficient organisational performance of firms in the telecommunication industry in Rwanda. This research managerial recommendations emphasized the need for telecom managers to build a strong bottom-up component in the strategic planning structures to ensure that views and opinions of people across all levels of the organization are heard and that they are part of the plan and part of the process. The research recommended policy-makers to intensify the credibility of regulatory commitment, protected from direct political intervention to encourage new telecom investors in the telecommunications industry in Rwanda. Areas for further research should include other sectors of the economy such as; public transport, airlines and learning institutions in order to be studied on a much broader perspective.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

1.1.1 Global Perspective of Strategic Management Practices and Organizational Performance

From a global perspective, strategic management is a moderately fresh discipline, which has been evolving with the help of various contributions from diverse fields globally in the area of social science. Over the past few decades, several developments affirm strategic management's evolution and maturity as it is one of the fields of study today that enjoy abundant capacity and of analysis plus huge volumes of theories, topics and methodologies of analysis (Pearce & Robinson, 2011). Over the course of the enormous evolution of strategic management, the study has steadily accumulated a sensibly large quantity of knowledge both empirically and theoretically plus the methodological nature. First numerous works have been reflected upon the discipline through written books, papers and journals on this same subject. Second that has been an increase of dedicated issues of journals, which have attempted to explore the borderlines of knowledge in the field of strategic management and how it linked to other significant disciplines.

Strategic management is process and approach of specifying an organization's objective, development policies and plans to achieve these objectives, and allocating resources to implement the policies and plans. In other words, strategic management can be seen as a combination of strategic formulation, implementation and evaluation (David, 2015). Strategic management suggests that firms need to seek a strategic fit between the external environment, opportunities and threats, and internal resources; strength and weakness. It is believed that Porter specifically brings a concept of "competition" for the first time in strategic management theory and he focused on examining concrete questions like "how will a firm be able to get a competitive advantage over its competitors?"

Telecommunication is among the most important driving factor in almost all strong global economies. As the adoption of telecommunication technology around the world is more than ever Harald and Pantelis, (2010), postulated that over the last three decades' mobile telecommunication industry has rapidly grown around the world. They also argued that the positive influence of telecommunication technology is more associated with developing countries with a subscription of 3.2 billion as in developed countries the subscription is only 1.4 billion. The developed countries around the global began to make improvement in telecommunication technology to maintain a continuous flow of communication, which eventually intensifies their economic activities by providing a more developed platform of communication. On the other hand, developing countries also took initiatives when it becomes prudentially evident that the role of telecommunication over the economic development is significant.

Tella and Ahamefule, (2003) claimed that communication tools such as Telephones, mobiles, and internet are becoming the prerequisite for economic success and personnel achievement across the entire world (Tella & Ahamefule, 2003). Strategic management practices must evaluate and control the industries, assesses its competitors and set goals and strategies to meet all existing potential competitors as well as reassess each strategy annually or quarterly to determine how it has been implemented and whether it has succeeded or need replacement by a new strategy to meet charged circumstances, new technology, new competitors, new economic environment or a new social, financial or political environment (Askarany & Yazdifar , 2012)

1.1.2 Regional perspective of Strategic Management Practices and Organizational Performance

From the African perspective, Special topics ranging from networking, organizational capacities, strategic alliance, global business strategy, entrepreneurship, technological competences and economics have all been published that utilize knowledge about strategic management practices (Pearce & Robinson, 2011). Many African governments have developed their telecommunication

infrastructure by privatizing their former state-owned enterprises. Ford and Noury, (2010) argued that telecommunication operators invest in the development of network in Africa which actually ensures the benefit would be enjoyed across the continent. As a mandatory and progressive part of modern telecommunication, internet is becoming a prerequisite in the development for every African economy. Moreover, internet as a crucial tool of telecommunication technology has significant impact on the Africa economic development as bank, stock market, insurance company, corporate offices and all of their transaction flows Waterhouse (2014), mobile business solutions are one of the most attractive market segments of mobile information services. With this realization adoption of the third generation of mobile communication systems (3G) by Airtel Africa was a significant step forward in the convergence of telecommunications and data communications industries. With its headquarters in Nairobi, Kenya, Airtel Africa is driven by the vision of providing affordable and innovative mobile services to all. The telecommunication industry estimates indicate that by the end of 2014, Africa had over 635 million mobile phone subscribers, a significant rise from 246 million subscribers in the year 2008. Mobile phones first exceeded that of fixed telephones in the year 2000 (BhartiAirtel, Annual Report , 2013). In this regard, various strategies have been put in place by Airtel Africa's management to ensure that these goals are attained. The most outstanding strategy so far have been the launch of the 3G services, outsourcing, mergers and Acquisition as well as sale and lease back of its Towers.

The competitive advantage practice across Africa's emerging economies are based on network-relationship, alliances, close business government ties and more importantly competition, where firms become effective oligopolistic in the African domestic markets. As the institutional context change, the necessary changes in the company asset structures and orientations are immediately required. Therefore, the essence here is that new strategies should be introduced to secure organizational effectiveness by performing the right activities at the right time to achieve the right fit with the external environment. This is because, organizational decision-making takes place at three levels and so strategies can actually be formulated at all these three levels. These different levels of strategic decision-making and strategic

formulation include corporate level, business level and functional level. (Amita, Richard & Robinson, 2011).

1.1.3 Local Perspective of Strategic Management Practices and Organizational Performance

Waema (2017) postulated that it is obvious that a telecommunication sector has an impact on the direct employment. But the larger effect relies on creating the indirect job opportunities with an establishment of call centers, customer cares, and retail shop (Waema, 2017). In Rwanda, two decades ago marked a moment of fundamental change in Rwanda communication. The governmental embarked on a policy that aimed to increase connectivity as a spur to development. Telecommunications reforms were aimed at increasing the competitiveness of the telecommunications industry and attracting foreign investment. The country believes that the efficient development of the communications infrastructure can contribute significantly to balanced regional development through the partnership with the private sector. Better telecommunications can improve the ability of the community to participate in the political life of the country. To reach this end, Rwanda sought to dominate what at the time seemed a niche market in the region by becoming a telecommunications hub in partnership with the private sector. Telecommunications in Rwanda include radio, television, the Internet, fixed and mobile phones. In 1993, Rwandatel started its operations in Rwanda being the champion of all other telecommunication companies. (Agency, 2017).

In 1998, MTN Rwanda was licensed as a mobile telecommunication industry in Rwanda. However, in 2003; it was given a license to provide fixed line as an additional service to mobile telecommunication services. Tigo was Multi National Telecommunications Company, which had Mobile telecommunications operation in 13 countries of the world. In December, 2009, Tigo started its operations in Rwanda but however in December 2017, it was sold out to Bharti airtel Rwanda an Indian-based global telecom giant thereby Airtel now has a significant raise in the subscribers and the market is increasingly growing at a very fast rate with enormous subscription and market shares, (Agency, 2017)

Consequently, these telecommunications companies are changing rapidly and telecom operators must remain sensitive and responsive to the changing markets and customer preferences in order to catch up with the continued robust growth in connectivity demand, high competition persistent security challenges, and continuing innovation in devices and services, customers' expectations and cost savings in the telecommunications industry. What makes one company outpace another is the difference in the business strategies and the entire implementation process of the said strategy. In their efforts to outcompete each other in the Rwandan Telecommunication market, MTN and Airtel are applying a wide range of strategic management practices in order to gain more market shares, Profitability, sales growth and customer satisfaction.

Successful strategy management practices convey this so that the sales force spend time targeting the correct customers at the right time (Leigh & Marshall, 2001). One of the key concepts of strategic management practices is the idea that successful companies create services that have a unique benefit, not just unique features. Rather than try to push a new idea on consumers, smart marketers research what consumers want and try to deliver it in ways the competition cannot.

Odunlami and Ogunsiji, (2011), postulated that in spite of the numerous management strategies and techniques available to many organizations, it is important to note that many telecommunication companies have not yet appreciated how to effectively and efficiently utilize these strategies and techniques in attempting to enhance their organizational performance. Strategic management practices encourage the purchase of large quantities of services or persuade customers to consume more of a service offered by the service provider.

For that reason, research into the specifics of 'appropriate' marketing strategies for the telecommunications sector is currently hampered by the lack of existing evidence in the literature combined with the fact that studies nowadays have tended to focus on the investigation of the overall effectiveness of telecom organizations rather than the outcome of individual management policies and significant selling strategies. This study therefore dwells much on scrutinizing the effects that has been brought

about by the strategic management practices applied by the telecommunications companies in Rwanda in a bid to resuscitate profitable operations and ultimately establish the performance of the Telecommunication industry and how it impacts the overall economic development of Rwanda at large (Odunlami & Ogunsiji , 2011).

1.3 Statement of the Problem

Survival of a company in the telecommunications industry depends of the contemporary tactics, techniques and strategies they apply in order to position themselves and differentiation from their rivals. According to Uwizeye and Namusonge (2019), strategic management drivers which accelerated firm growth include; strategic value addition, market diversification, business environment and strategic human capital. They recommended further research to be conducted on other factors towards the implementation of implementation of strategic management practices on the firm's growth.

Firms in the telecommunication industry in Rwanda operate in an increasingly competitive, highly regulated and dynamic market and therefore they have to formulate strong strategic tools to ensure their survival. A wide range of studies have been carried out in Rwanda and across the region on the topic of strategic management practices and how they affect organizational performance with the aim of broadening the knowledge on the tactics and the challenges that are faced in the execution of these management strategies in the telecommunication industry in Rwanda. Enyioko (2020), conducted a study in which he examined the impact of strategic management on economic development in the Nigerian oil sector. He asserted that, without a strategy, an oil sector becomes bunch of individuals, hence strategy is required to ensure collective actions and concentration of efforts towards achieving oil sectoral plans and objective. In fact, it was quite clear that all businesses whether public or private need to strategize to ensure that their organizations manage change effectively and deliver for the stakeholders now and future which is very lacking in many companies as discovered by (Enyioko, 2020).

Wambua and Mulyungi (2019) conducted a study on the strategic quality management practices on organizational performance of telecommunications

companies in Rwanda. The study concluded that, the commitment of top management, quality management and customer focus plus ISO certification practices had been adopted in the MTN telecommunication company (Wambua & Mulyungi, 2019). It can be urged that, creating an effective management strategy in telecommunication services is vital however, all telecommunication companies provide nearly same products and services, which are easy to imitate. On the other hand, managers of MTN and Airtel in Rwanda used different premium models to reach out and gain new customers on in the telecommunication's market (Kwizera *et al*, 2018).

Mutindi, Namusonge and Obwogi, (2013), carried out a study on the effects of strategic management drivers in the performance of hotels in Kenya and provided evidence that, strategic management drivers had a significant and positive influence on the hotel performance (Mutindi, Namusonge & Obwogi, 2013). Management could not rely on either one strategy or traditional strategies in order to improve their performance. Another study was conducted by Mwizerwa et al, (2018) on Effects of Competitive Strategy on market penetration in the telecommunication industry in Rwanda. It was found out that, Tigo used a wide range of competitive strategies to penetrate the market which included among others the cost leadership, differentiation, and focus strategies. When investigating the effects of corporate strategy on financial performance of MTN Telecommunications Company in Rwanda, Intwaza and Mulyungi, (2018), established a relationship between operational strategy and financial performance. However, they recommended future researchers to direct their focus on strategic planning being one of the independent variables in this research (Intwaza & Mulyungi, 2018).

Qiuhong and Tiorini, (2009) state that, establishment of Strategic management practices entail the formulation of a workable system design, planning operational and resource implications of the system. In their findings, they noted that; there are other variables that specifically contribute to the performance of businesses (Qiuhong & Tiorini, 2009). Kithamba (2014) conducted a study on competitive business strategies adopted by mobile service providers in Kenya. He found out that the telecom companies employed cost leadership, price leadership and outsourcing

strategies (Kithamba, 2014). A research conducted by Kamande, (2010), on competitive strategies adopted by mobile phone companies in Kenya and discovered that, the mobile phone companies have adopted several strategies which include cost leadership, differentiation, marketing, diversification, expansion, technology, customer services and corporate social responsibility (Kamande, 2010). The challenge is; as more telecommunication industries continue mushrooming across different countries of the global village, strategic management now becomes an increasingly crucial tool to keep track of the industry developments and position the telecommunication firms to long-term competitive advantage.

There is still a remarkable scarcity of scientific knowledge that describes a more detailed representation of major roles of strategic management practices and how it influences organizational performance. Although telecommunication companies in Rwanda have similar products and services, they all differ from one another based on the customer subscriber base and their visions, innovations, alliances and marketing strategies differ significantly. The continued drop in profitability, sales volume shrinkage and loss of market share are part of the problems that have seen the transfer of all shares of Millicom International Cellular Company Tigo Rwanda acquired by (BhartiAirtel, 2016). When considering the increasing importance of strategic management practices and the performance of the telecommunication companies and their contribution to the Rwandan economy, it is obvious that there is a growing need for researches giving understanding on the role of strategic management practices collectively ranging from strategic planning, strategic innovation, strategic alliances and strategic marketing on the performance of the telecommunication companies in Rwanda. One can argue that the need for such information will become more important as the competition is becoming fiercer than before, due to many new mushrooming telecommunication companies in the country. Consequently, a better understanding of the influence of strategic management practices on the performance of telecommunication companies especially in a Rwandan context is now indispensable. This study therefore, seeks to fill that gap by establishing the strategic practices applied by the telecommunication companies and how these management strategies influence the performance of the entire telecommunication industry in Rwanda.

1.4 Research Objectives

1.4.1 General Objective

The general objective of this study was to determine the influence of strategic management practices on organisational performance of firms in the telecommunication industry in Rwanda.

1.4.2 Specific Objectives

1. To evaluate the influence of strategic planning practice on organisational performance of firms in the telecommunication industry in Rwanda
2. To examine the influence of strategic innovation practice on organizational performance of firms in the Telecommunication industry in Rwanda.
3. To establish the influence of strategic alliance practice on organisational performance of firms in the Telecommunication industry in Rwanda
4. To ascertain the influence of strategic marketing practice on organizational performance of firms in the Telecommunication industry in Rwanda.
5. To assess the moderating influence of legal and regulatory framework on relationship between strategic management practices performance of firms in the Telecommunication industry in Rwanda

1.5 Research Hypotheses

H_1: There is no significant relationship between strategic planning practice and organizational performance of firms in the telecommunication industry in Rwanda

H_2: There is no significant relationship between strategic innovation practice and organizational performance of firms in the telecommunication industry in Rwanda

H_3: There is no significant Relationship between strategic alliance practice and organizational performance of firms in the telecommunication industry in Rwanda

H_4: There is no significant relationship between strategic marketing practice organizational and performance of firms in the Telecommunication industry in Rwanda.

H_5: Legal and regulatory framework has no moderating effect on the relationship between strategic management practice and organisational performance of firms in the Telecommunication industry in Rwanda

1.6 Significance of the Study

This study is important to the researcher, telecommunication industry and the future researchers. This study provides an amicable opportunity to conduct such a meaningful and important type of research, which is one of the major requirements for the award of the PhD in business administration. The findings of this study will equally benefit the telecommunication companies in Rwanda to apply the knowledge of Strategic management practices of strategic planning, marketing, innovation and alliances in the telecommunication industry in order to boost performance and gain a competitive advantage in the industry. To policy makers such as the Ministry of Communications and Telecom Regulatory Authority of Rwanda, the findings and results of this study will provide invaluable insights and a more reliable guide to evaluate performance of service providers with special reference to customer care services. The future researchers in the field of telecommunication will use these research findings as literature review so as to carry out their future research reasonably with backing of prior literature study.

1.7 Scope of the Study

1.7.1 Content Scope

The content of the study covers the concept and theories on Strategic management practices and how it influences performance of Telecommunication Industries. In the process, the researcher reviewed related literature by various writers and scholars on the thematic area of this study. Empirical studies were also scanned with intention to

back up the justification of the study and thereafter identify the research Gap to be bridged by the study in the end of the study.

1.7.2 Geographical Scope

As far as the Geographical scope is concerned, this research was carried out in Rwanda revolving around the Telecommunication Headquarter of MTN and Airtel, the only two telecommunication companies in Rwanda and are all located in the central Nyarugenge district, Kigali City

1.7.3 Time Scope

With regard to time Scope, the researcher conducted the study based on the data collected for the period of two years. Thus from 2017 to 2019 this is because this was the time that competitors in consideration were all on board on the Rwandan market yet during this period, Bharti Airtel Rwanda bought and merged with Tigo which had issues within its management systems hence, merging with Airtel. This study indicates strategic management practices ranging from strategic planning, strategic innovation, and strategic alliances, strategic marketing that affect performance in terms of market share, turn over and customer volumes of the two different telecommunication companies in Rwanda.

1.8 Limitations of the Study

The most outstanding limitation emanated from the fears of some respondents hesitating to provide the researcher with the required information due to the confidentiality clauses in their employment contract and they did not want to participate in the research. However, to solve this, the researcher assured the respondents about the level of confidentiality that would be exhibited in handling the information and also provided the data collection letter from JKUAT as well as the research permit letter from the telecommunication company as evidence of the purpose and permission to conduct academic research. The second limitation was the hard schedules of these telecommunication managers who were too busy and rare to find for both interview and filling of the questionnaires. To solve this, the researcher

made prior appointments with regard to the respondents' convenience and flexibility and this worked perfectly well as the researcher dropped the questionnaires and the respondents filled up the questionnaires over the weekend and the researcher would pick them up after they were filled. Another limitation occurred when some telecommunications' respondents delayed significantly to bring back the questionnaires and some even went as far as losing them. To mitigate this, the researcher frequently contacted the respondents and would often provide additional blank questionnaires each time a respondent claimed to have lost the first questionnaires.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is divided into three main sections; the theoretical framework, the conceptual framework and the empirical review of literature. The theoretical framework covers the fundamental theories supporting strategic management, which is the basis for this research. To that effect, the theory of competitive advantage, contingency theory and the resource-based theories have all been clearly elaborated in order to explain different parts of an organization that elucidate its survival and growth as a whole. Similarly, the conceptual framework section elaborates on the overall conceptual model demonstrating a deeper understanding of how the Independent and the dependent as well as the moderating variables influence each other. And finally, the empirical literature is reviewed critically and analyzed the recent studies on the five components of strategic management ranging from; strategic planning, strategic innovation, strategic alliance, strategic marketing and legal and regulatory framework, all of which form specific objectives for this study

2.2 Theoretical Framework

The typology of theories provides a useful background for giving explanation about strategic management needs through such unified concepts that connect different theories explaining different parts of an organization to elucidate the organizations' survival and growth as a whole. Therefore, building a unified strategic management theory must be one of most important goals of strategic Management. In this section, the theory of competitive advantage, contingency theory and the resource-based theories have all been clearly elaborated in order to explain different parts of an organization that elucidate its survival and growth as a whole.

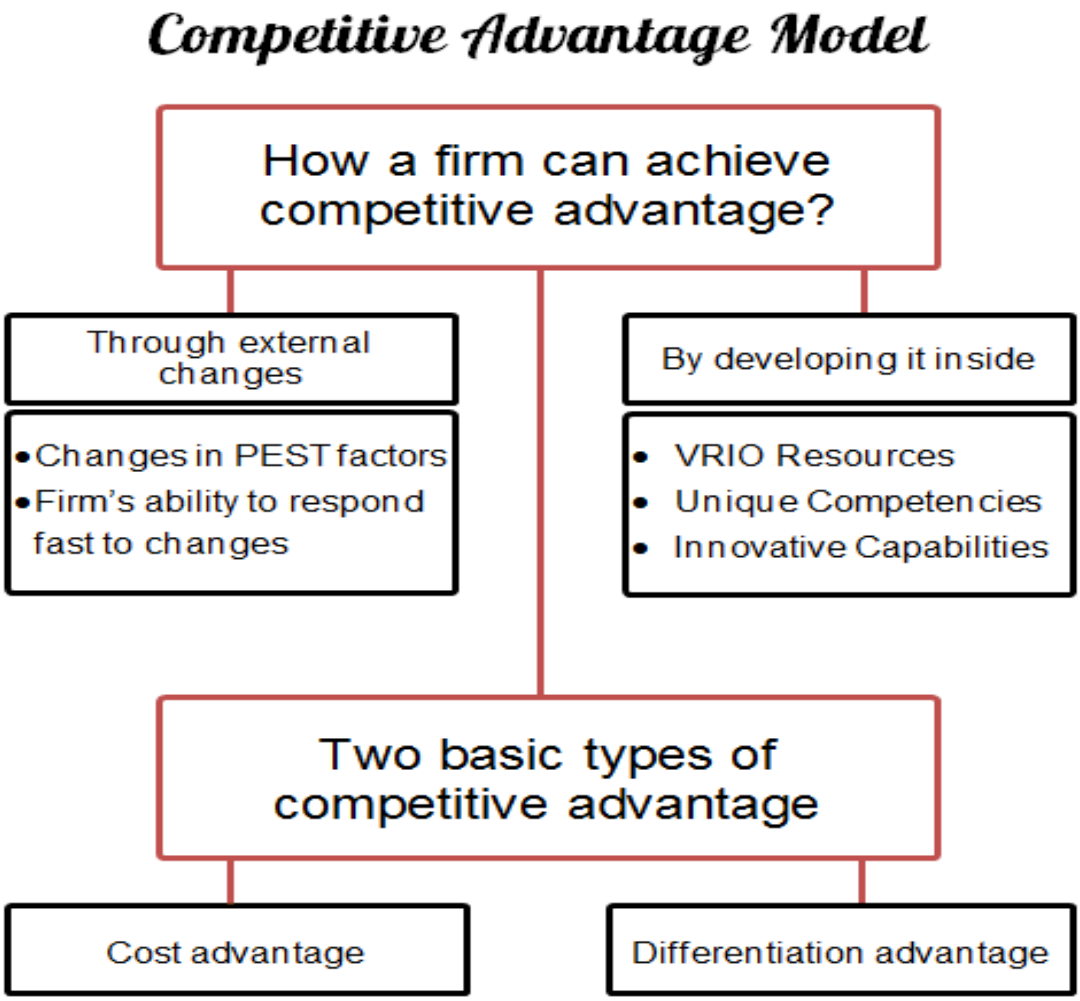
2.2.1 The Theory of Competitive Advantage

According to Porter, (2001) a firm develops its business strategies in order to obtain competitive advantage (i.e., increase profits) over its competitors. It does this by

responding to five primary forces (1) the threat of new entrants, (2) rivalry among existing firms within an industry, (3) threat of substitute products/ services, (4) the bargaining power of suppliers and (5) the bargaining power of buyers. This approach is relevant when the firms defend their market positions or try to influence competitive forces (Wang, 2014).

Schumacher (2013), reemphasized the importance of analyzing the five competitive forces in developing strategies for competitive advantage: "Although some have argued that today's rapid pace of technological change makes industry analysis less valuable, the opposite is true. Analyzing the forces illuminates an industry's' fundamental attractiveness, exposes the underlying drivers of average industry profitability, and provides insight into how profitability will evolve in the future. The five competitive forces by Porter's Five Competitive Forces Model clearly shows a firm by adopting certain competitive strategy (cost leadership, market focus, differentiation strategies and corporate growth strategies) determine its profitability.

In the competitive forces model, five industry forces – barriers to entry, threat of substitution, bargaining power of buyers, bargaining power of suppliers, and rivalry among industry incumbents – determine the profit potential and success of an industry or sub-segment of an industry (Sigalas, 2015). Importantly, building longer-term relationships with customers, suppliers, and third parties, manufacturers are trying to fight back and preserve longer-term competitive advantage.



Source: (Malburg, 2007)

Figure 2.1: Competitive Advantage Model

Figure 2.1 demonstrates a paradigm that, the company has to keep examining both its external factors including the PEST and internal changes including the VRIO, its unique competences and the available innovative capabilities in order to gain either the cost or differentiation advantage (Lightfoot, 2013). In relation to these research variables, a telecommunication company in Rwanda, which is capable of outperforming its competitors over a long period, ultimately has a sustainable competitive advantage.

In the functional sector of any business undertaking or industrial branch, there is always an internal competitive struggle and confrontation for advantages. Ideally, the

target of organizational strategy assumes that, by establishing and sustaining the already achieved strategic advantage, the business can easily reach its objectives. For that reason, the strategy of the company should always be spearheaded towards creation of new potential advantages that lead to customer satisfaction and ultimately towards beating the competitor in the market. Once this is done, the business advantage is definitely extended as the competitors' advantages begin to shrink (Doval, 2016).

The overall goal of any profit-oriented company is not only to create but also to maintain the achieved baseness advantage. However, it should be noted that, looking for the competitive advantage alone does not necessarily translate into success in the competition. Dependent on the owned competitive advantage, the firm's strategy will be positioned in such a manner that such competitive advantage can be effectively utilized to meet the stakeholder's' interests as well as the client's needs and to able to acquire additional sustainable profit and boost organizational performance (Dragomir, 2016).

Different firms have got a wide-range of models for competitive advantage but at the end of the day, they have the prerogative to create several other models if the ones applied in the literature do not reflect the competitive environment and the contingency conditions in which they associate their business features against their firm's strategy. The proposed model puts a contribution to the evolution of strategic management across many fields and can also be developed by adding the particulars of different organizations. The competitive advantage strategy originates from the capabilities within which business management combines basic and advanced resources and potentials in form of well-coordinated activity systems. In this context, this research intends to through light on the significance of competitive advantage with an aim of selecting the most suitable company strategy ranging from; strategic planning, strategic innovation, strategic alliance and strategic marketing (Doval,2016). In connection to this research variables this theory anchors the relationship between strategic alliance and performance of firms in the telecommunication industry in Rwanda

2.2.2 Open Innovation Theory

The open innovation theory was developed by Henry Chesbrough in the year 2006, which relates to the use of purposeful inflows and outflows of knowledge to speed up innovation within an organization while also expanding the markets for the external use of innovation. The theory focuses on the strategic management information interchange with related actors who are outside the boundaries of the organization but with an aim of integrating their knowledge and resources into the organization's innovative process (Chesbrough, 2006). Once open innovation is adapted, the boundaries of the organization soon become absorbent and this ultimately allows linking the company resources with the external collaborators. Under the open innovation paradigm, the emphasis is on the flow of external knowledge into the organization, which turns into project collaboration with external partners often bringing in the purchase of and incorporation of external technologies.

On the other hand, the innovation that is generated within the company is then sold as industry property to other outside organizations. Here, the idea is that some products in an organization reach the market by use of exclusive internal resources right from the initial ideas up to the final commercialization of the product. However, other products are manufactured through incorporation of external knowledge at diverse phases of their development. For example, a company may license a technology, which has been developed elsewhere, and integrate a particular component of that technology into its own solution instead of developing a similar in-house solution (Tuan *et al.,* 2016). A company may also license its own products to another firm to help further develop the product through obtaining the necessary regulatory approvals. Therefore, the combined innovation process brings together the inbound and the outbound dimensions instead of sharing resources and the expertise, companies work together to develop new solutions as well as get to share the existing resources and expertise. This may involve cooperation as joint ventures or tight affiliations.

As observed by Herzog (2013), open innovation has its basis on the recognition that firms can solicit and leverage on the extensive knowledge from numerous sources to promote innovation and thus add value to their customers. For instance, then grounding on an open innovation model, an organization does not seek to generate the best idea on its own, but rather, they seek to make optional use of internal and external ideas in order to be more efficient in managing costs and risks as well as speed up development of new technologies (Vanhaverbeke & Cloodt, 2014). This theory postulates that firms should apply both these paradigms of internal and external ideas and causes of action in their effort to improve what they offer on the market (Nuryakin, 2018). Limiting skills and ideas to only internal sources can be somewhat detrimental to the life of a growing company hence, open innovation treats research and development as a system open to new ideas and innovation through outside collaborations hence, promoting access to the skills and knowledge of the best talents across the world.

Vergara and Polo (2015), asserted that open innovation is viewed as the reverse to the traditional model of vertical integration where the activities of research which is internally done leads to the development of internally manufactured products and distributed by the company to other consumers. Literary, it is the use of knowledge through the inbounds and the outbound to speed up the company's internal innovation as well as expanding the markets for external innovation. The structural perspective indicates that, companies are making a word movement shift towards the paradigm of outsourcing research and development and alliances, which ultimately leads to specialization and cost reduction.

As a link to the independent variables of the conceptual framework, the theory lays a foundational basis to the strategic innovation variable in the conceptual framework by explaining the connection between open innovations, service innovation, process innovation or infrastructure innovation obtained through reinforcement of competences within the telecommunications company and to accelerate the company's innovation process. Literary, the knowledge from external sources is brought to the company to develop new services and on the other hand, internal knowledge is marketed to other companies that bring it into effective action for the

development of their own new products. Unless open innovation is explicitly linked to the corporate strategic management practices, the full potential of open innovation will not be realized in the long run (Adner, 2012). A wide distribution of knowledge and ideas are shared across the telecommunications organizations through advanced research and development, which helps to boost customer satisfaction, customer loyalty, customer retention, profit maximization and return on asset (Remneland Wikhamn & Wikhamn, 2013). This theory was used to anchor the strategic innovation variable among the telecommunication industry.

2.2.3 Resource Dependency Theory

The Resource dependency theory (RDT) is founded on the guiding principle that an organization especially business-related firms should engage in the transactions with other players and strategic partners within its environmental spectrum in order to obtain a wide range of integrated resources. Essentially, such partnership has the ability to leverage on the diverse opportunities and can address challenges, which could not otherwise be handled without the partnership (Davis & Cobb, 2010). The theory explains the actions of companies through the formation of alliances, interlocks, joint ventures, mergers or acquisitions in their struggle to improve organizational legitimacy, autonomy and competitiveness. It is an instrument of resource control of an organization as a core factor for company growth and survival.

In principle, the resource dependency theory presents an application of more universal theoretical ideas to a particular issue. The mutual dependency between different organizations can actually act as a motivating factor for potential partners to combine synergies during critical interdependencies with other organizations in the same environment (Drees & Heugens, 2013). When any company has no sufficient resources internally, it stretches its dependency on the external players have the resources they need. These can cut across technical capabilities, skills and expertise, financial resources or organizational legitimacy. Organizations learn the game of redressing their insufficiencies through strategic partnerships by liaising with other organizations to fill up their need gaps. The logic behind the

establishment of such partnerships is the potential for value addition through pooling the resources together because no man is an island. Essentially, the acquisition of such external resources is a crucial precept of both the strategic and tactical management of any successful company (Chesbrough & Bogers, 2014).

Across different organizations in the world, the issues of uncertainty triggers interdependencies in the management of the available resources for the survival of organizations and this is a driving factor for organizations to seek out for supplementary resources and capabilities in other partners. Organizations typically have to adjust their business strategies to adapt to changes in power relationships with others in partners organizations (Nyaga, Lynch, Marshall & Ambrose, 2013). Since many firms are not self-sufficient and do not have access to control of all the resources, they need interaction and collaboration with other similar actors in order to fulfill their own vision and goals. This implies that, organizational partnership is a mode of gaining access to critical resources, which is a prerequisite to organizational survival and success (Mastio & Dovey, 2019).

In connection to these research variables, the Resource Dependency Theory seeks to observe telecommunications' adaptation to dependences through alliances, mergers and acquisitions by aligning internal organizational elements with the environmental pressures. The telecommunication companies in Rwanda have learnt to collaborate with similar actors in the telecommunications industry in order to alter their environment. With this assumption, it can be asserted that, dependency on the critical resources influence the actions of companies and that their decisions can be elaborated depending on the specific dependency situation. The telecommunications companies in Rwanda are not able to produce all the resources they need to be able to survive hence engage some form of exchange with the external environment in order to acquire the resources that that need for survival. The resource dependency theory emphasizes that; the survival of the company depends on its ability to attract resources needed to support and sustain their operations (Yeager *et al.*, 2014).

Del Baldo (2012), postulated that, managers brought in resources such as skills, information, legitimacy, buyers and suppliers, social groups and policy decision-makers all of whom could reduce uncertainty and ultimately boost performance of the organization. This is because, the particular resources that the organization may want could not be readily accessible, available or under the control of an external uncooperative player. In order to prevent such dependencies, companies develop tactics that are aimed at enhancing their power to bargain strong positions in the transactions of the resources. Such actions may include diversifying and establishing links with other similar companies, boosting company's scale of production. These strategies result into lessening a firm's dependency on other firms as well as improving its own power and leverage through strategic alliance with other potential companies (Del Baldo, 2012).

2.2.4 Market-based Theory

Market-based view of the firm postulates that the industrial factors plus the external market orientations are the most fundamental determinants of the firm's performance. The source of value for the firm are embedded in the competitive situation which distinguishing its end-product strategic position. The strategic position is the firm's unique set of activities that are distinctive from those of its rivals. In this context, the firm's performance or probability are determined exclusively by the structure and competition dynamics of the industry within which it carries out its operations. Researchers observed that; the firm's performance considerably dependent on the on the industrial environment within which it operates. In the context of industry, they viewed strategy as a whole and the position of the firm in market comparative to its competitors (Askarany & Yazdifar, 2012).

Market-based theory of the firm is founded on the premise that; innovative firms endeavor to manipulate changing market conditions. Such market conditions are set to offer the original conditions, which govern the direction and quality of an organization's groundbreaking activities. The ability of any organization to customize its strategies with branded enablers and restraints in their environment are extremely influential to its competitive advantage (Hu, 2022).

Organizations need to develop strategies in response to the structure of the industry in which the organization is set to compete in order to gain a strategic competitive advantage. The market-based view strategy designs the company's policies and strategies based on the trends and the nature of the industry's environment. It helps in the selecting the market combination for the product in which the company utilizes its strategy. The strategy helps in designing the approach and the structure of the company based on the market analysis of the industry. During this phase, the focus was on the organization's internal environment plus the external factors. The firm's performance was extremely significant and dependent on the environment of the firm. In this sense, strategy was viewed in the industrial context as a whole and the position of the firm in the market relative to its competitors (Putri, 2022). This theory was used to anchor strategic marketing variable among the telecommunication industry. Organizations need to develop strategies that respond to the industrial structure in which within which organizations compete so as to acquire a competitive advantage. Firms normally make a general evaluation of their own competitive advantage through an assessment of the external environment.

2.2.5 Resource-based Theory

The resource-based theory of the firm propounds that; the market-based view presents a very weak framework for the innovative strategies specifically in volatile and dynamic markets. The resource-based view instead argues that, the firm's own resources such as its capabilities, routines, knowledge base and other assets may offer a more tangible basic for innovation to take place (Kozlenkova, Samaha & Palmatier, 2014). Organizations that innovate typically make use of their material resources to create exceptional configurations of resources thereby establishing a firm foundation for successful innovation (Barney, Ketchen & Wright, 2021). Uncountable, the resource-based theory of the firm provides new directions for the strategic management practices as it has shifted all the attention to the organization and all its other unique attributes. The general innovation theory as offered by the resource-based theory emphasizes the significance of organization's technological capabilities for its capacity of innovation.

The technological capacities of a firm are ultimately defined by its knowledge and the physical capital with enormous investments on the resource development and education of the staff as a most crucial ingredient to increase and intensity such capital (Jin, 2014). They stressed that, when the technological capabilities are high in a particular industry, the chances are that, it will develop further innovation in the near future. The contribution of the resource-based theory perspective highlights the difference, which this study brings particularly in the telecommunications industry in comparison with traditional perspectives that attempt to study innovation. On this regard, the fundamental research contribution of the resource-based school of thought of the firm's innovation can be summarized as shown below:

Primarily, innovation cannot emanate from merely scanning the external environment for market prospects but rather form the inside look and establishing on the resource endowment and the core competences of the firm. Secondly, the firm's resources and its capabilities are known to provide the most crucial inputs for the exploitation as well as the development of the firm's innovative activities and the motivation and fuel for the activities to take place. Thirdly, the resource-based view of the firm emphasizes the firm's opportunities to produce outputs of innovation with value-increase for the future on the assumption of the firm's resource heterogeneity. Such benefits of innovation input probably have the power to motivate and facilitate new innovative efforts and ultimately lead to a competitive advantage (Jin, 2014). It is worth remembering that, the entire process of innovation is based is founded the mixture of strategic assets which are firm specific and hence complex for the competitors to try to imitate.

Fourthly, resource-based view of the firm proposes that, a firm should endeavor to innovate a step ahead of its immediate competitors. Adaptation of dynamic capabilities like changing to industry conditions, new knowledge and providing innovative response to the new market demands are part of the strategies that should always be applied by the firm's strategic management practices. Finally, the relationship between resource-based view of the firm and innovation is mutual in nature. This means that; the as the resource-based view of the firm enlarges knowledge about the determining factors of the firm's capacity to innovate, on the

other hand, innovation becomes the paramount mechanism through which an organization can refurbish the quality of its assets (Jin, 2014). Such bilateral beneficial relationship can help to establish and sustain benefits in many ways ranging from production of outputs of increased value as well as establishment of new stocks of specific assets, which other competitors cannot easily replicate.

The relevance and the popularity of the resource-based view of the firm turns focus on the black box of an organization. In theory, the key premise of the resource-based view of the firm is quite distinctive and how organizations acquire and sustain a competitive advantage amongst its competitors by developing their resources is crucial for the firm's growth and survival. The resource-based theory stems from the principle that the source of Organizational competitive advantage depends on the unique resources and competencies that a firm possesses and not mainly their positioning in the outside environment or simply evaluating the environment opportunities and threats in conducting business. A firm is able to possess dynamic and operational capabilities, where dynamic capabilities are defined as those processes that allowed the firm to change its resource based in some ways to meet the differences in strategic and competitive changes (Olmsted & Jamison, 2001).

The term dynamic capability was developed to explain why some firms have been able to outperform their competitors over long periods of time and despite significant changes in marketplace. The theory asserts that it is advantageous for a firm to pursue a strategy that is not currently being implemented by another competing firm. Such resources must either be rare or hard to be duplicated. The competitive strategies provide the firm's ability to recognize and utilize several resources that to increase their performance, hence the resource-based theory is highly relevant to the study. Henry, (2008), evaluated competency as the internal competencies that firms require in order to be able to compete in the marketplace. Thus, instead of a unique set of resources, the firm's ability to adapt, reconfigure, and innovate in changing market conditions are central to competitive advantage (Henry, 2008). This theory was used to anchor the strategic planning and Performance of firms in the telecommunication industry in Rwanda. All companies need to have a comprehensive plan to plan their resources.

2.2.6 The Contingency Theory

A contingency theory is an Organizational theory that claims that there is no best way to organize a corporation, to lead a company, or to make decision. Instead, the optimal course of action is contingent (dependent) upon internal and external situations (Bastian & Andreas, 2012). The essential features of theory are its behavioral approach that relates to the optimal fit of organizational structure based on contingency situation. In other words, Organizations should not be managed by one-size-fit-all approach but should work out unique managerial strategies depending on the particular condition or situation they are facing, Organizations should then develop managerial strategy depending on the situation and condition they are experiencing. The theory states that leadership effectiveness, as it relates to group effectiveness, is a component of two factors: task motivation, or relation motivation, and circumstances. Contingency theory has sought to formulate broad generalization about the formal structures that are typically associated with best fit the use of different technologies especially in the ever-evolving telecommunication economies. Scholars such as Morgan, (2010) opined that strategic management should be flexible to accommodate the changing needs of the customers by providing clear plan of action on then best procedure of strategy execution to take place in terms of duties and while establishing clear reporting relationship between strategic management and their workers (Morgan, 2010).

This Theory assumes that, styles ought to be fixed and that they cannot merely be modified or adopted (Hitt, Carnes & Xu, 2016). Essentially, a leader is most effective when their qualities and method of leadership really match with the current environment and the situation around them. This theory however complex it may appear; it remains very vital in matching organizational professionals to their right situations as well as determines the best job fit personnel. A contingency approach to management is actually based on the concept that management effectiveness and efficiency is dependent upon the interplay between application of management behavior and particular situations at a specific time. In essence, management style changes with the circumstances and there is no policy of “one size fit all”.

The theory gives a strong basis for the research variable because the contingency approach to management finds its foundational in the exigency concept of management effectiveness which asserts that; leadership effectiveness as it relates to group efficiency, is a component of two main factors; task motivation and circumstances. This implies that; relationship motivation is contingent upon whether the manager is able to control and effect group's situational favorability (Gallego-Álvarez, Manuel Prado-Lorenzo & García-Sánchez, 2011). A manager's action should be able to reflect the organizational culture, commitment to employee's safety and well-being, brand positioning, profit orientation and customer attitude of the entire organization. This style of management compels managers to arrive at best solutions to company problems

It can be concluded that there is 'no one best way' or approach in management or decision making in the telecommunication industry. Different situations call for different approaches to handle, manage, and solve the arising issues concerned (Friedberg, 2010). Management and Organization is an 'Open system', which embrace anomalies or challenges every now and then, which requires 'adaptable' and 'situational' solution in order to overcome or settle the problem or issue concerned (Jeong, 2012). Other situational or contingency factors are 'changes in customer demand for goods and services, change in Government policy or law, change in environment or climate change, and so on.

2.3 Conceptual framework

Bradley (2008) defines conceptual framework as a visual or written product that explain either graphically or in a narrative, the main things to be studied, the key factors, concepts or variables and the presumed relationship among them. It is therefore a model used in research to outline possible courses of action or present a preferred approach to an idea or thought (Bradley, 2008). A conceptual framework is very important in any research study being undertaken. It shows the relationship between the dependent variables and independent variables.

Strategic Management Practices

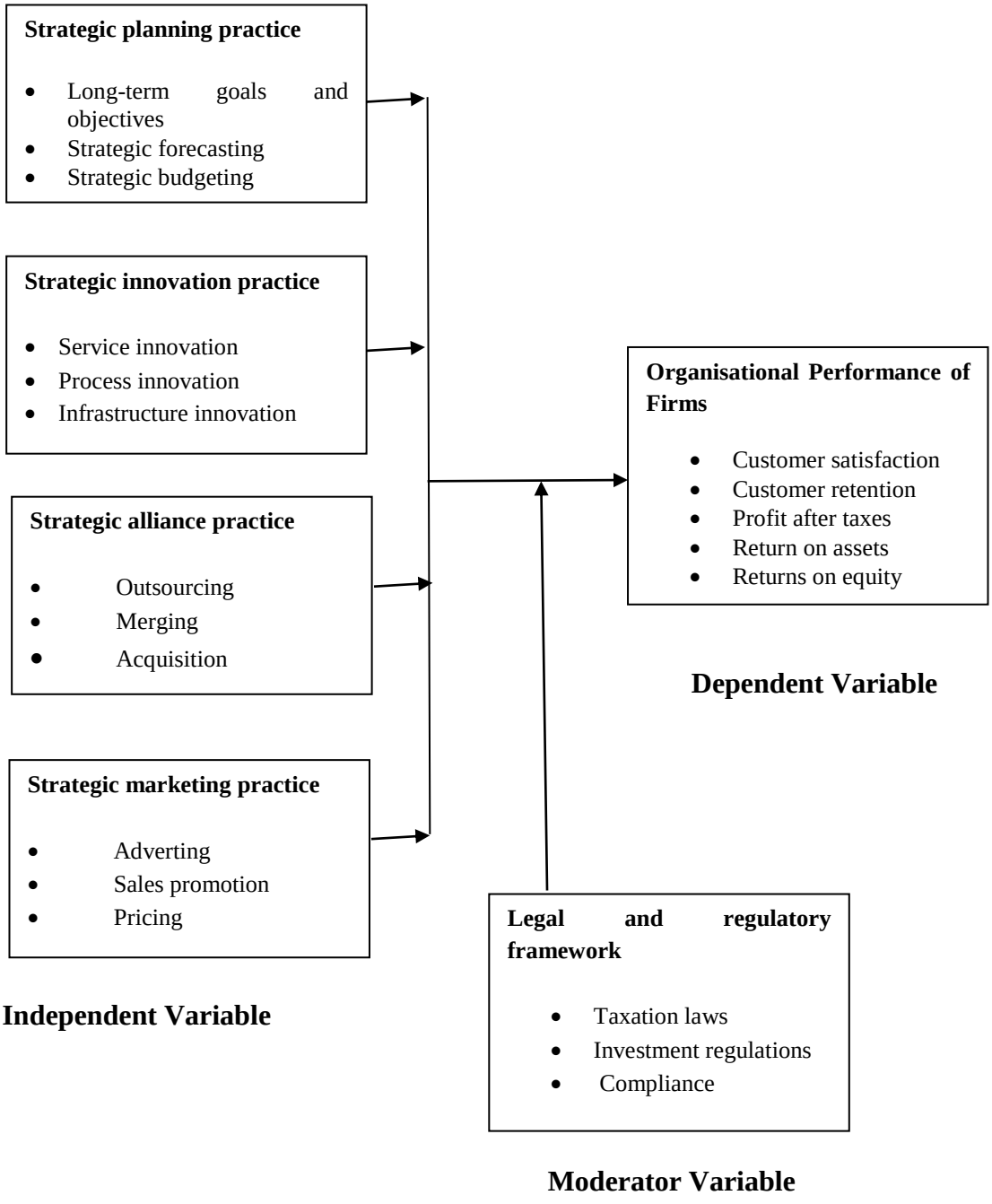


Figure 2.2: Conceptual Framework

2.3.1 Strategic planning Practice

Strategic planning practice was selected as one of the most significant independent variables of this research because it is the most crucial strategic management tool

that helps telecommunication companies to set goals and objectives, make rational forecasts and allocate resources in consideration of the risks and opportunities that are faced by the firms. Strategic planning gives a roadmap for growing doable coherent businesses which are proactive to situations which allows the telecommunications companies to keep up with the ever-changing trends in the market and to stay a step ahead of the competitor. Strategic planning for that reason offers a much-needed basis on which telecommunication companies can grow and evaluate its success against failures and establish boundaries for efficient decision-making (Pearce & Robinson, 2011).

Strategic planning is an Organization's process of defining its strategy or direction and making decisions on allocation of resources to pursue this strategy (Simerson, 2011). He maintains that, strategic planning may also extend to control mechanisms for guiding the implementation of the strategy. Strategic helps management understand what is happening in the business currently. This in term allows management to plan for tomorrow. In the world of rapid change, it becomes imperative for management to think strategically (plan for the future). Strategic planning looks at the long-term goals and objectives, which is how Organizations survive and thrive (John & Mathew, 2012).

According to Young (2013) a strategic planning process usually involves the formulation of vision for the future that defines the fundamental purpose of an Organization. Such fundamentals include the budget, as well as developing of general goals, specific objectives or targets and performance measurement to gauge Organizational progress, which will involve forecasting within and outside the institution and preparing scenarios for response to challenges (Young, 2013). Many Organizations spend most of their time realizing and reacting to unexpected changes and problems instead of anticipating and preparing for them thus leading crisis management. There is no doubt that traditional management practices such as detailed annual budget, strategic plans, quarterly forecasts and monthly management reports are now becoming obsolete (Pearce & Robinson, 2011). The current movement suggest that, there needs to be a strong bottom-up component to the planning process both to ensure that the important views of all people at all levels of

the Organization are heard and that they are part of the process and part of the plan (Barney, 2009). When performed well, strategic planning unifies the entire Organization behind a single set of marching orders designed to accomplish clear objectives.

Rational strategic planning is a formal, logical, systematic, and continuous process Hough & White, (2003) with the following steps: definition of the mission and long-term objectives of the organization, analysis of its environment, generation and evaluation of strategic alternatives, implementation of the chosen strategy, and finally, monitoring of the results (Crittenden & Crittenden, 2000).

2.3.2 Strategic Innovation Practice

The choice of the strategic innovation as another independent variable in this study draws its basis on the fact that; without innovation strategy, then the different parts of the telecommunication firms can easily shrink or end up pursuing different conflicting priorities even if there is a very clear business strategy. Innovation should cut across services innovation, process innovation and infrastructure innovation collectively. It is logical that this research investigates on the influence of strategic innovation on the performance of the telecommunication company to give re research a more logical and global touch. Performance of the telecommunication companies entirely dependent on whether or not strategic innovation is utilized in order to think through and allocate their resources and capabilities plus services to prevent their existing or new customers from defecting the rivals and ultimately achieve a sustainable competitive advantage. Capacity for innovation stems from an innovative system (Covey, 2015).

Jin (2014), defines strategic innovation as a future-focused development framework that identifies breakthrough growth opportunities, accelerates business decisions and creates near-term, measurable impact within context of a large term vision for sustainable competitive advantage. Strategic innovation is one of the fundamental instruments of growth strategies to enter new markets, to increase the existing market share and to provide the telecommunication company with a competitive edge (Nybakk & Jenssen, 2012). Motivated by the increasing competition in global

markets, companies have started to grasp the importance of strategic innovation, since swiftly changing technologies and severe global competition rapidly erode the value added of existing products and services. Thus, strategic innovations constitute an indispensable component of the corporate strategies for several reasons such as to apply more productive processes, to perform better in the market, to seek positive reputation in customers' perception and as a result of gain sustainable competitive advantage. Innovations provide firms a strategic orientation to overcome the problems they encounter while striving to achieve sustainable competitive advantage (Hitt., Ireland, Camp & Sexton, 2001). Innovation strategy as a crucial strategy, promotes the development and implementation of the new products and services. Covey, (2015), claims that the origin of creativity and innovation lies in a share vision and mission which are focused on the future. Furthermore, the vision and mission of creativity and innovation Organization are also customer and market oriented, focusing on solving customer problems among other things. Aswani (2013), underlined that strategic innovations vary in complexity and can range from small changes to existing products, processes, or services to breakthrough products, and to processes or services that introduce first-time features or exceptional performance. A firm, which has competencies in many functional areas, would be better able to remain competitive in the market. It is advisable that mixed strategies, such as cost reduction, innovation and quality enhancement to be adopted simultaneously to gain competitive advantage.

2.3.3 Strategic Alliance Practice

This research selected strategic alliance as one of the independent variables due its roles in the telecommunications industry. Strategic alliance as a management practice involves sharing of knowledge between service partners thereby reducing the unnecessary costs and risks in the areas such as new technologies and development of new products (Drucker, 2016). Establishment of strategic alliances like mergers, acquisitions and outsourcing has actually been viewed as a response to globalization and increasing uncertainty in the global telecommunications business. It is within this sense that strategic alliance was adopted to form a basis for the evaluation of

strategic management practices and performance of telecommunication companies in Rwanda.

The concept of strategic alliance has become widely used in business language to refer to the different types of partnership agreements between two or more companies that pursue clear strategic collaboration objectives with different levels of possible integration among the members. Elmuti and Kathewala (2011), presents his definition for alliance as any governance structure to manage an incomplete contract between firms and in which each partner has limited control. Wheelen and Hunger (2007), argued that strategic alliances are likely to bring into play the element of technology and manufacturing capabilities at come into play when an Organization engages in strategic alliances with other players in the industry. This is strategic alliances can bring about a competitive advantage to those organizations that have collaborated.

The author states further that an alliance is a way of sharing control over future decisions and governing future negotiations between the firms. Strategic alliance is a coalition or corporation agreement formed between a company and others to achieve certain strategic goals. Presently, strategic alliances are prominent phenomenon in the global economy among multinational companies (MNCs) and between companies in developing countries too. Drucker, (2016), states that the greatest change in corporate culture, and the way business is being conducted, may be the accelerating growth of relationship based not on ownership, but on partnership. Strategic alliances are therefore of two or more corporation or business units that work together to achieve strategically significant objectives that are mutually beneficial to the parties. These strategic alliances present enormous potential to a business (Drucker, 2016).

2.3.4 Strategic marketing Practice

Importantly, marketing strategies are one of the most essential tools for business growth and competitive advantage in the telecommunications industry. As one the management practices that has a direct influence to performance of an industry, the researcher thought it wise to incorporate strategic meeting practices as on the

research independent variables. This is because, the telecommunication industry is always marked by intense competition in effort for the network providers fight to gain more subscribers (Del Chiappa, 2013).

According to Hollensen (2015) strategic marketing is the way a firm effectively differentiates itself from its competitors by capitalizing on its strength (both current and future potentials) to provide consistently better value to its customer than its competitors. Marketing strategies have been associated with the field of strategic management form its earliest foundations, (Hollensen, 2015). The relationship between strategic marketing and the firm's performance is a key issue to the survival of the Organization. Marketing strategies can be qualified as a key to measure of Firm performance. It is a concept of identifying the reason why a company exists and how it can benefit target consumers over the long term cannot be divorced from organizational performance (Ward & Peppard, 2016).

According to Del Chiappa (2013), Marketing strategies is a necessity to meet the demands of an increasingly complex and dynamic environment. Knowledge and evidence-informed decision-making are instrumental in marketing strategies; and entails getting focused on important goals, and involving others in achieving them (Del Chiappa, 2013). This conceptual framework explains three significant attributes under the marketing strategy including Advertising, pricing and sales promotion. (Frank, 2015), defined advertising as "the move intended to persuade people to buy a given product or service. Advertising as a marketing strategy is a key strategic factor contributing to market leadership and under all ways, has a greater contribution on building the market value (Chetty, 2012).

On the other hand, the communication and signaling of an Organization's pricing strategy affects the distribution channel, which include competitors and customers, as well as the internal sales force (Varadarajan, 2010). Every business must research and test its pricing to determine at which price point consumers will buy or consume enough product to yield enough total profits to justify price change. Similarly, sales promotion is an initiative undertaken by Organizations to promote and increase sales, usage or trial of a product or service (Muala & Qurneh, 2012). Sales promotion

refers to the provision of incentives to customers or to distribution channel to accelerate demand for a product. It is an important component of an Organizations overall marketing strategy along with advertising, public relations and personal selling. Sales promotion acts as a competitive weapon by providing an extra incentive for the target audience to buy or support one brand over the other. Its main aims are communication to create and maintain relationships by informing and persuading one or more audiences. (Muala & Qurneh, 2012).

In all these cases, when the company is already aware of why it exists and has a clear marketing mix strategy on what to do when, how and where, there is absolutely no doubt such a strategy will have a direct impact into how the company will perform (Brown, 2013). Firms may utilize communication channels like newsletter, e-mails and podcasts in their new strategies marketing activities. The central objective of any company will be customer satisfaction so they may dominate the market and become leaders in their industry and thus providing substantial business.

2.3.5 Legal and Regulatory Framework

All regulatory outcomes including unbundling policies and mandated access prices are the effect of political and administrative processes, which can interact with the investment decisions of firms. This is crucial for the econometric modeling of the investments and known in the econometric literature as endogeneity problem. Recently, empirical studies established a close link between political and institutional factors and the design and the effectiveness of regulations. For instance, Bauer (2010), show that political and institutional factors explain a substantial part of the variation in subsidy levels between various EU countries, the degree of deregulation achieved in various OCECD countries in the mobile telecommunication industry and price deregulation in the U.S. mobile industry, respectively. These political and institutional factors include governments' attitudes towards market regulations, electoral system, political systems (presidential vs parliamentary), accountabilities and independence of the regulatory agencies. One indication of the benefit of telecommunication investment is the strong correlation between telecommunication development and overall economic development (Bauer, 2010).

Kotakorpi (2006) published evidence that shows that statistically telecommunications investment causes growth in the financial sector hence GDP growth due to the heavy revenue through taxes that the companies pay to the government. While the list of scholars, who seek to explain the regulatory policies, is much longer than the one cited here, the list of explanatory variables used typically includes the above variables. As also shown in the above-cited studies, one additional factor, which explains the regulatory policies, is the performance of the regulatory market itself.

In the same way, the government collects taxes in order to provide the non-revenue services such as infrastructure, education, health, communication system etc., providing employment opportunities and essential public services (such as maintenance of law and order) irrespective of the prevailing ideology or the political system of a particular nation (Worlu & Nkoro,, 2012). Rwanda is a developing country whose major exports are coffee and tea therefore, the only best way through which the government can boost the economy is through tax revenue mobilization as a source of financing developmental activities in the country. However, this has been a difficult issue primarily because of various forms of resistance, such as evasion and corrupt practices attending to it.

Adegbie and Fankile (2011), the more the citizen lack knowledge or education about taxation in the country, the greater the desire and opportunities for tax evasion, avoidance and non-compliance with relevant tax laws. In this respect, the country becomes more adversely affected due to absence of tax conscience by individuals, companies, and the failure of tax administration to recognize the importance of communication and dialogue between the citizens and tax-related matters (Adegbie & Fankile, 2011). In the face resource efficiency in financing long-term development, developing countries like Rwanda resort to foreign capital such as, loans and grants as a primary means to achieve rapid economic growth. Consequently, this ends up accumulating huge external debts in relation to the Gross Domestic Product (GDP) and serious debt serving problems in terms of foreign exchange flow and as such, majority of the population ends up living in absolute poverty. To this effect, the government of Rwanda has expressed concern over these

and has vowed to expand the tax revenue in order to meet its mandate and one greatest was industry that brings in revenue to the government is the telecommunication industry.

2.3.6 Organizational Performance

Chandler (2012), defined Organizational performance as the ability of an Organization to utilize its resources (e.g. knowledge, people and raw materials) to achieve Organizational goals in effective and efficient way. It is a set of financial and non-financial indicators, which offer information on the degree of achievement of objectives and results (Lebans & Euske, 2011). Performance is dynamic, requiring judgment and interpretation; performance may be illustrated by using a casual model that describes how current actions may affect future results.; performance may be understood differently depending on the person involved in the assessment of the Organizational performance (for example; performance can be understood differently from a person within the Organization compared to one form outside). To define the concept of performance is necessary to know its elements characteristic to each area of responsibility. To report an Organization's performance level, it is necessary to be able to qualify the results. Organizational performance comprises the actual output or results of an Organization as measured against its intended output. Organizational performance involves the recurring activities to establish organizational goals, monitor progress towards the goals and make adjustments to achieve those goals more effectively and efficiently. Organizational performance is an abstract concept and it is difficult for so many organizations to directly measure. Instead of measuring Organizational, performance directly the Organization selects indicators such as quality, growth, productivity, job satisfaction, goal consensus, managerial interpersonal skills.

In general, the concept or Organizational performance based upon the idea that an Organization is the voluntary association of productive assets, including human, physical, and capital resources, for achieving a shared purpose. Those providing the assets will only commit them to Organization so long as they are satisfied with the

value they receive in exchange, relative to alternative uses of the assets (Lebans & Euske, 2011).

Consequently, the essence of performance is the creation of value. So long as the value created by the use of the contributed assets is equal to or greater than the value expected by those contributing the assets, the assets will continue to be made available to the Organization and the Organization will continue to exist. Therefore, value creation, as defined by the resource provider, is the essential overall performance criteria for any Organization. How that value is created is essence of most empirical research in management. Conversely, how that value is measured is the essence of this research (Carton, 2004). The telecommunication sector is emerging from a period of cost cutting and debt reduction. This is mainly because traditional fixed line carriers are losing market share in favor of mobile operators that are offering raising quantities of airtime in return for a flat monthly fee as well as advanced value-added services.

2.4 Empirical Literature

This section presents an analysis of previous research studies carried out on the aspect of strategic management practices and the performance of telecommunications companies. The section is presented with the regard to the chronological arrangement of the research objectives set forth in chapter one of this study.

2.4.1 Strategic Planning and Performance of the Telecommunication Industry

In, Babafemi (2015), highlights the essential components of planning in large enterprises and evaluates the literature on strategic planning and performance evaluation. Among these components is the corporate vision, goals, and basic values communicated from the top down. This research has proven that there is a positive correlation between performance and effective strategic planning, as supported by a survey of the literature. While formal planning alone won't improve performance, good implementation will do the trick. The study comes to the conclusion that only companies that engage in some kind of strategic planning will be able to maintain their high level of corporate performance. It suggests that the strategic planning

process receive the due consideration it deserves, taking into account all of the processes outlined in the body of current literature. The strategic difficulties that the company is confronting as a whole, such as its direction and future goals, should be the main focus of management.

Using Cogebanque as a case study, Uwambayingabire and Mulyungi (2018) investigated the impact of strategic planning on organizational performance. It delves deeper into the ways in which this affects its administration. Effectiveness and efficiency are crucial for strategic planning and an organization's performance. For the study, both primary and secondary data were employed. Cogebanque Limited personnel were asked to provide information for the study via a questionnaire. Analyses of the gathered data have been done using both inferential and descriptive results. The Pearson's Product Moment Correlation Coefficient has been utilized to test the hypotheses and determine the importance of the association between the several performance-measuring variables. Strategic planning and organizational performance have a strong positive link, according to the hypothesis results.

The purpose of Dua'a Adnan (2022) was to elucidate how strategic planning affects the operations of telecom businesses in Jordan. To accomplish the study's goal, a comparative method was used, which involved going over earlier research on the topic and talking about the most significant conclusions that were drawn. In light of this, he came to the conclusion that strategic planning plays a proactive and significant role in helping organizations grow their work so that it will positively reflect on them. In view of the fierce rivalry, we therefore advise using this study to activate strategic planning in the departments of Jordanian telecommunications businesses in order to assure more innovation and creativity.

Mohamed (2019) conducted this study to evaluate organizational performance and strategic planning in Kenya's telecom sector. The goal of the study was to ascertain how organizational productivity in Kenya's telecommunications sector is impacted by strategic planning. The study used mixed methods research, which includes phenomenology and descriptive survey design. Nine department heads and fifteen hundred thirty-six employees from Safaricom, Airtel, and Telkom Kenya made up

the target population. While a census was utilized to sample each of the nine head of department, simple random sampling was applied to 219 employees. Data were gathered using interview guides and questionnaires. The study used the Cronbach's Alpha Coefficient to assess reliability. While content analysis was used to assess the qualitative data, descriptive results such as percentages, frequencies, and means were used to analyses the quantitative data, which was then presented in tables. Because the questionnaire did not require identify reveal, respondents were guaranteed the privacy of the data they submitted as well as the anonymity of the data source. According to the study, strategic planning significantly affected organization performance (p=0.000).

In the Jordanian telecom sector, Fraihat et al. (2023), analysis from examines how strategic management might improve business performance and competitive advantage. Due to the fierce rivalry, rapid technical development, and shifting consumer tastes that define the telecom sector, telecom companies must implement efficient strategic management techniques in order to obtain and preserve a competitive advantage. This study uses a quantitative research methodology to pinpoint the main ideas and topics pertaining to business performance and strategic management in the telecom sector. Three major telecom firms in Jordan provided 94 managers and department heads with data. Smart PLS 4 was used for the statistical analysis, and it was discovered that every hypothesis was statistically significant. In Jordan's telecom sector, the results show that strategic management practices such as resource allocation; innovation, strategic planning, and performance measurement are positively correlated with business performance and competitive advantage. However, a number of variables, like the company's size, its position in the market, and the degree of environmental instability, affect how effective these practices are. For telecom companies looking to improve their performance and competitive advantage through strategic management techniques, the report offers insightful information.

Abdi and Sasaka (2017) aimed at demonstrating how strategic planning affects an organization's success, with a focus on Hormuud Telecom in Mogadishu, Somalia. A large number of Somali-owned businesses operate without official strategic plans.

The goal of the study was to determine how strategic planning affects an organization's performance, with a focus on how strategy creation, strategy implementation, and strategy evaluation effect company operations. The study's design was descriptive. There were 5716 Hormuud telecommunications employees in the target demographic. A total of 374 workers from various organizational departments made up the sample. To check the questionnaire's internal consistency, the study conducted a pilot study. Primary data was gathered using questionnaires, and secondary data was gathered from books, journals, and other published works related to strategic planning. The study discovered that the combination of the four independent parameters examined in this study influences 11.7% of Hormuud telecommunication performance. Though there was an insignificant relationship between strategy formulation and performance and business operations with performance of Hormuud telecommunication, there was a positive and significant relationship between strategy evaluation and performance of the organization and between strategy implementation and performance of Hormuud telecommunication.

In light of the significant economic changes occurring in Saudi Arabia, Alotaibi (2019) aimed to determine whether any indication of strategy reorientation among Saudi telecommunications businesses exists, as well as whether or not these companies are exhibiting organizational flexibility. Using recent publicly available information, primarily from their most recent annual reports, along with interview data, a multiple-case study was carried out at three of the major Saudi telecom companies: Mobily, STC (Saudi Telecom Company), and Zain (Kuwaiti company). The study aimed to investigate the type and degree of organizational flexibility in these companies as well as their strategic planning in light of economic environment forecasts. The results showed that Mobily, STC, and Zain, the three main Saudi telecom companies, were creating organizational flexibility and providing information about smart strategic planning.

Mugo (2020) looks into how Porter's Five Forces affect competitive advantage in Kenya's telecom sector. The goal of the study is to determine the degree to which replacement products, buyer and supplier negotiating power, rivalry among established businesses, and entrance obstacles affect Kenya's telecom sector's

competitive advantage. The research used desktop methods. In particular, the study found documentary proof in the form of previously finished research on the impact of Porter's Five Forces on competitive advantage on a local, regional, and worldwide scale. The results of the study showed that the existence of numerous rival companies posed a threat to new entrants in Kenya's telecommunications sector. Furthermore, the purchasers had a lot of bargaining power even though the industry's suppliers had organized associations to deal with input sources over costs. To prevent clients from switching to another business, the companies had to plan how to draw in and keep them. According to research on the bargaining power of mobile phone carriers' customers, businesses have invested time and resources in making sure their clients are well-protected and motivated to remain on their specific mobile networks. Similar to this, research on the intensity of rivalry shows that organizations employ a variety of methods to remain ahead of the competition in order to strategize and succeed in this fiercely competitive market. These strategies include technical innovation, product differentiation, and process innovation.

Strategic planning is an organization process of defining its strategy or direct and making decisions on allocating its resources to pursue this strategy (Simerson, 2011). Strategic planning is very important to every Organization and if done properly, implementing and enforcing a strategic plan within the Organization can increase growth, overall revenue and Organization profitability. According to (Strydom, 2011), strategic planning and control inform the managers about the reasons leading to the failure to meet a certain objective, performance standard and any other performance indicator. Okwako, (2013), examined the effect of strategic planning with a focus on the performance of telecommunication companies in the UK. They examined whether strategic planning and enabled management perform better (Okwako, 2013). Researchers suggest that strategic planning positively influences firm performance. According to Simerson, (2011), strategic planning is a systematized and chronological procedure to develop or coordinate an organizational strategy leads to the concept of formality in strategic planning (Simerson, 2011). Formality is the extent to which a strategy is deliberate, documented, communicated and the time spend on planning as well as the degree of involvement of participant and specification of the process, resources and responsibilities (Okwako, 2013). He

stated that without a clearly defined strategy, a business would have no sustainable basis for creating and marinating a competitive advantage in the industry where it operates. They further stated that effective planning and implementing has positive contribution to the financial performance of organizations.

Strydom (2011), explained that strategic management practices enhance both organizational profitability and company market share and therefore suggest that strategic planning concepts should be adopted by business organizations. When performed well, strategic planning unifies the entire organization behind a single set of marching orders designed to accomplish clear objectives. Preskill and Mack (2013), explains that in many organizations, the meaningfulness and usability of evaluation information has been limited because of its disconnection from strategic and organizational- level decision-making. They posit that if learning and evaluation efforts are informing an Organization's decision-making practices, then there needs to be a comprehensive strategy for evaluating the strategy itself in the Organization's effectiveness. According to Odongo, (2008), for organization to properly plan their long-term projects and activities, it is imperative that the goals and objectives of the organization are in overall alignment with those of the business. Therefore, to effectively manage any corporate function, it requires a thoughtful and comprehensive strategic planning process.

2.4.2 Strategic Innovation and Performance of the Telecom Industry

Namusonge *et al.,* (2016) asserted that, innovation is a fundamental tool for entrepreneurs and the means through which entrepreneurs exploit change as a best opportunity for different businesses or other services. They propounded that, innovativeness is the most significant tendency of a growing organization to engage in and support new idea generation, experimentation and creative processes which may result into new products or services (Namusonge *et al.*, 2016).

The goal of Mugo and Macharia's (2020) study was to find out how technological innovation affected Kenyan telecommunications businesses' ability to compete. The extension of Global System for Mobile Communications (GSM) networks, new hardware and software, collaborations and synergies, and other factors were used to

gauge technological innovation. In order to achieve the goal of this work, a cross-sectional survey data study strategy and positivist philosophical position was employed. Proportionate sampling was used to gather data from 247 managers. The findings show that technical innovation gives Kenyan telecom companies a stronger competitive edge. Only the new hardware and software components, with government regulation acting as a moderating variable, had a significant and beneficial impact on the dependent variable. In the end, the results imply that technical innovation's impact on Kenyan telecommunications businesses' competitive advantage is mitigated by government regulation.

Kariuki (2014), claims that the shifting operating environment has had a negative impact on the telecommunications business recently, resulting in massive losses for three of the four companies in the sector. It's interesting to note that, despite Safaricom's dominance in East and Central Africa, Airtel, Orange, and Yu have been suffering significant losses, prompting the management of these companies to explore exiting the Kenyan market. The purpose of this study was to determine how strategic innovation affected Kenyan mobile telecom companies' performance. Descriptive research design was used in the study's data collecting and analysis. According to the study, strategic innovation improves organizational performance. Better organizational performance resulted from the adoption of superior strategies pertaining to goods, services, marketing procedures, and people resources. The study makes the recommendation that mobile telecom companies increase their R&D spending in order to boost their capacity for innovation and the adoption of creative tactics that will boost their bottom line.

Abdi and Ali (2013) use the Somalian telecom sector as a case study to examine the relationship between administrative innovations and company performance. This study's primary goals were to describe the effects of innovation strategy on corporate performance and look into the connections between technical and administrative innovations. Based on 143 target respondents, particularly officers and directors of Somalia's telecom companies, the study was conducted. Both correlation and descriptive analysis were applied. The study discovered a strong positive correlation between firm performance and both technical and administrative innovation. The

study also discovered a positive correlation between corporate performance and innovation strategy. Innovation and corporate performance eventually correlated well.

Ireri, Wasike and Mungai (2020) investigate how Telkom Kenya Limited's organizational performance is impacted by creative tactics. These particular goals served as the study's guidelines: finding out how Telkom Kenya Limited's performance is impacted by innovative product strategies; evaluating the degree to which Telkom Kenya Limited's performance is impacted by innovative process strategies; and investigating the relationship between innovative market strategies and Telkom Kenya Limited's performance. The innovation diffusion idea served as the study's foundation. Using a descriptive survey methodology, 125 employees from middle and lower management levels were chosen as a sample using stratified sampling and basic random sampling techniques. The primary data gathering tool for the study was a structured questionnaire. The study's unique market strategies were the first and most important independent variable, according to the findings.

Using Safaricom PLC as a case study, Gachigo, Kahuthia, and Muraguri (2019) evaluated the impact of creative approaches on the performance of Kenya's telecom sector. The study aimed to investigate the impact of effective implementation of innovative strategies, such as cannibalization, outcome-driven, disruptive innovation, and exploration strategies, on the performance of Kenya's telecommunications sector. The theories of jobs to be done, disruptive innovation, and open innovation served as the researcher's compass. The population under research in this descriptive study consisted of all Safaricom PLC employees across all 58 branches located in Nairobi County. A questionnaire was used to collect primary data, and charts, graphs, and tables were used to present the data after it had been analyzed to help with conclusions and suggestions. According to the report, an innovation strategy improves an organization's performance.

In Dilunga's (2020) evaluation of the effect of strategic innovations on Tanzanian telecommunications companies' performance, the effects of technology, process, marketing, and product strategic innovations were all considered, along with their

effects on organizational performances. Using Vodacom as the study's case, the technique used in the study included applying a quantitative research strategy to evaluate the significance of strategic innovation in impacting organizational performance. The study involved 120 responders in total. The researcher used both purposive and random sampling since the respondents who were chosen had the necessary information and experience to respond to the study's research questions. Tables with the results of the qualitative and quantitative analysis of the data obtained from questionnaires and interviews were produced using SPSS. The results of the study demonstrated that the performance of the organization was greatly enhanced by each of the four strategic innovations that were examined.

In an effort to close the gap, Ogunnaike, Ibidunni and Adetowubo-King (2014), investigated the nature of the connection between innovation and company performance. A combination of survey and ex post facto research designs were used in this study. Both primary and secondary sources of data were used in the investigation. After being created, the research instrument was put through validity and reliability tests, and it was shown to be both reliable and valid for the study. For the investigation, a straightforward random sample technique was used. We developed three hypotheses and tested them using inferential statistical techniques like regression and correlation. It was found that there is a considerable relationship between company performance and service process innovation, service modification, and service innovation structure.

According to Zhou and Wu (2010), innovation can be defined as process, product, and organizational changes that don’t necessarily originate from new scientific discoveries but arise as a result of combining already existing technologies and their applications in new contexts. Zhou and Wu (2010), stressed that innovation is very critical to enable firms to adapt to turbulent environments and achieve a sustainable competitive advantage. They further noted that whereas firms need a continuous innovation process to respond to the ever-fast changing environment conditions, the goal of sustainability requires new ways of doing business. Mwania and Muganda, 2011), also notes that creative research and human capital are considered to be two of the most important determinants of innovations. He states that innovation improves

the existing processes and products thereby contributing to lower costs, increased profits, higher productivity and employment. He further states that firms that are innovative have growth and higher global market share. Gitonga, (2003), also did a study on the innovation processes and the perceived role of the Chief Executive Officer (CEO) in the telecommunication industry (Gitonga, 2003).

Previous studies have produced mixed results regarding the impact of innovations on Telecommunication's firm's performance. Mwania and Muganda (2011), concluded that innovations had significant contribution to performance. They state that innovation is usually because of employees' creativity in a firm and that it should always be targeted at consumers to bring a benefit. They summarize by stating that it is therefore very necessary to acknowledge that the most inventive part of innovation is based on people's skills, knowledge and experience. Organizations can benefit more if they develop, embrace and communicate an innovation orientation. Innovation oriented organizations have a better chance of succeeding financially.

According to Covey, (2015), available evidence shows that companies are more successfully at innovation approach it in systematic and holistic way, developing and innovation strategy that is fully integrated with their business mission, vision and goals, and aligning their organizational culture and organizational system with strategy (Covey, 2015). Relatively few organizations pick up this approach" if innovation occurs at all, it more often in an ad hoc fashion that has little or no connection to core-business goals. Philips, (2010), note that innovation is mainly demand driven, and therefore the marketing activities have Avery important role to play in identifying opportunities for few innovations. They further state that many of organizations innovate as a result of reacting to the changes in the external environment and also as a result of desiring to become a market leader.

Covey (2015), recognizes that innovating firms want to capture the imagination of consumers by creating fresh and exciting products. Philips (2010), again, notes the innovating firms may want to create a solution to a particular problem or take advantage of an identified opportunity. Innovation strategy is strategy that promotes the development and implementation of new products and services. Robinson,

(2014), explains that, the origin of creativity and innovation lies in a shared vision and mission, which are focused on the future. Furthermore, the vision and mission of creative and innovation organization are also customer and market oriented, focusing on solving customer problems among other things.

Another scholar, Aswani, (2013), carried out a study on strategic innovations and performance of commercial banks listed in the Nairobi Stock Exchange (NSE). His study concluded that listed commercial banks had deviated from the existing industry rules and engaged in creation of new and significant customer value and that strategic innovation was embedded in their corporate strategy (Aswani, 2013). Fagerberg (2004), states that innovations in the telecommunication industry can be intended to increase quality, decrease unit costs of production or delivery and finally to deliver new or significantly improved products. He further stressed that while the introduction of new products is commonly assumed to have a clear and positive effect on the growth of income and employment; process innovation can have a hazier effect due to its cost-cutting nature. Businesses need to constantly innovate in order to ensure optimal performance and success. Organizations that do not choose to innovate put themselves at risk Kotler, (2000) and continuous innovation activity in an organization leads to organizational growth and long-term success.

Omongot (2022) investigates the interplay of innovation, technological adoption, and strategic planning in the plastics recycling sector. The research challenge was centered on the industry's sluggish innovation, which has led to numerous issues that have a wide range of implications for numerous stakeholders. The study aimed to investigate the correlation between innovation and strategic planning, as well as the relationship between technological adoption and innovation. Additionally, the study sought to understand the mediating role of technological adoption in the relationship between strategic planning and innovation. A cross-sectional and quantitative methodology was used in the investigation. A sample technique was used to collect data from 36 plastics recycling companies. Three employees of each firm were asked to complete a questionnaire to provide data. The findings indicate that there is a significant and positive relationship between innovation and strategic planning, a significant relationship between technological adoption and innovation, a significant

relationship between strategic planning and technological adoption, and an actual mediation of the relationship between innovation and strategic planning in Uganda's plastic recycling companies by technology adoption.

2.4.3 Strategic Alliance Performance of the Telecommunication Industry

Strategic alliance are partnerships of two or more corporations or business units that work together to achieve strategically significant objectives that are mutually beneficial to the parties (Drucker, 2016). These strategic alliances present enormous potential to a business. Emami, Welsh, Davari, and Rezazadeh (2022) investigate how small entrepreneurial businesses (SEFs) in the telecommunications sector perform as a result of strategic alliances. The study analyses primary data from a sample of 74 small, entrepreneurial telecoms enterprises using structural equation modeling. They discover that, among small, entrepreneurial enterprises in the telecommunications industry, strategic partnerships have a large and favorable impact on partners' performance in terms of financial, operational, and organizational effectiveness. Based on the results, we advise small entrepreneurial businesses to give pre- and post-alliance concerns such as partner resemblance, alliance experience, partner reputation, complementary skills, industry scope, and commitment to enhancing trust and skill, and collaboration to improve performance special consideration.

Ndunge, Arasa and Ombuki (2019), examined the moderating role of alliance networks in the association between business performance and competitive strategy in Kenya's telecommunications sector. By using questionnaires, primary data were gathered using the descriptive study method. The results of the study showed that alliance networks had a positive moderating influence on the link between business performance and competitive strategy in Kenya's telecommunications sector.

A study by Cuéllar-Fernández, Fuertes-Callén and Laínez-Gadea (2011), examines the effects on capital markets of 130 announcements of strategic alliances involving European telecom companies. They employ the methodology of event studies. They characterize the occasion as a company's media-released public announcement of an alliance initiative. The data was specifically gathered from news articles on alliances

that were published on corporate websites' Press Release sections. According to their results, the effect of European telecom companies' alliance initiatives on share price volatility around announcement dates shows that investors value these initiatives. Nonetheless, it appears that the market has conflicting expectations given the null effect of coalitions on returns.

Through the management use of information and communication technology, Winata, Mia and Langmann (2016) examine if there is a direct or indirect relationship between a company's participation in strategic alliances and its performance relating to customers. Based on the replies of 78 general managers from major manufacturing companies, structural equation modeling using partial least squares was used to analyses the data for the results. Conclusions: Although not directly, but rather via management usage of ICT, the results show a favorable relationship between a firm's CRP and its participation in strategic alliances. Additionally, the findings show that the link is sector-specific.

The goal of Njuguna, Mbithi and Rintari (2023) was to determine how technology alliances affect the operations of Kenyan telecommunications companies, with a focus on Safaricom PLC. A case study approach with a descriptive research design was used. Six thousand employees of the Safaricom headquarters were the intended audience. Those in senior management and departmental management roles made up the sample. Stratification was carried out based on the organization's managerial tier. Using basic random sampling, 105 respondents made up the sample size. We employed both primary and secondary data. Using questionnaires, surveys were used to get primary data sources. Inferential methods and descriptive analysis were used to analyze the data. First and second order averages had to be created for descriptive analysis. Regression and correlation analysis were used for inferential analysis. The findings indicated a statistically significant and direct correlation between technological relationships and organizational performance.

Globally, a number of studies have been conducted that are related to the effects of strategic alliances on organizational performance. Strategic alliances have both significant implications of the economy and financial performance of the

organization involved (Amita, Richard & Robinson, 2011). Regionally, Margarita, (2010), investigated on the importance of strategic alliances in company's activity. The paper explains strategic alliances as an indispensable tool in today's competitive business environment. No longer can companies afford ad hoc approaches to alliance formation and management, any more than they can rely on a small number of talented alliance managers. Many global companies have multiple alliances, some global, requiring coordination with numerous partners. Elmuti and Kathewala (2011), postulate that strategic alliance can be effective ways of diffusing new technologies rapidly, entering new markets, bypassing government restrictions expeditiously, and learning quickly from the leading firms in a given field.

Aderemi (2003), looked into how strategic alliances between banks and mobile phone companies can be used to overcome these challenges with a specific focus on the recent alliance between Equity bank (Kenya), and Safaricom Ltd. The authors found that strategic alliances can be used as a tool which enables firms to overcome threats from their competitors while gaining additional benefits. In terms of alliance management, the use of separate teams was found to be an effective management tool in cross industry alliance. Moreover, Makau, (2012), researched on strategic alliances and organizational competitiveness. The study found that strategic alliances seek to create competitive advantage through collaboration rather than competition. Strategic alliances are also based on mutual trust of partners (Makau, 2012). The study also established strategic alliances provide partners with an opportunity to tap into resources, knowledge, capabilities and skills of their partners to gain competitiveness.

Finally, the study found that strategic alliances especially non-equity strategic alliances are 15 positives and significantly correlated with organizational competitiveness. The study therefore concluded that strategic alliances interdependence between the partner firms, which bring benefit in the form of intangible assets, and capabilities. Ongoge (2013), conducted a research on how strategic planning has assisted Action Aid Kenya to improve in performance of its programs. The study concludes that there is a difference between results and approaches to measuring strategic planning effectiveness and organization

performance, which confirms the case that selecting the appropriate approach to measuring relationship between strategic planning and organization performance must be done with caution.

On identification level, alliances try to identify new knowledge. Entrepreneurial activity includes not only innovation of new product but also identification of new opportunities and market such as the needs of our customers. Since the strategic alliance includes the relationship among large companies and SMEs, so SMEs form alliance with big companies to identify new customers and markets as well as to exploit these markets and new markets (Joshi & Dixit, 2014). The advantages of an alliance, as compared with a single firm, depend on the need for integration among parts of the value chain and the need for scale and specialization in each of the parts.

2.4.4 Strategic Marketing and Performance of the Telecommunication Industry

Strategic marketing is a market driven process of strategic development that takes into account constantly changing environment and the need to achieve high level of customer satisfaction, Cravens (2000). It focuses on organizational performance, rather than no increasing sales. It links the organization with the environment and view marketing as the responsibility of the entire organization rather than as specialized function. However, a strategy is an intentional process.

The marketing empirical literature explains at large the contribution of strategic marketing to firm performance. In order to create a comprehensive picture of the relationship between marketing strategies and performance in Uganda telecom, Musembi (2009) set out to explore the various marketing techniques that the company offers. iii. Create performance metrics for Ugandan telecommunications. The study also includes discussions of many writers' perspectives on the marketing tactics used by telecom companies and how such tactics impact the organization's overall effectiveness. There is discussion of several research approaches. There is usage of both primary and secondary data. In order to validate the chosen approach for solution creation and execution, the organization's data is gathered through the use of questionnaires and an examination of the telecom company's documentation. The data gathered from the case study is then analyzed.

Asamoah (2021) conducts research on three key areas: customers' awareness of mobile telecommunication companies' marketing strategies; customers' decisions to purchase the products and services offered by these companies; and lastly, the impact of customers' awareness of marketing strategies on their purchasing decisions. The research used a quantitative methodology and included 300 participants. According to the study, consumers of the various mobile telecommunications carriers were aware of the mobile service providers' 7Ps marketing techniques. Additionally, the respondent's intentions to use their mobile networks' services were similar for all users. Additionally, the study discovered a substantial positive association between customer intention to use telecommunication businesses' services and customer awareness of pricing, product/service, procedure, and promotional techniques. Nonetheless, the degree to which customers were aware of the marketing mix and plan did not significantly influence their decision to use their mobile communications firms' services.

In order to assess the degree to which Globacom Limited strategically markets its product and the techniques it uses, Amisu, Otegbade, and Shomade (2015) looked at the consequences of strategic marketing management on the company's performance. The study's research approach was a descriptive survey method using administered questionnaires on strategic marketing and a straightforward random technique to pick respondents. Nonetheless, both primary and secondary methods were used, and the SPSS (regression) approach was used to evaluate the hypotheses. The study's conclusions showed that Globacom Limited's performance is positively impacted by strategic marketing management. The results also showed that market segmentation is an effective strategy to raise customer satisfaction and that market orientation has an impact on the telecom industry's profitability and sales performance.

Waiswa *et al.* (2016) investigated the connection between Uganda Telecom Limited's (UTL) M-Sente mobile money product's market performance and its marketing techniques. Study findings included an analysis of the following relationships: pricing and M-Sente market performance; promotion and M-Sente market performance; and location and M-Sente market performance. Design and technique: The study used both quantitative and qualitative methods in a cross-

sectional study design. Members of the marketing team, sales team, dealers (Central), sub dealers (Central), and M-Sente outlets (Central) comprised the sample of 120 respondents in total. Questionnaires and interviews were used to gather data, and descriptive and inferential results were used to analyses the quantitative data. Although clients felt they were not getting value for their money, the results showed that UTL's pricing were lower than those of the competitors. This explains why, in spite of their competitive prices, UTL's market share keeps declining. The results of the study showed that the market success of UTL's M-Sente mobile money product and marketing techniques are positively correlated.

The impact of strategic marketing on the performance of organizations in the Nigerian telecommunications industry was studied by Akanni, Oba and Ishola (2022). For this study, survey research approach was used. From the research problem statement, two hypotheses were developed. The statistical techniques of Analysis of Variance and Pearson Product Moment Correlation Analysis were employed to examine the hypotheses. The findings indicate that organizational performance is significantly impacted by strategic marketing.

Four relationship marketing strategies—service quality, pricing perception, brand image, and value offered—typical of the service sector were employed by Koi-Akrofi, Koi-Akrofi and Welbeck (2013), who then looked at how these strategies affected customer loyalty in the Ghanaian mobile market. To collect field data, a self-completion questionnaire including forty closed questions was created. It was discovered that the outcomes agreed with the findings in the body of existing research. The survey offers valuable feedback and insights from mobile phone consumers to the telecom companies. The voice and preferences of customers are also taking precedence as the competitive landscape gets more intense. This research is anticipated to assist and direct telecom managers in making well-informed decisions regarding the relationship marketing mix that best suits the needs of current customers and increases revenue and profit. Oyedijo (2013), stated that organizations must be consistent with serving the needs of the target market within the framework of a long-term plan which is the key to achieving organizational goals and objectives. He stated further that the major proposition of strategic marketing management is to

align marketing activities with organizational objectives, while marketing opportunities must be found by systematically analyzing the competitive and industry situational environment. However, organizations that take cognizance of strategic marketing management as a sustainable competitive advantage through the development of long-range marketing plans has the opportunity to outperform firms that has not strategically identify the needs and wants of customers in order to tailor those needs within the framework of long-term plan (Oyedijo, 2013).

Odongo (2008), also stated that organizations can use environment scanning to determine whether or not to enter new market and also to know the present situation or condition of its environment. Environmental scanning is the monitoring, evaluating, and disseminating of information from the external and internal environment to key people within the corporation or organization. Oyedijo (2013), confirms the positive effect of strategic marketing management of organization performance in terms of competitive advantage, profitability, survival and market share. Their study also reveals that strategic marketing management has some effects on performance measures, such as process efficiency, service quality, cost saving, organization and process flexibility and customer satisfaction (Oyedijo, 2013).

2.4.5 Legal and regulatory framework on Performance of the Telecommunication Industry

There are various regulations that can hinder successful management of the various business strategies especially with regards to industries that fall under government regulatory authorities such as the telecommunication industry. Oglietti and Pontarollo (2003), asserted that government licensing can often force significant changes in industry practices as well as strategic approaches. This is well achieved through deregulation given that it limits the activities of competitors in the market in different industries. The communication Authority in Rwanda for instance can come up with new rules of the game which might require all players in the industry to abide by. As such it becomes therefore mandatory for the organization to change part of its corporate management strategy so as to align itself properly with new

regulations. Such occurrences therefore act as a challenge to successful strategy implementation (Oliver, 2012).

The regulation of infrastructure industries, such as electricity, water supply and telecommunications, was affected by significant changes over the past decades, with an increase in attractiveness of the so-called incentive regulation methods. Consequently, National Regulatory Authorities (NRAs) have been created in order to ensure a successful evolution towards competitive markets, regulate and supervise the relations between incumbents and new comers, who initially dependent on incumbents' services. Mainly, it has been argued that policy-makers need to increase the credibility of regulatory commitments in order to encourage new investors to enter in the telecommunications market (Flint, Blocker & Boutin Jr,. 2011). Accordingly, both theoretical and empirical works have emphasized that the governments' commitment of not interfering with property rights is crucial for attracting long term investments and developing sustainable growth levels (Henisz, 2002).

Surveying countries' regulatory preferences in the telecommunications sector over the past years, it is possible to observe a variety of independent regulatory settings, whose two ends are the ministries and the National Regulatory Authorities. Within this continuum have occurred several variations of regulatory institutions. Undoable, it has taken place, in this field, an international trend towards organizing regulatory authorities separate from the relevant ministry jurisdiction. In certain instances, there were significant functional changes in responsibilities. As a result, the last available data reveal the presence of 132 such independent regulatory authorities worldwide, compared to 14 in 1990 International Telecommunications. The main conclusion of such studies was the mutual acknowledgment that the Cost-Benefit Analysis has failed in assessing the regulatory effectiveness, (Flint, Blocker & Boutin Jr,. 2011). Particularly, three main limits of this approach have been outlined: a) there is an objective difficulty in identifying the real costs and benefits of regulatory activities; b) it is also possible that operators could adopt an opportunistic behavior, hiding or manipulating the information, required for the assessing process; c) the complexity of the analysis could require the creation of ad hoc bureaucratic structure, that would

imply a duplication of the regulatory costs, affecting consequently the assessing process itself. Gilardi, (2005), argued that Independent Regulatory Authority (IRAs) can be evaluated by looking at i) their impact on performance on the markets they regulate and capacity to strike a balance between possibly conflicting goals, ii) their capacity to produce high quality regulation and iii) the extent to which they respect the accountability standards. According to the author, the first and second aims can be measured through an econometric analysis assessing the link between IRAs and a range of indicators of market performance (defined widely to include the interests of both firms and consumers) and regulatory quality, while the third needs an assessment on a case-by-case basis (Gilardi, 2005).

The telecommunications policy in a country like Rwanda is a framework of law directed by government and the regulatory commissions, most notably the Rwanda Communications Commission. One of the goals of the RCC is to best utilize this limited resource, in such a way that it brings the" highest and best use". The Government of Rwanda aims to develop the nation as a global telecommunication hub and provides regulatory support to the industry to achieve the goal and to propose 'infrastructure' status to telecom (IBEF, 2011). Rwanda's successful reform on the other hand, is now often called Rwanda communication boost, has been attributed to policy changes to take advantage of comparative advantages in labor-intensive goods.

2.4.6 Strategic Management and Organizational performance

Strategic management is an important aspect of management that elicits research interest among scholars and practitioners. Strategic management has been defined differently by scholars due to their variety of backgrounds and context of studies. It is a process that generally encompasses three main aspects namely, formulation, implementation and evaluation (David, 2012). Formulation strategy refers to the mission, objectives, strategies, goals, policy and guidelines of an organization (Mintzberg, 2003). It embraces the identification of external opportunities and threats, determination of internal strengths and weaknesses and choosing the best strategy to be implemented (Esmaeil *et al.,* 2013).

The purpose of Arasa and Gathinji's (2014) study was to investigate the connection between organizational performance and competitive strategies across Kenyan mobile telecommunications companies. The study determined the competitive strategies used by Kenyan industry firms, evaluated the various degrees to which these strategies were implemented within the organizations, and looked at the connection between these strategies and company performance. According to the survey, low cost leadership and product differentiation are the most widely employed strategies in this highly competitive business. Additional tactics encompass tactics such as targeted market emphasis and strategic alliances. The analysis comes to the conclusion that the tactics used enhance the performance of the company as a whole. These tactics impact a number of important performance measures, such as market share and sales, customer loyalty, profitability, and product innovation.

In effort to link the extensive fields of management with theory and practical knowledge in the global business strategy and determine a strong analysis of the telecommunication roles in the business strategic processes, there was need to conduct research on the influence of strategic management practices and performance of the telecommunications industry in order to divulge the knowledge of new developments in the field of telecommunications. This knowledge will allow the 21st Century business managers align their organizational, financial and technological innovations to warrant maximum degree of competitiveness across the new paradigm of interconnected global market (Wambua & Mulyungi, 2019).

Strategic management as a field of study was first recognized in the 1962, when Harvard Professor Alfred Chandler published his book “Strategy and Structure: The book mainly focused on the relationship between strategy and organizational structure and how the two needed to be consistent with each other to ensure strong firm performance. A great number of people and researchers in the field of strategic management consider Chandler’s book to be the first work of strategic management research (Kitchen, 2013). He emphasized the technical importance of taking a long-term perspective when focusing into the future and his work mainly concentrated on large firms to be able to create administrative structures to accommodate growth and

clearly indicating how strategic change can give a company structure, direction and focus (O'Shannassy, 2012).

An effective strategic management process has to ensure that all members in an organization are informed of its content and allowed to participate directly in the formulation of the plan. This is necessary to ensure that each member can feel ownership of the strategy at hand. It also has to be strategic in nature and though this seems obvious, it is quite complex to put it to practice (Fain, 2007).Porter, (2001) emphasized the importance of analyzing the five competitive forces in developing strategies for competitive advantage. Although some have argued that today's rapid pace of technological change makes industry analysis less valuable, the reverse is actually true (Porter, 2001). Moreover, as the telecommunication technology around the world is more than ever, Harald and Pantelis, (2010) proposed that, mobile telecommunication technology has over the last three decades has rapidly expanded around the entire world (Harald & Pantelis , 2010). Verboven, (2011) argued that; the impact of telecommunication investment has a significant level of positive impact on the general macro-economic development of a country (Verboven, 2011).

Furthermore, in the recent years, there have been a wide range of research that has emerged which uses scientometric techniques to discover and evaluate the intellect structure of strategic management and how it evolves continuously (Preskill & Mack, 2013). Therefore, the instance of research work that applies scientometric tools do not replace the works that review and reflect upon the discipline but rather, they complement them in an appropriate manner. Uniquely, they allow identifying and measuring specific variables related to the discipline and its evolution thereby facilitating an objective method towards the analysis of such variables for instance the influence of strategic management practices and performance of telecommunication companies in Rwanda. In this regard, they permit the discovery of the correlation that exists between researchers and the topics, which seem obvious.

Contemporary strategic management practices are completely a new paradigm shift that addresses the need for managers to have comprehensive knowledge of different technological innovations, tactical global alliances, standard management plans and

digital marketing tools of today's and future networks. Knowledge on strategic management practices provide the concrete foundations for innovation in the telecommunications business which is based purely on proper management and alignment of company strategies with those of the broader industry. While strategic management knowledge leads to the knowledge and skills on how the company is run, telecommunications leads to knowledge of possible network potentials and capabilities. When these two are connected the new management, space is created which links business administration and telecommunication management (Namusonge, Muturi & Olaniran, 2016).

This way, the new forms of strategic management and corporate administration are then better understood giving a complete outline of the strategic thinking and business planning to its implementation in the telecommunications strategies. Justification of strategic management practices as my independent variable was set to expose the indispensable relationship between company systems, business processes and techniques of working in the telecommunications world that allows the 21st Century business managers align their organizational, financial and technological innovations to warrant maximum degree of competitiveness across the new paradigm of interconnected global market. This therefore, stamps the theoretical knowledge on the telecommunications well-connected to the methods and tools that are used currently plus the international experiences which are related to strategic management practices (Mutindi, Namusonge & Obwongi, 2013).

2.5 Critique of Existing Literature

Many writers on Strategic management area confirm that lack of superior management strategies in any institute diminish performance at all stages of operation. Nonetheless, a few authors have been found trying to relate management strategies to determining whether results were as required. Ikonya, (2015), carried out a study about business strategies on the performance of telecommunication companies in Kenya but did not dig deep into the modern sophisticated practices like strategic innovation and strategic alliance. Gitonga, (2003), whose focus shifted to innovation processes and the perceived role of the Chief Executive Officer (CEO) in

the telecommunication industry didn't give any clear knowledge about the influence of strategic management practices that are applied by the Chief Executive Officer in the execution of his management roles (Ikonya, 2015).

Namusonge *et al.* (2016), conducted a study on the role of innovation on the performance of firms in the Nigeria Stock Exchange. They postulated that innovation is a specific entrepreneur's tool and the channel for change exploitation as an outstanding prospect in different business service. The research however did not provide empirical evidence on the answers for the potential challenges facing innovation specifically in the telecommunication industry. For that reason, the innovative as one of the firm's strategic management practices should always be solution-oriented and spearheaded towards creation of new potential advantages that lead to customer satisfaction

Another research conducted by Analoui and Karami (2003), postulated that in spite of the numeral strategic management practices available to many organizations, it is important to note that many organizations have not yet appreciated how to effectively and efficiently utilize these strategies and techniques in attempting to enhance their organizational performance. They however did not point out which particular management practices would most probably be best suited in the modern changing telecommunication industry (Analoui & Karami , 2003).

A study carried by Akingbade (2015), focused on the analysis of business strategies and performance in selected Nigeria telecommunication companies. The study establishes the importance of each of the competitive strategies on the crucial factors affecting the telecommunication performance indices despite local and global challenges facing the industrial business environment. But he missed out the overall strategic management practice that constitute an indispensable component of the corporate strategies for several reasons such as to apply more productive processes, to perform better in the market, to seek positive reputation in customers‟ perception and as a result to gain sustainable competitive advantage. Empirical studies on consumer oriented Strategic management essence utilized a diverse array of approaches based on consumer perception towards Strategic management practices

adopted by companies in the telecommunication sector. The studies carried out were hinged on consumer perception of the organization during services delivery and few have focused on the performance of the telecommunication after the sales.

Ayende, (2010), sought to find out the business strategies used by Safaricom and the influence in performance. The findings showed a significant relationship between the strategies adopted by Safaricom in Kenya and the organization's performances with respect to the objective performance indicators (Ayende, 2010). However, he left out the fundamental instruments of growth strategies to enter new markets, to increase the existing market share and to provide the company with a competitive edge (Nybakk & Jenssen, 2012). The literature, only addresses specific aspects of telecommunications but does not provide an overall understanding of the dynamics of the strategic management practices ranging from planning, innovation, alliance or even marketing collectively. Motivated by the increasing competition in global markets, research has to shift focus to grasp the importance of strategic innovation, alliance, strategic marketing since suddenly changing technologies and severe global competition rapidly erode the value added of existing services in the telecommunication industry.

2.6 Research gap

Several studies given above have failed to establish the link between strategic management practices and performance on the telecommunication industry. Most of these studies have focused on either of the two being either an independent variable of another variable or a dependent variable of another. Namusonge, Muturi and Olaniran (2016), investigated the role of innovation on performance of firms on the Nigerian stock exchange. They found out that, innovation was still at infancy level as it had a negative relationship between the returns on assets and returns on equity (Namusonge, Muturi & Olaniran, 2016). The need to investigate the holistic role of the core strategic management practices remained still lacking. Wambua and Mulyungi (2019) conducted a study on the strategic quality management practices on organizational performance of telecommunications companies in Rwanda. The study concluded that, the commitment of top management, quality management and

customer focus plus ISO certification practices had been adopted in the MTN telecommunication company. However, it can be urged that, creating an effective management strategy in telecommunication services is vital yet, all telecommunication companies provide nearly same products and services, which are easy to imitate.

Conversely, Kavale, Mugambi and Namusonge (2014) investigated the strategic management determinants of corporate growth in selected microfinance institutions in Kenya. It was revealed that their determinants of corporate growth which included the grand strategy, corporate vision, strategic energy and product differentiation were not clear indicators of strategic management practices and could not confer a direct bearing on a firm's performance in a telecommunications context.

Ali (2013), did a study on Innovation strategy and business performance in telecommunication industry case study Somalia they found out that impact of innovation strategy on business performance was great and there was a positive correlation between innovation and performance. But this was just one aspect of the strategic management practices whose finding could not establish the overall influence of the most contemporary management practices which constitute an indispensable component of the corporate strategies which are responsive to the high-speed changing technological environment in the telecommunication industry.

When examining the effects of strategic management on organizational culture, the analysis discovered that, performance of government organizations was heavily influenced by the organizational culture, formulation dimensions as well as the implementation strategy with organizational culture being the most triggering predictor of performance (Samadi, Alghafis & Al-Zuman, 2018). However, their findings did not represent strategic management practices on organizational performance with its ability to enhance company effectiveness and customer satisfaction.

Research study by Lumpkin, (2013), missed to assess the link between strategic management practices and performance of the telecommunication company because it did not provide comprehensive knowledge that calls for integration of current

strategies that would help the telecommunication industry to define its business today and tomorrow, and determine the industries to compete because the Rwandan market, demands that the telecommunication company operators combine and integrate their strategy with other secondary strategies to become successful (Lumpkin, 2013). They cannot, as Porter says, only depend on one strategy. The researcher identified this area as deserving attention since none of the studies directly addressed the influence of strategic management practices on the performance of the telecommunication industry in Rwanda. The researcher identified a gap in evidence of approaches of using strategy and the strategic management process for operational, functional and corporate level optimization of the vision and mission of the telecommunication industry. This study therefore, seeks to fill that gap by establishing the influence of the well-integrated strategic management practices applied in the telecommunication companies in Rwanda and their significant influence on the performance of the telecommunication industry in the country at large.

2.7 Summary

This chapter reviews the Theoretical, Empirical and Critical literature related to Strategic management practices and performance of telecommunication industry. Therefore, in this chapter with regard to the theoretical literature the researcher has looked at concept of strategic management, and concept of organizational performance. An overview of the conceptual framework that explains the relationship between the independent, dependent and intervening Variable is clearly elaborated. The researcher has also looked at empirical literature discussing presenting the earlier finding of other researchers plus their different perspectives in the field of strategic management practices and how they affect the firm's performance. Critique of Existing Literature relevant to the study has been relatively elaborate identify the gap and citing those who have worked on the concept of strategic management.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology applied in the preliminary stages and during data collection. The chapter presents the, research design; study target population, sampling strategy, and research philosophy all of which serve as the foundation for the entire study are all covered in this chapter. The chapter concludes by discussing the methodologies used in the study's sequentially captured data processing, data analysis, and research procedures. This chapter eloquently illustrates the comprehension of the link that exists between the variables in addition to serving as the foundation for a rationale for the determination of the study outcome.

3.2 Research Philosophy

A research philosophy is a viewpoint on how information about an event, phenomenon, or collection of data should be gathered, examined, and interpreted by users (Saunders *et al.*, 2014). As there are numerous fields of study, there are diverse kinds of research philosophies. There are four main philosophical schools in the business field: positivism, interpretative, realism, and pragmatism (Saunders *et al.*, 2014). Metsämuuronen (2017) defines positivism as a philosophy that bases knowledge on empirically verifiable observation and is characterised by the use of comprehensive analysis, such as surveys, experiments, or statistical analysis, as well as the investigation and analysis of quantitative data.

According to Padgett (2016), the paradigm makes use of mathematical formulas and models to extrapolate, generalise, and ultimately test the empirical hypothesis in an objective manner. According to Bryman and Bell (2007), positivism philosophy guarantees accuracy in measurements, objectivity in problem-solving, and validity and reliability of findings. As it relates to testing hypotheses, structured research design, and objective method employing cross-sectional design, positivist

methodology was used in this study to undertake a quantitative collection and analysis of data (Metsämuuronen, 2017).

3.3 Research Design

This study applied descriptive research design by collecting general information through administering questionnaire to the selected sample of respondents. This design was appropriate since it provided an accurate account of characteristics of a particular event or scope of real-life situation (Kothari, 2004). Each construct can be described using a descriptive study methodology, which also successfully establishes the relationship between the independent and dependent variables. Additionally more inquisitive, descriptive research design concentrates on a variable aspect. Data gathered from a population, or a representative subset, at a single point in time is analyzed using a cross-sectional survey technique (Mackenzie & Knipe, 2015).

Additionally, the study included a qualitative and quantitative methodology. According to McMillan and Schumacher (2014), quantitative research is an investigation into a problem that has been identified, based on testing a theory, measured with numbers, and analyzed using statistical techniques. Qualitative research, on the other hand, aims to understand the social phenomenon from the perspective of the participants. A more comprehensive depiction of reality was possible when the two methods were combined (Zikmund *et al.,* 2013). The choice of descriptive research design is suitable for this study since it utilizes a questionnaire as a tool of data collection.

3.4 Target Population

The population in a research refers to all items in a unity of inquiry (Kothari, 2004). A population is composed of a group of people among whom a survey was carried out. Such individuals have common characteristics since investigation is done to the specific sub-groups with a similar demographic grouping. Population is defined by Cooper *et al.,* (2016) as the total number of items that constitute the primary subject of a scientific inquiry. Target and accessible populations are the two categories of population that Borg *et al.*, (2017) identified. The term "accessible population" refers

to all the persons who may reasonably be included in the sample, whereas the term "target population" refers to all members of a real or imaginary group of people, events, or objects from which a researcher seeks to generalize the results of their research.

For this research, the target population comprised of all Top and middle level, managers of mobile phone operator companies in Rwanda which include MTN and Airtel company Headquarter and branches managers within Kigali City. Target population for this study was 133 which was composed of all the individuals in the executive positions for the two telecommunication companies. Due to the positions these individuals occupy in these companies they were in better position to answer the questions asked. Hence table 3.1 describes the target population.

Table 3.1: Target Population

Category of respondent	**MTN**	**Airtel**	**Total**
Top level managers	13	16	29
Middle level Manager	48	56	104
Total	**61**	**72**	**133**

Source: *primary data*

3.5 Sampling Frame

Bryman and Bell (2003), define a sampling frame as a list of all the items which the researcher chooses to work with and which do not comprise of the entire population under study. The list of components from which the sample is actually taken is known as the sampling frame (Flick, 2015). The names of every object in the finite world under consideration are listed in what is also known as the source list. In the event that a source list is not readily available, the researcher must create one, and it must be thorough, accurate, trustworthy, and relevant. According to Kothari *et al.,* (2019), it is crucial that the source list be as representative of the population as feasible.

The sampling frame for this research included all the mainstream managers holding the top and middle level leadership positions at MTN and Airtel in Kigali that are involved in the core telecommunication business at either the corporate, business or functional level. These business units in the MTN and Airtel telecom include; marketing and communications, customer care, logistics, commercial, risk and strategy, information technology, human resource, finance and administration, network operations.

3.6 Sample and Sampling Technique

3.6.1 Sampling Technique

The practice of choosing a number of people or items from a population so that the chosen group has components typical of traits present in the full group is known as sampling technique (Kombo & Tromp, 2016). According to Kothari *et al.,* (2019), a sample's ability to accurately reflect the features of the complete population serves as its final test. The study used a stratified sampling technique and random sampling, to create an acceptable study sample. Two strata were created from the population to reflect each sort of service provider.

3.6.2 Sample Size Determination

According to Cooper and Schindler (2014), a sample is a subset of the population, which is a true representative of the entire population to be studied. To determine a sample for this research, the researcher applied a Slovene's formula, which is commonly used to calculate the sample size out of the study population (Cooper & Schindler, 2014).

Slovene's formula: $n=\frac{N}{1+N(e)2}$

Whereby

n=Required sample size

N=Population size

e= Margin of error 5% for this research

Therefore, n = $\frac{133}{1+133(5\%)2}$

$$\frac{133}{1+133(0.05)2}$$

$$\frac{133}{1+133(0.002)}$$

$$\frac{133}{1+0.3325}$$

$$\frac{133}{1.3325}$$

n = 100 respondents

Therefore, the sample size of the research was 100 respondents from the two mobile telecommunication companies in Rwanda (MTN and Airtel) drawn from the top, and middle level managers of the two companies.

Table 3.2: Target Sample Distribution

Category of respondent	MTN	Airtel	Total	Sample size calculation	Sample distribution
Top level managers	13	16	29	(29/133)*100	22
Middle level Manager	48	56	104	(104/133)*100	78
Total	**61**	**72**	**133**	**100**	**100**

3.7 Data Collection Instruments

According to Cooper and Schindler (2016) and Mugenda *et al.* (2013), data collection instruments are the equipment and methods utilized to measure variables in research projects. There exist diverse approaches to gathering data that vary in terms of expenses, duration, and additional resources available to the investigator. Depending on the goal of the study, Mackey and Gass (2015) divide these techniques into primary and secondary categories. While Klenke (2016) defines primary data as information gathered by the researcher at many field sites specifically for a comparative study, Babbie (2017) defines primary data as those elements that are unique to the subject under study.

According to Kothari *et al.,* (2019), primary data is unique information that is gathered for the first time. Information that has already been gathered and statistically processed is referred to as secondary data. Both primary and secondary data were used in this investigation. While secondary data was retrieved via the Flight Safety Foundation website, primary data was gathered through the use of a questionnaire. According to Kothari *et al.,* (2019), surveys are the most often used technique for diagnosing how well institutions are operating and the most significant way of gathering data. Questionnaires can be classified as either closed-ended, open-ended, or a hybrid of the two. Closed-ended questions, for which respondents had to provide a brief explanation, were included in the questionnaire that the researcher

used. According to Kothari *et al.,* (2019), open-ended inquiries are ones that often pose a question to the respondents, who then react with their own response in the designated area. In a similar vein, Mugenda *et al.,* (2013), elaborate on closed-ended questions by defining them as those that present the respondents with a set of options or choices in lieu of fixed answers. A Secondary Data Collection Sheet was used to gather secondary data.

3.8 Data Collection Procedure

Permission to conduct the study was obtained from the administration of Jomo Kenyatta University of Agriculture and Technology, which issued an approval letter for the research and also distributed a request letter to telecommunication companies in Rwanda to participate in the research by answering questionnaires. This was done to ensure that the study complied with all ethical issues pertaining to any research undertaking. Additionally, a research authorization from the National Commission for Science, Technology, and Innovation (NACOSTI) was acquired. The management of each company received a detailed explanation of all the operations related to the study, stating that the study's sole goal was academic. Confidentiality and privacy were respected, and the study's results were sent directly to the university.

The 100 managers in charge self-administered a questionnaire. The organizations were contacted in advance and given sufficient notice of the planned data collection effort in order to guarantee a maximum response. The responders received the questionnaires in person. The company's financial statements provided the secondary data. The study's objectives and design, as well as the fact that responding to the questionnaires was entirely voluntary, were sufficiently disclosed to the participants.

3.9 Pilot Study

In order to make sure that research instruments are functioning properly, a pilot study is a preliminary test that is carried out before the main study. It can also be used as a smaller-scale version of a trial run in order to get ready for a larger study (Kombo *et al.,* 2016). To ensure that the questionnaires were valid and reliable in collecting the

data needed for the study, a pilot test was conducted. A pilot test is a rehearsal and duplicate of the main survey, according to Kombo and Tromp (2016) and Kothari *et al.,* (2019).

According to Klenke (2016), the goal of a pilot test is to evaluate procedures, data collection tools, and other study components in advance of a more extensive investigation, rather than so much to test research hypotheses. Its goal is to identify any flaws in the questionnaire's structure or content as well as its capacity to gather the data needed for the research project. The sequence of parts, the phrasing and style of the questions, the selection of respondents, and the amount of time needed to complete the questionnaire, and other limitations like respondent weariness are some of the factors that were assessed during the pilot test and may be taken into account when creating the final questionnaire.

In order to test the quality of the data of the questions, as well as to the validity of the survey as a whole, the research instruments was pre-tested using the pilot test before going out for the actual data collection. The researcher reached out to a group of 19 people other than the actual telecom managers who served as the representatives of the target group. This tested the reliability of each construct and question in capturing the information used. Having returned the filled questionnaires, the researcher cross checked the appropriateness of the questions and their comprehension in the pilot test. The pilot results helped the researcher to examine the respondent's comprehension of the wordings of the questions in the local context, amendments were subsequently made and the validity was thereby established.

3.9.1 Reliability of the Instruments

Cronbach's alpha was used in the study to determine the reliability of the tests. Cronbach's Alpha measured the internal reliability of a set of related items. Specifically, it summarizes the extent to which sets of items were interrelated with each other (Hair 2006). First, questionnaires were randomly distributed and collected among 19 subjects and then its Cronbach's alpha.

3.9.2 Validity of Research Instrument

The degree to which an instrument measures what it is intended to measure and functions in the manner intended by its designers is referred to as validity. According to Babbie (2017), validity is the extent to which the findings from the analysis of the data accurately depict the phenomenon under study. There are degrees of validity, and it is uncommon for an instrument to be 100% genuine. Validation is the process of gathering and evaluating data to determine an instrument's accuracy. The validity of quantitative instruments can be evaluated using a variety of statistical tests and metrics, most of which need pilot testing.

According to Mugenda *et al.,* (2013), construct validity, is an evaluation of how well data from an instrument significantly and precisely describes a theoretical perspective. Expert views about the content and face validity of the research instrument were obtained from lecturers in the field of strategic management and aviation safety for the purpose of this study. Based on these standards, the research would be impartial, fair, pertinent, and typically dependable, as stated by Kothari *et al.*, (2019), validity for this study was tested using Kaiser – Meyer – Olkin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity, test to test the strength of the constructs.

3.10 Data Analysis and Presentation

The researcher after receiving the filled questionnaires from the respective respondents, the questionnaires was edited for completeness and consistency. The collected data was then extracted from the questionnaires and presented using tables, and figures while analysis and interpretation was done based on the frequencies and percentages of respondents' views in line with the research questions. This was done by on percentages and frequencies of respondents' views. The coding of respondent's views was done in Ms excel program used to analyze and interpret the study figures. Finally, correlation analysis, normality test, heteroskedasticity test, factor analysis and regression model were applied to establish the relationship between strategic management practices and performance of telecommunication industry.

3.11 Operationalization and Measurement of Variables

Table 3.3: Operationalization and Measurement of Variables

Variable	Indicators	Likert Scale	Analysis of Data
	Independent Variable		
Strategic Planning	• Long-term goals & objectives • Strategic forecasting • Strategic budgeting	Ordinal	Standard deviation, Simple regression, Mean
Strategic Innovation	• Service innovation • Process innovation • Infrastructure innovation	Ordinal	Standard deviation, Simple regression, Mean
Strategic Alliance	• Outsourcing • Merging • Acquisition	Ordinal	Standard deviation, Simple regression s, Mean
Strategic Marketing	• Adverting • Sales promotion • Pricing	Ordinal	Standard deviation, Simple regression, Mean
	Moderating Variable		
Legal & regulatory framework	• Taxation laws • Investment regulations • Compliance	Ordinal	Standard deviation, multiple regression
	Dependent Variable		
Performance of Telecommunication industry	• Customer satisfaction • Customer loyalty • Customer retention • Profit maximization • Return on assets • Return on equity	Ordinal	Standard deviation, multiple regression

3.12 Exploratory Factor Analysis for Result Data

Factor analysis refers to the idea that measurable and observable variables in the study can be reduced to fewer underlying variables that share a joint variance and are unobservable (Bartholomew *et al.,* 2011; Williams *et al.,* 2010). Thus, in the present study, factor analysis was performed so as to reduce and summarize data set items into controllable factors without losing the original information. Exploratory factor analysis was employed in this study because of its ability to explore the data to identify the acceptable and relevant set of factors which can be analyzed together (Fricker *et al.,* 2012; Velayutham*et al.,* 2012). Hence, EFA was conducted to assess the reliability and validity of the reflective multi-item scales.

Before extraction of factors, a number of tests were used to assess the suitability of the respondent data for factor analysis. The tests used to assess the appropriateness of the data included the Kaiser – Meyer – Olkin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity. For data to be suitable for factor analysis, the recommended value for KMO is .50 and the Bartlett's Test of Sphericity should be significant ($p < .05$) (Hair *et al.,* 2010; Tabachnick & Fidell, 2007).

3.13 Quantitative Analysis

The operational performance of telecommunication industry was derived from five qualitative factors as described in the models below. To test the research hypotheses, regression analysis was used and it predicts the change in the dependent variable resulting from changes in the independent variables.

Single Variable

$$Y = \beta_0 + \beta_i X_i + \varepsilon \ (i=1, 2,3,4);$$

$$Y = \beta_0 + \beta_i X_i + \beta\ X_5 + \varepsilon;$$

$$Y = \beta_0 + \beta_i X_i + \beta\ X_5 + \beta X_j * X_5 + \varepsilon$$

A multiple regression analysis was also used and it predicts the change in the dependent variable resulting from changes in the multiple independent variables

Multiple Variables

$$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where:

Y = Organizational Performance of Telecommunication industry; X_1 = Strategic Planning practice X_2 = Strategic Innovation Practice X_3 = Strategic Alliance Practice X_4 = Strategic Marketing Practice. $\beta 0$, $\beta 1$, $\beta 2$, $\beta 3$, $\beta 4$, are regression coefficients to be estimated. Then the multiple regression model is given as:

$$Y= \beta_0 + \beta_1 X_1 Z + \beta_2 X_2 Z + \beta_3 X_3 Z + \beta_4 X_4 Z + \varepsilon$$

Where Z = the moderator

Table 3.4: Hypothesis

No	Null Hypothesis	Decision criteria
1	**H_1**: There is no significant relationship between strategic planning and performance of telecommunication industry in Rwanda	Reject the null hypothesis if $p<0.05$
2	**H_2:** There is no significant relationship between strategic innovation and performance of telecommunication industry in Rwanda	Reject the null hypothesis if $p<0.05$
3	**H_3:** There is No significant Relationship between strategic alliance and performance of telecommunication industry in Rwanda	Reject the null hypothesis if $p<0.05$
4	**H_4:** There is No significant relationship between strategic marketing and performance of Telecommunication industry in Rwanda.	Reject the null hypothesis if $p<0.05$
5	**H_5:** There is no significant moderation effect of legal and regulatory framework on the relationship between strategic management practices and the performance of Telecommunication industry in Rwanda	Reject the null hypothesis if $p<0.05$

3.14 Diagnostic Tests

3.14.1 Normality tests

A properly distributed set of data can enhance regression analysis (Bryman, 2017). Plotting can be used to test the assumption of normal distribution. Both independent and dependent variables should be used in this. According to Bloomfield and Fisher (2019), normality tests are used to assess whether a data set is well modeled by a normal distribution and to calculate the likelihood that a random variable underlying the data set would be normally distributed. Kolmogorov- 2 Smirnov test was used. If the p-value was less than 0.05, the data was not normally distributed; if it was higher than 0.05, the data was assumed to have traits of a normal distribution.

3.14.2 Multicollinearity Test

One predictor variable in a multiple regression model that can be reasonably accurately predicted linearly from the others is known as multicollinearity, also known as collinearity. In this case, even slight modifications to the model or the data may cause the coefficient estimates of the multiple regressions to fluctuate unpredictably (Sekaran *et al.,* 2016). When independent variables in a regression model exhibit correlation, it is known as multicollinearity, and this correlation is problematic because independent variables ought to be independent.

A high enough degree of correlation between variables may make it difficult to fit the model and understand the data. High levels of correlation between variables cause multicollinearity, which is why independent variables shouldn't have a high degree of correlation with one another (Kothari *et al.,* 2019). Bryman (2017). Multicollinearity is definitely present if the value of correlation coefficient is greater than 0.85.

3.14.3 Heteroscedasticity Test

When responses are not normally distributed or the error term does not have a constant variance, heteroscedasticity the lack of constant error variance occurs (Bloomfield and Fisher, 2019). The Koenker Heteroskedasticity Test was also used

to test for heteroscedasticity. In this test, the alternative hypothesis is that the error variances are a multiplicative function of one or more variables, and the null hypothesis is that the error variances are all equal. The study's level of significance was 5%. When $p \geq 0.05$ the null hypothesis is rejected suggesting the absence of heteroscedasticity; however, when $p < 0.05$, the null hypothesis is not rejected, leading to the conclusion that there is a difference in the population's variances (Cooper & Schindler, 2014).

3.14.4 Autocorrelation Test

Autocorrelation was defined by Cameron & Miller (2011) as the relationship that exists between the observations in a series that are arranged in either space or time. It is frequently employed when the timing of observations is crucial, most frequently when the same participant is subjected to repeated measurements of the same variable throughout time. Gujarat (2010) states that there is a value range for the Durbin-Watson statistic, which is 0 to 4. A value close to 2 denotes non-autocorrelation; a value near 0 denotes positive correlation; while a value near 4 denotes adverse correlation. The purpose of the research was to determine whether there was any autocorrelation between individual data sets. This argument is consistent with that of (Miles *et al.*, 2014).

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results on the effect of Performance of Telecommunication industry in Rwanda. This chapter starts by pressing the response rate. The pilot results are then discussed in two sub-sections reliability and validity. Descriptive results section is presented which is composed of demographic; gender, work experience, education level age of the respondents. The next section presents the descriptive in terms of mean and standards deviation. The next section involves the analysis using the factor analysis components; principal component analysis, total variance explained scree plot for all the variables. The chapter then presents the results on correlation analysis. The chapter also goes further to present the diagnostic tests that were conducted. These test were for the Normality Test, Heteroskedasticity Test, and Autocorrelation Test. The next key section presents the regression results both univariate and multi variate regressions the last section presents the hierarchical regression model for moderation testing.

4.2 Response Rate

The response rate of the questionnaires and the interview was moderately upright and it met the expectations of the researcher. High response rate guaranteed that, the final findings were representative of the entire target population and that they were reliable. As noted by Emore, (2007), that the rate of response is construed as the extent to which the collected data caters for all the sample items, ratio of the real respondents against the projected number of people who indeed respond to the study. The telecommunications company had the highest response rate and this demonstrated the level of commitment often making it an appropriate representative sample that simplified the research results generalizability (Emore, 2007). The study sampled one hundred respondents who had been carefully selected from the Top and middle level, managers of mobile phone operator companies in Rwanda which include MTN and Airtel company Headquarter and different branches within Kigali

City and shown in table 4.1, which presents the results on the response rate of the respondents.

Table 4.1: Response Rate

Response status	Frequency	Percent
Responded	87	87
Did not Respond	13	13
Total	**100**	**100**

From the results, the evidence showed that 87 out of 100 questionnaires were filled and returned. From the same results, it was found that 13% of the respondents did not reply to the questions asked. However, the high number of responses was good to allow further analysis to take place. This implied that, the active sample represented the response rate of 87% of the sample size which according to Emore (2007), is construed as the data which caters for all the sample items in research against the projected number of respondents who indeed respond to the study.

4.3 Pilot Study

4.3.1 Reliability Test

Reliability has been acknowledged in the literature to mean that scores from a research instrument are stable and consistent (Yasar & Cogenli, 2014; Koonce & Kelly, 2014). Given that in this research, structured questionnaires were used as instruments to collect data, it was worth testing for its reliability. Rovai *et al.*, (2013) recommended Cronbach's alpha as an adequate model to measure internal consistency reliability based on the average inter-item correlation of an instrument. Therefore, any Cronbach alpha value of more than .70 is regarded as a reliable measure for the construct under consideration. Evidently, the present study results demonstrate that all variables had a Cronbach alpha of more than .70. The study therefore used Cronbach alpha to check for reliability of the research instruments. The results are presented in Table 4.2.

Table 4.2: Reliability Results

Variable	Alpha statistic	Number of items
Performance of Telecommunication industry	0.93	7
Strategic Planning	0.91	7
Strategic Innovation	0.92	6
Strategic Alliance	0.94	7
Strategic Marketing	0.93	7
Legal & regulatory framework	0.92	5

According to Sekeran and Bougie (2010), the conventionally accepted level of reliability measure is set at 0.70. From the results generated, the Cronbach alpha for each variable based on the average of inter-item correlation was above 0.70 with the highest Cronbach alpha value observed in Strategic Alliance (.94) whereas the lowest value was (.910) with respect to strategic planning. Thus, the results met the required threshold for further analysis as presented in Table 4.2.

4.3.2 Validity Test

Construct validity, according to Mugenda *et al.,* (2013), is an evaluation of how well data from an instrument significantly and precisely describes a theoretical perspective. Expert views about the content and face validity of the research instrument were obtained from lecturers in the field of strategic management and aviation safety for the purpose of this study. Based on these standards, the research would be impartial, fair, pertinent, and typically dependable, as stated by Kothari et al., (2019). Validity for this study was tested using Kaiser – Meyer – Olkin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity, test to test the strength of the constructs as presented in table 4.3.

Table 4.3: Validity Test

Variables	KMO	Bartlett's Test Chi-Square	Comment
Performance of telecommunication firms in Rwanda	0.885	306.741, p-value 0.000	Adequate
Strategic Planning	0.897	286.991, p-value 0.000	Adequate
Strategic Innovation	0.889	339.458, p-value 0.000	Adequate
Strategic Alliance	0.774	511.545, p-value 0.000	Adequate
Strategic Marketing	0.901	367.856, p-value 0.000	Adequate
Legal & Regulatory Framework	0.816	170.738,p-values 0.000	Adequate

Bartlett's Test of Sphericity produced significant Chi-Square (χ^2) of Performance of telecommunication firms in Rwanda, Strategic Planning, Strategic Innovation, Strategic Alliance, Strategic Marketing and Legal & Regulatory Framework were; ρ- values were less than 0.05 and Kaiser – Meyer - Olkin measure of sampling adequacy were 0.885, 0.897 , 0.889 , 0.774 , 0.901 and 0.816 above the acceptable value of 0.50 (Field, 2005), showing that it was appropriate to subject data for factor analysis on this variable in this study.

4.4 Descriptive Results

4.4.1 Demographic characteristics of the respondents

This section significantly supports the researcher to determine the respondents' background information to substantiate the validity, reliability and relevancy of the data that was given. The personal characteristics of the respondents play a significant

role when it comes to expressing or giving their responses about the questions and the problem. The section specifically examined the demographic information of the respondents with regard to their gender, work experience in the telecommunications industry at both corporate, business or functional level, their Education levels and their respective age groups.

4.4.2 Respondents by Gender

Both male and female managers at top and middle levels of management at MTN and Airtel participated in providing information for this research. The data allowed the researcher to gather information for analysis and helped to determine the relationship between strategic management practices and performance of telecommunication industry. Table 4.3 presents the information regarding the gender of the respondents.

Table 4.4: Gender

Gender	Frequency	Percent
Female	55	63.2
Male	32	36.8
Total	**87**	**100.0**

The results on the sex composition of the respondent that will be targeted for this study. These preliminary results depict that 63.2% of the respondents were female. While men were 36.8 % percent. These results support those of Makonyango and Bichanga (2015), who established that the diversity issues that are prominent at Safaricom include age, gender, disability, tribalism and culture. Contrary to these findings (Osuri, 2015) in case for airtel and Telkom found that there were 33 (71%) male andonly 13 (29%) of the respondents were female. This shows that the industry in Rwanda could be women dominated and that views and inferences provided by both males and females were significantly inclusive especially in a contemporary gender sensitive Rwanda.

4.4.3 Work Experience

This section sought to examine the respondents' work experience working as top or middle level manager in the telecommunications industry. These were groups between one to two years, between 3 to four years, from five to six years and above. Figure 4.5 presents the respondents by work experience

Table 4.5: Work Experience

Work experience	Frequency	Percent
less than 1 year	3	3.4
1-2 years	16	18.4
3-4 years	29	33.3
5-6 years	28	32.2
Above 6 years	11	12.6
Total	**87**	**100.0**

The results on the duration of time the respondent worked in the telecommunication industry. From the results of the study, it was discovered that; majority of the respondents have been in the industry for a duration of 3 to 4 years closely followed by those between 5 to 5 years. This implied that the respondents had a long-standing work experience in the telecommunications and were fit to answer the research questions poses to them by the researcher.

4.4.4 Education level

The study sought to establish the level of Education of the respondents as it is one of the most essential characteristics, which affects any person's perception, attitude and the general understanding of any specific business phenomena. Hence, the respondents' Education level was investigated by the researcher, grouped in four categories, which include Diploma, bachelor's degree, master's degree and Doctorate of Philosophy degree. The data is presented in table 4.5.

Table 4.6: Education level

Education level	Frequency	Percent
Diploma	14	11.5
Bachelor Degree	39	41.4
Master's Degree	28	26.4
Doctorate of Philosophy degree	18	20.7
Total	**87**	**100.0**

The results on the academic level of the respondents. From the results, it can be observed that majority of the respondents 41.4 % had a bachelor's degree while those with diploma had least education at 11.5%. The results revealed that majority of the respondents were well educated to deal with the requirement in the industry. Such people had a quite a substantial level of knowledge and skills regarding the process of strategic management practices and how they influence performance in the telecommunications industry.

4.4.5 Ages of the Respondent

The study sought the significance of age of the respondents as one of the most important components in understanding the views of the respondents. By large, ascertaining the age of the respondents signifies their maturity level which in an important factor in determining their responses. The data is presented in table 4.6.

Table 4.7: Ages of the Respondent

Age of respondents	Frequency	Percent
less than 25 year	5	5.7
26-35 year	17	19.5
36-45 year	37	42.5
46--55 year	20	23.0
56 and Above	8	9.2
Total	**87**	**100.0**

The results on the ages of the respondents. From the results it is evident that 5.7+19.5+42.5= 66% of the respondents were below the age of 47. This implies that the industry may be dominated by younger members of the society. It also shows that those between the age of 36 to 45 is the dominant group. Regarding performance of the telecommunications industry, the descriptive results is described in the table 4.8

4.5 Descriptive Results of variables

4.5.1 Descriptive results on Performance of telecommunication firms

Table 4.8 Descriptive results on Performance of telecommunication firms

Opinion statements	Mean	Std. Deviation
The firm's financial return on assets has improved significantly over the duration of our operations in the country	4.07	.728
Returns on equity has really improved significantly over the duration of our operations in the country	4.22	.689
Sales growth has gone up over the duration of our operations in the country	4.13	.643
Cash flows has improved over the duration of our operations in the country	4.17	.633
Our firm enjoys a huge service market share and customer retention	4.32	.656
The company has experienced increased new and loyal customers subscriptions to our products	4.02	.731
Our customers are always satisfied with our products	4.21	.631

Firm performance is on the premise that an organization is in possession of productive assets such as human, physical, and capital assets required accomplishing a common purpose (Hayes, 2013). The benefits made by firm through the utilization of assets were expected to be of advantage to the firms so long as the benefits

incurred supersede the costs. So long as such advantages are experienced the existence of firms is assured. The results on firm performance are presented in table 4.8. The firm's financial return on assets has improved significantly over the duration of our operations in the country with a mean, of 4.32 and a standard deviation of 0.820, The firm's financial return on assets had improved significantly over the duration of their operations in the country 4.07, Returns on equity has really improved significantly over the duration of our operations in the country 4.22, Sales growth had gone up over the duration of our operations in the country 4.13, Cash flows has improved over the duration of our operations in the country 4.17, Our firm enjoys a huge service market share and customer retention 4.32, The company has experienced increased new and loyal customers subscriptions to our products 4.02 and Our customers are always satisfied with our products 4.21. These findings are in line with those of Chandler (2012), who defined Organizational performance as the ability of an Organization to utilize its resources (e.g. knowledge, people and raw materials) to achieve Organizational goals in effective and efficient way. It is a set of financial and non-financial indicators, which offer information on the degree of achievement of objectives and results (Lebans & Euske, 2011).

4.5.2 Descriptive Results on Strategic Planning

The research utilized measures of central tendency especially the "mean" which is used to describe the central position of the frequency distribution. Similarly, the measures of spread including the standard deviation describes how spread out or dispersed the scores are. The study sought to evaluate the extent to which strategic planning influences performance of telecommunication industry in Rwanda. By use of the descriptive analysis, the findings are shown in Table 4.9.

Table 4.9: Descriptive Results on Strategic Planning

Opinion statements	Mean	Deviation
The firm has a Process of defining company's strategy or direction and making decisions on allocating its resources to pursue this strategy	4.08	.702
The firm has a Systematic process of envisioning a desired future and translating this vision into broadly defined goals and steps achieve them	4.22	.672
The organization formulates the strategic vision for the future in a timely manner	4.15	.638
The company has a framework for Evaluating and monitoring the overall strategic plan	4.18	.601
We regularly forecast internal and external development	4.30	.649
We always Specify the tactical "action" strategies to be accomplish	4.03	.723
The firm has a Smart Budgeting strategy to maximize resources and minimize costs	4.22	.618

The results depicted that; The firm has a Process of defining company's strategy or direction and making decisions on allocating its resources to pursue this strategy 4.08, The firm has a Systematic process of envisioning a desired future and translating this vision into broadly defined goals and steps achieve them 4.22, The organization formulates the strategic vision for the future in a timely manner 4.15, The company has a framework for Evaluating and monitoring the overall strategic plan 4.18, We regularly forecast internal and external development 4.30, We always Specify the tactical "action" strategies to be accomplish 4.03 and The firm has a Smart Budgeting strategy to maximize resources and minimize costs 4.22. This means that strategic planning in telecommunication companies in Rwanda is very vital in achieving company's objectives. These findings are in line with the views of (Strydom, 2011), strategic planning and control inform the managers about the reasons leading to the failure to meet a certain objective, performance standard and any other performance indicator. Okwako, (2013), examined the effect of strategic planning with a focus on the performance of telecommunication companies in the UK. They examined whether strategic planning and enabled management perform better (Okwako, 2013). Researchers suggest that strategic planning positively influences firm performance. According to Simerson, (2011), strategic planning is a

systematized and chronological procedure to develop or coordinate an organizational strategy leads to the concept of formality in strategic planning (Simerson, 2011).

4.5.3 Descriptive Results on Strategic innovation

The research utilized measures of central tendency especially the "mean" which is used to describe the central position of the frequency distribution. Similarly, the measures of spread including the standard deviation describes how spread out or dispersed the scores are. The study sought to evaluate the extent to which strategic innovation influences organisational performance of firms in the telecommunication industry in Rwanda. The results are presented in Table 4.10.

Table 4.10: Descriptive Results on Strategic Innovation

Opinion statement	Mean	S.D
The company is always looking for innovative ways to improve on the Service delivered to our customers	4.01	.739
The company has a process of introducing new and cost-effective ways of doing things that create new demands and new market space	4.16	.713
The company is always investing in new and modern infrastructures to improve on the Service delivered to our customers	4.08	.651
The firm is quick to adopt new Technological advancements in the market	4.11	.655
The company always use internet and social media platforms to attract potential innovative man power in the firm	4.26	.690
A plan made by an organization to encourage advancements in either technology or service usually by investing in research and development activities	3.95	.730
Employees are always involved in the innovation process in the company	4.15	.656

It is evident from the company is always looking for innovative ways to improve on the Service delivered to our customers 4.01, The company has a process of introducing new and cost effective ways of doing things that create new demands and new market space 4.16, The company is always investing in new and modern infrastructures to improve on the Service delivered to our customers 4.08, The firm is quick to adopt new Technological advancements in the market 4.11, The company always use internet and social media platforms to attract potential innovative man power in the firm 4.26, A plan made by an organization to encourage advancements

in either technology or service usually by investing in research and development activities 3.95 and Employees are always involved in the innovation process in the company 4.15 shows that most of the respondents sees strategic innovation as very significance part of telecommunication companies in Rwanda in achievement of companies objectives. These findings are in line with the views of Abdi and Ali (2013), who using the Somalian telecom sector as a case study to examine the relationship between innovations and company performance. The study discovered a strong positive correlation between firm performance and both technical and innovation. The study also discovered a positive correlation between corporate performance and innovation strategy. Innovation and corporate performance eventually correlated well.

4.5.4 Descriptive Results for Strategic Alliance

The means and standard deviations for the strategic alliance variable was generated from the data. Accordingly, the mean of the data represents the midpoint of data distribution whereas the standard deviation indicates how well the data was spread out (Field 2009; Saunders *et al.*, 2007). The results are illustrated in Table 4.11.

Table 4.11: Descriptive Results on Strategic Alliance

Opinion statement	Mean	Std. D
The firm has always adopted Inter-organizational synergy to expand its operations	3.94	0.653
Cooperation with other firms in the industry has brought about Low investment costs for the company	4.07	0.643
Formation of development cooperation has brought a broad range of skills and expertise to the firm	3.99	0.770
The formation of alliances has helped the firm in the Mitigation of market uncertainties through risk sharing	4.08	0.511
The formation of alliances has help in enhancing stakeholder's satisfaction	4.23	0.677
The formation of alliances has brought Operating efficiency and effectiveness in the company	4.07	0.643
The firm has always adopted Inter-organizational synergy to expand its operations	4.07	0.712

The firm has always adopted Inter-organizational synergy to expand it operations 3.94, Cooperation with other firms in the industry has brought about Low investment costs for the company 4.07, Formation of development cooperation has brought a broad range of skills and expertise to the firm 3.99, The formation of alliances has helped the firm in the Mitigation of market uncertainties through risk sharing 4.08, The formation of alliances has help in enhancing stakeholders satisfaction 4.23, The formation of alliances has brought Operating efficiency and effectiveness in the company 4.07 and The firm has always adopted Inter-organizational synergy to expand it operations 4.07.This means that strategic alliance is a very important strategic in achievement telecommunication companies in Rwanda. These findings are in line with the views of Regionally, Margarita, (2010) who investigated on the importance of strategic alliances in company's activity. The paper explains strategic alliances as an indispensable tool in today's competitive business environment. Elmuti and Kathewala (2011), postulate that strategic alliance can be effective ways of diffusing new technologies rapidly, entering new markets, bypassing government restrictions expeditiously, and learning quickly from the leading firms in a given field.

4.5.5 Descriptive Results for Strategic Marketing

The research utilized measures of central tendency especially the "mean" which was used to describe the central position of the frequency distribution. Similarly, the measures of spread including the standard deviation described how spread out or dispersed the scores are as displayed in table 4.12.

Table 4.12: Descriptive Results on Strategic Marketing

Opinion Statement	Mean	Std. D
The company always identifies one or more sustainable competitive advantages and allocate resources to explain them	4.08	.750
Our firm effectively differentiates itself from its competitors by capitalizing on its strength to provide consistently better value to customer than its competitors	4.18	.724
We have an overall game plan for reaching people and turning them to customers of the product or service that the business provides	4.11	.672
We have a long-term forward-looking approach to planning with the fundamental goal of achieving a sustainable competitive advantage	4.14	.650
We have a competitive Pricing strategy compared to our competitors	4.30	.701
The firm has always adopted the Sales promotion strategy to expand our market base	4.02	.747
The firm has always adopted the Advertising strategy to expand our market base	4.18	.674

Strategic marketing influences the performance of the Telecommunication industry in Rwanda also was sought by the study. The company always identifies one or more sustainable competitive advantages and allocate resources to explain them 4.08, Our firm effectively differentiates itself from its competitors by capitalizing on its strength to provide consistently better value to customer than its competitors 4.18, We have an overall game plan for reaching people and turning them to customers of the product or service that the business provides 4.12, We have a long-term forward-looking approach to planning with the fundamental goal of achieving a sustainable competitive advantage4.14, We have a competitive Pricing strategy compared to our competitors 4.30, The firm has always adopted the Sales promotion strategy to expand our market base 4.02 and The firm has always adopted the Advertising strategy to expand our market base 4.18. This symbolized that most respondents agreed to the statement marketing strategy is key in achieving telecommunication company's objectives. This strong impact of strategic marketing on the performance of organizations in the Nigerian telecommunications industry was studied by Akanni, Oba, and Ishola (2022). For this study, survey research approach was used. From the research problem statement, two hypotheses were developed. The statistical techniques of Analysis of Variance and Pearson Product Moment Correlation

Analysis were employed to examine the hypotheses. The findings indicate that organizational performance is significantly impacted by strategic marketing.

4.5.6 Descriptive Results for Legal and Regulatory Framework

The research further subjected the variable legal and regulatory framework on the factor analysis tests. To that effect, the dimension of the data was reduced into more super-variables. The research utilized measures of central tendency especially the "mean" which was used to describe the central position of the frequency distribution. Similarly, the measures of spread including the standard deviation described how spread out or dispersed the scores are. This section of the analysis shows the descriptive results on Legal and regulatory framework. The results are reported in Table 4.13.

Table 4.13: Descriptive Results on Legal & Regulatory Framework

Opinion statement	Mean	Std. D
Our employees are aware and adheres to the laws and regulations governing the telecommunications industry in Rwanda	4.03	.723
The laws and regulations favour the operation of our telecommunications industry in Rwanda	4.16	.680
The investments regulations do favour the operation of our telecommunications industry in Rwanda	4.14	.632
The firm is always able to comply with the tax laws in the country	4.14	.613
The company always comply with labour laws in the country	4.31	.653

As presented in the Table 4.13, Our employees are aware and adheres to the laws and regulations governing the telecommunications industry in Rwanda 4.03, The laws and regulations favors the operation of our telecommunications industry in Rwanda 4.16, The investments regulations do favors the operation of our telecommunications industry in Rwanda 4.14, The firm is always able to comply with the tax laws in the country 4.14 and The company always comply with labor laws in the country 4.31. This suggests that the respondents mostly agreed that Legal & regulatory framework is a vital trait in the success of the firm. These findings are in line with the views of Oglietti and Pontarollo (2003), asserted that government licensing can often force significant changes in industry practices as well as strategic approaches. This is well

achieved through deregulation given that it limits the activities of competitors in the market in different industries.

4.6 Factor Analysis

Factor analysis refers to the idea that measurable and observable variables in the study can be reduced to fewer underlying variables that share a joint variance and are unobservable (Bartholomew *et al.,* 2011; Williams *et al.,* 2010). Thus, in the present study, factor analysis was performed so as to reduce and summarize data set items into controllable factors without losing the original information. Exploratory factor analysis was employed in this study because of its ability to explore the data to identify the acceptable and relevant set of factors which can be analyzed together (Fricker *et al.,* 2012; Velayutham*et al.,* 2012). Hence, EFA was conducted to assess the reliability and validity of the reflective multi-item scales.

4.6.1 Organizational Performance of Firms in the Telecommunication industry factor analysis

Descriptive results describe the data collected through survey questionnaires and organize, summarize and describe such data (Kaushik & Mathur, 2014; Talib *et al.,* 2011; Thompson, 2009). Therefore, descriptive analyses were performed to provide a general and comprehensive picture of the data collected. Consequently, in this study, the data collected were presented in Tables and graphs in preparation for further analysis and interpretation. Additionally, means and standard deviations for all the variables were generated from the data. Accordingly, the mean of the data represents the midpoint of data distribution whereas the standard deviation indicates how well the data was spread out (Field 2009; Saunders *et al.,* 2007). In this section, descriptive results were generated for all the variables in the study. Thus, it presents the characteristics of the sample with respect to each variable in the study and finally, the values of the mean, standard deviations were summarized for each variable in the respective Tables.

4.6.2 Communalities for performance of Firms in the Telecommunication industry

The research sought to apply Communalities as a useful measure in predicting the value of the variable performance of telecommunication industry. Communalities specifically tell what proportion of the particular variable is the result of either the principle component or a mare correlation between each particular variable and the individual factor. It can also be noted as the h^2 which is the sum of squared factor loadings. It is a clear definition of the common variances that normally range between 00 and 1. Values that are closer to one (1) have a suggestion that the factors extracted explain the variance of an individual item. According to Field, (2000) he asserted that "as the communalities become low, the sample size importance steadily increases." Therefore, as such, if the variable is actually high, the extracted factors account for a bigger proportion of the variance of the variable. If the communalities are not found to be high, then the sample size has to compensate for this (Field, 2000). Table 4.14 presents the results on the sum of squared multiple correlation coefficient between the constructs and the factor.

Table 4.14: Communalities for Performance of Firms in the Telecommunication industry

Opinion statement	Initial	Extraction
The firm's financial return on assets has improved significantly over the duration of our operations in the country	1.000	0.608
Returns on equity has really improved significantly over the duration of our operations in the country	1.000	0.665
Sales growth has gone up over the duration of our operations in the country	1.000	0.515
Cash flows has improved over the duration of our operations in the country	1.000	0.693
Our firm enjoys a huge service market share and customer retention	1.000	0.626
The company has experienced increased new and loyal customers subscriptions to our products	1.000	0.677
Our customers are always satisfied with our products	1.000	0.717

Extraction Method: Principal Component Analysis.

Since the extracted values were very high all the variables will be retrained in further analysis during the final data analysis. The highest value is 0.717 and the lowest is 0.515 which is more than the minimum acceptable value of 0.30. These values also show that the reliability of these constructs was very high.

4.7.2 Principle Component Matrix for Performance of Firms in the Telecommunication industry

Principle component Matrix was applied to describe as much the variation in the first few axes of the factors. This sought the linear combination of variables so that the maximum variance gets extracted from the variables. After the variance was removed, the principle component analysis sought for a second linear combination which explained the maximum proportion of the variance remaining and the trend continued. The Varimax rotation which comes as a result of change of coordinates was used to maximize the sum of the variances of the squared loadings as all the coefficients were either larger or near zero with very few intermediate values. With this type of analysis, the unities are utilized in the diagonal of the correlation matrix computationally implying that all the variances are either common or shared. Table 4.15, presents the Principle Component Matrix

Table 4.15: Principle Component Matrix for Performance of Firms in the Telecommunication industry

Opinion Statements	Component 1
The firm's financial return on assets has improved significantly over the duration of our operations in the country	.780
Returns on equity has really improved significantly over the duration of our operations in the country	.816
Sales growth has gone up over the duration of our operations in the country	.718
Cash flows has improved over the duration of our operations in the country	.833
Our firm enjoys a huge service market share and customer retention	.791
The company has experienced increased new and loyal customers subscriptions to our products	.691
Our customers are always satisfied with our products	.847

The study also conducted the, principal component analysis (PCA) with Varimax rotation was conducted to identify the underlying factors of all the research constructs Huang & Van Der Veen, (2018) relating to Performance of Telecommunication industry. The results are presented in table 4.15. Factor loadings were generated for all the items to assess construct validity. The results depicted that factor loadings of all items used to measure Performance of Telecommunication industry were all above the minimum recommended value of 0.50 (Hair et al., 2014). Further, the high factor loading scores showed that all the items explained Performance of Telecommunication industry.

4.7.3 Scree plot for performance of Firms in the Telecommunication industry

This is a simple line segment that shows a single fraction of the total variance in the whole data. In the factor analysis or principle analysis context, a sharp drop in the plot implies that the subsequent factors can be ignored. This plot is used in research to determine the exact number of factors that can be retained in an exploratory factor or principle components to keep in a principal as displayed in the figure 4.1.

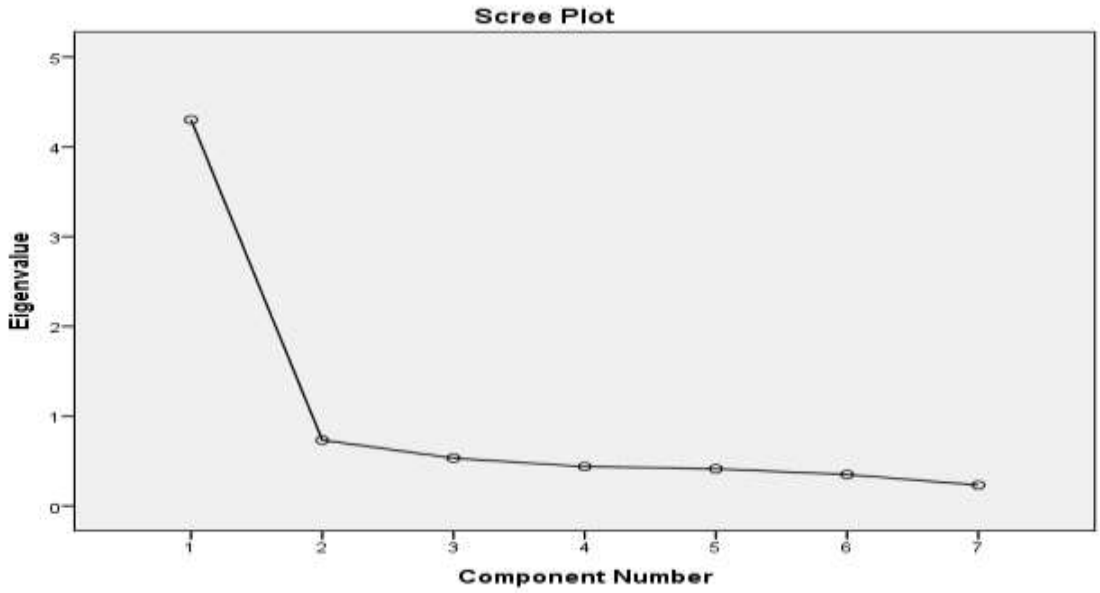


Figure 4.1: Scree plot for performance of Firms in the Telecommunication industry

The results of the number of factors extracted from the factor analysis process. The lower line in the plot shows the proportion of variance for each principle component, while the upper line in the plot shows the cumulative variance explained by the first component. The most significant principle component is always listed first because all the principle component is sorted in the descending order of the variance. The graph shows that there are seven factors but only one is above the threshold value of one.

4.7.4 Total Variance Explained for performance of Firms in the Telecommunication industry

Explained variance sometimes referred to as explained variation is used in research to measure the inconsistency and discrepancy between the said model and the actual data. Actually, it is part of the model's total variance that is explained by the different factors which are essentially present and are not caused by the error variance. The higher percentage of explained variance indicates a strong strength of association. In essence, the percentage of the variance Colum gives the ratio that is expressed as a percentage of the variance accounted for by each component to the total variance among all the variables. This therefore implies that better predictions were made (Rosenthal & Rosenthal, 2011). Table 4.16 illustrates the total Variance for performance of Firms.

Table 4.16: Total Variance Explained for performance of Firms in the Telecommunication industry

Total Variance Explained						
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	4.302	61.456	61.456	4.302	61.456	61.456
2	.732	10.463	71.920			
3	.533	7.612	79.532			
4	.438	6.251	85.783			
5	.413	5.906	91.689			
6	.350	4.997	96.686			
7	.232	3.314	100.000			

Further, the high factor loading scores showed that all the items explained Performance of Telecommunication industry. The EFA extracted 1 factor with an Eigen value of 4.302 which is above the accepted value of 1 and cumulative extracted variance of 61.456 %. Thus, none of the seven items was dropped (Yong and Pearce, 2013). The results on table 4.16 show that there is one factor with a loading greater than one.

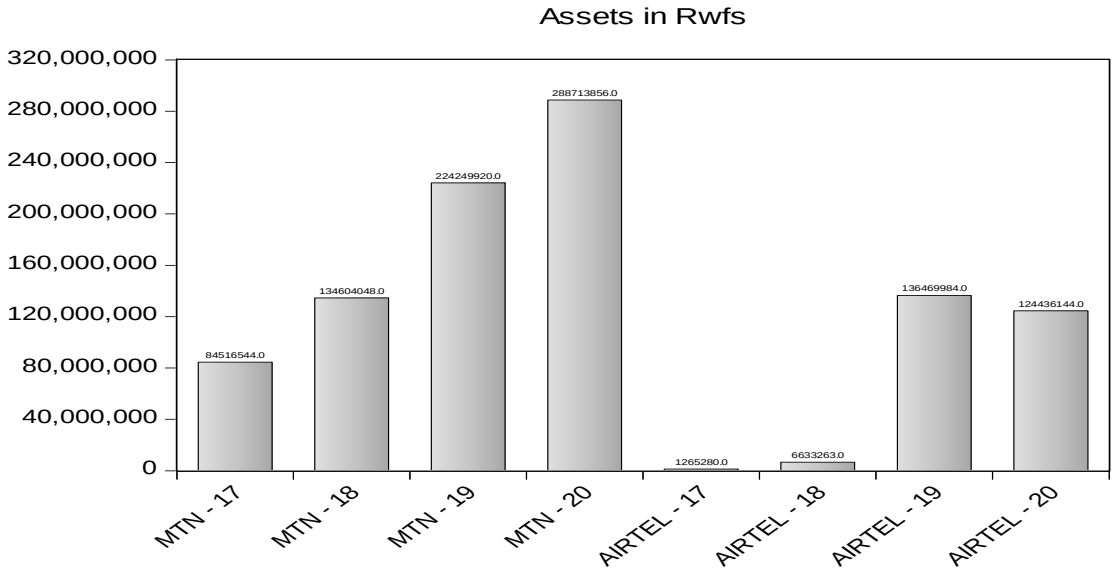


Figure 4.2: Total Assets

Figure 4.2 presents the results on the assets growth trend for the telecommunication companies in Rwanda that is MTN and Airtel companies. The results show that there has been tremendous growth in assets volumes for the two companies. This show that these companies have been adopting the appropriate expansion technologies. This shows that these investors have huge confidence in the future of telecommunication in that country.

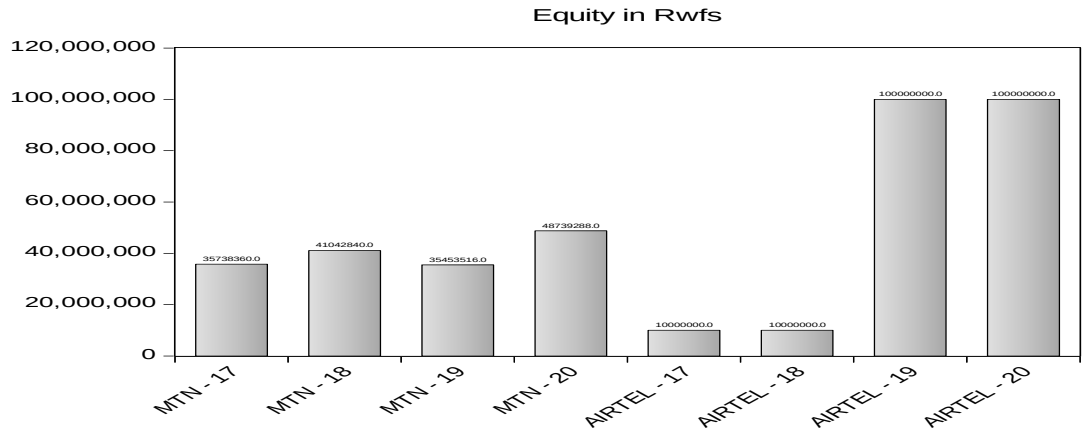


Figure 4.3: Total Equity

Figure 4.3 presents the results on the equity growth trend for the telecommunication companies in Rwanda that is MTN and Airtel companies. The results show that there has been tremendous growth in equity volumes for the two companies.

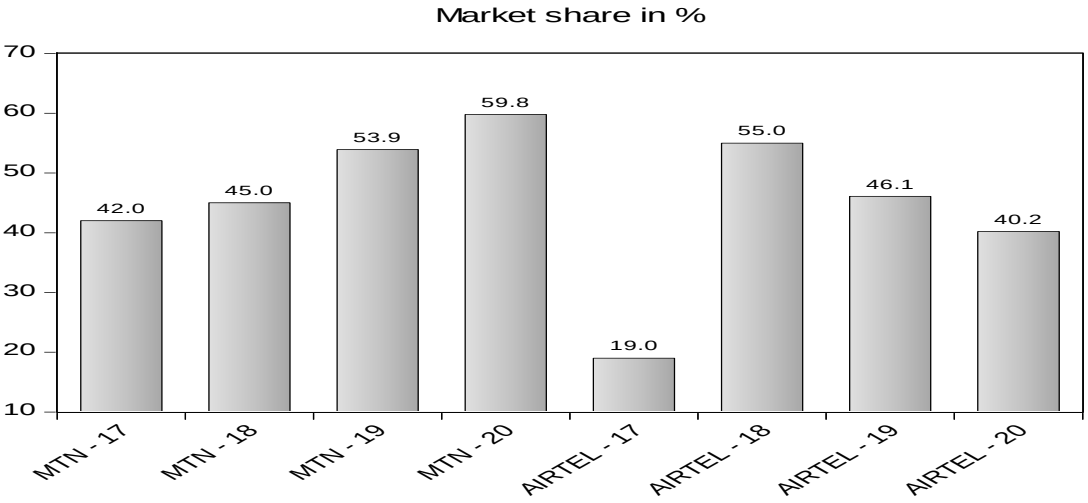


Figure 4.4: Total Market share

Figure 4.4 presents the results on the market share growth trend for the telecommunication companies in Rwanda that is MTN and Airtel companies. The results show that there has been tremendous growth in market share for the two companies. From the years 2017 to 2020 especially for MTN that has been capturing new customers from it rival as well as the new comers.

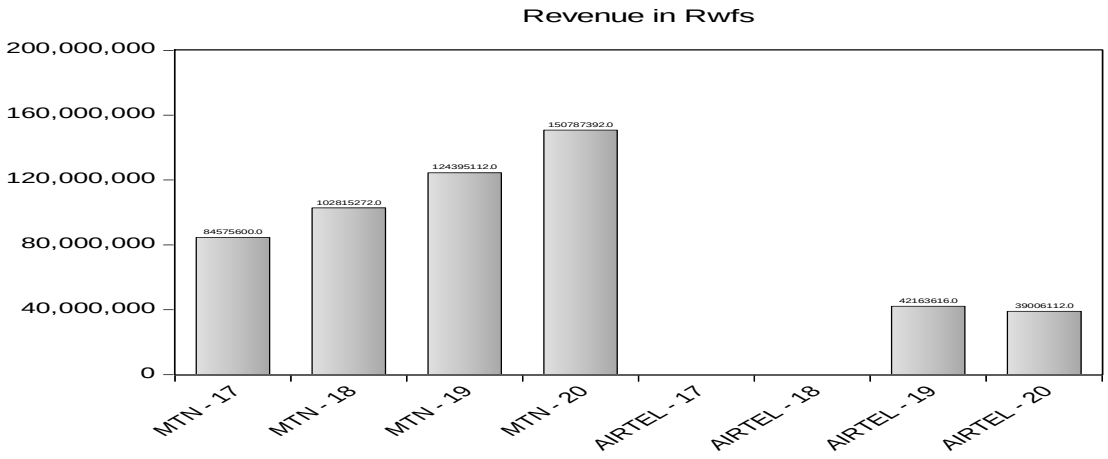


Figure 4.5 Total Revenue

Figure 4.5 presents the results on the revenue collected by telecommunication companies trend for the telecommunication companies in Rwanda that is MTN and Airtel companies. The results show that there has been tremendous growth in revenue collected for the two companies. From the years 2017 to 2020 especially for MTN and Airtel companies.

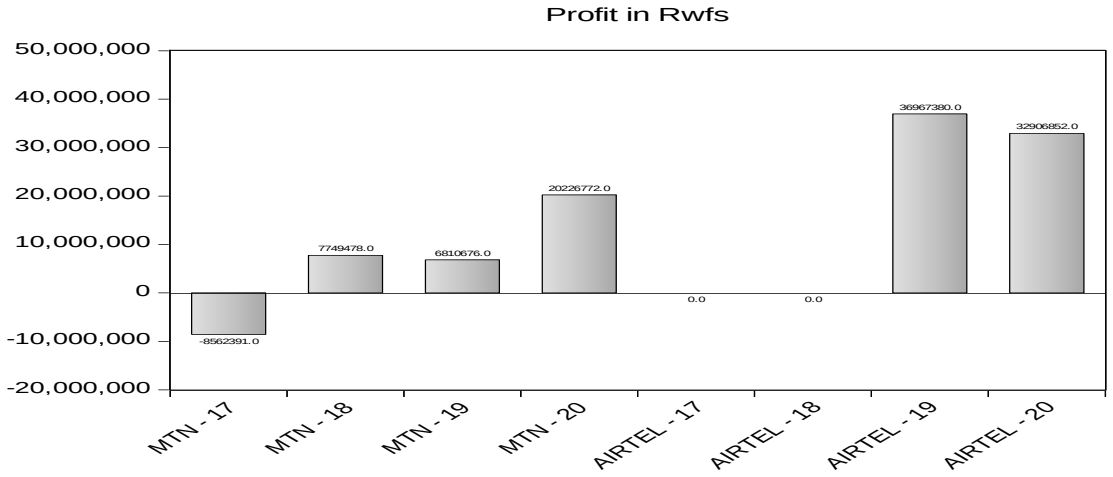


Figure 4.6: Total Profit

Figure 4.6 presents the results on the profit growth trend for the telecommunication companies in Rwanda that is MTN and Airtel companies. The results show that there

has been tremendous growth in profit for the two companies. From the years 2017 to 2020 especially for the two companies.

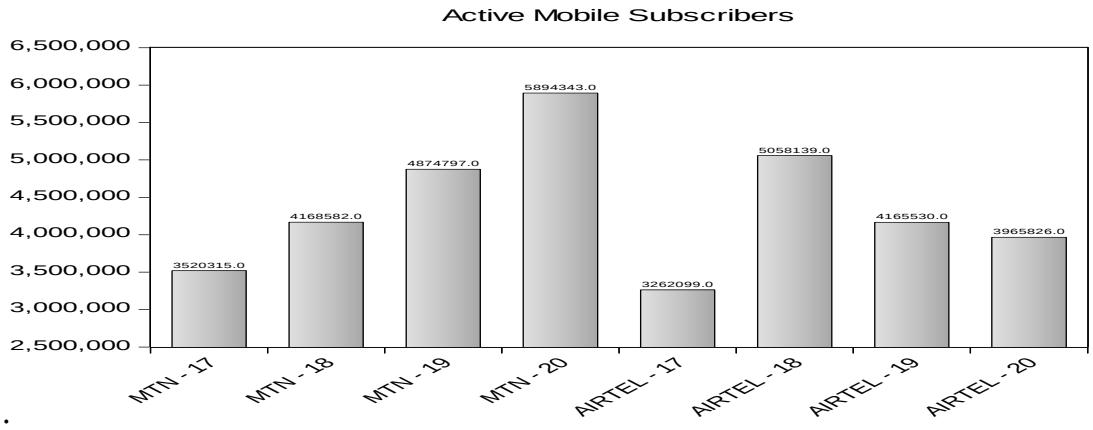


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Figure 4.7: Total Active Mobile Subscribers

Figure 4.7 presents the results on the active mobile subscribers' trend for the telecommunication companies in Rwanda that is MTN and Airtel companies. The results show that there has been tremendous growth in active mobile subscribers for the two companies. From the years 2017 to 2020 especially for the two companies.

4.8. Strategic Planning Factor Analysis

4.8.1: Strategic Planning Communalities

The research sought to apply Communalities as a useful measure in predicting the value of the variables related to strategic planning on the performance of the telecommunications industry. Communalities specifically tell what proportion of the particular variable is the result of either the principle component or a mare correlation between each particular variable and the individual factor. It can also be noted as the h^2 which is the sum of squared factor loadings. It is a clear definition of the common variances that normally range between 00 and 1. Values that which are closer to one (1) have a suggestion that the factors extracted explain the variance of an individual item. According to Field, (2000) he asserted that "as the communalities become low, the sample size importance steadily increases." Therefore, as such, if the variable is actually high, the extracted factors account for a bigger proportion of

the variance of the variable. If the communalities are not found to be high, then the sample size has to compensate for this (Field, 2000). Table 4.17 presents the results on the sum of squared multiple correlation coefficient between the constructs and the factor.

Table 4.17: Strategic Planning Communalities

Opinion statement	Initial	Extraction
The firm has a Process of defining company's strategy or direction and making decisions on allocating its resources to pursue this strategy	1.000	.584
The firm has a Systematic process of envisioning a desired future and translating this vision into broadly defined goals and steps achieve them	1.000	.666
The organization formulates the strategic vision for the future in a timely manner	1.000	.670
The company has a framework for Evaluating and monitoring the overall strategic plan	1.000	.680
We regularly forecast internal and external development	1.000	.670
We always Specify the tactical "action" strategies to be accomplish	1.000	.634
The firm has a Smart Budgeting strategy to maximize resources and minimize costs	1.000	.695

Since the extracted values were very high all the variables will be retrained in further analysis during the final data analysis. The highest value is 0.695 and the lowest is 0.584 which is more than the minimum acceptable value of 0.30. These values also show that the reliability of these constructs was very high.

4.8.2 Strategic Planning Principle Component Analysis

The Principle component analysis was used to extract the maximum variance and put them into the first factor. After that, it removed that particular variance which is explained by the first factor to use it to extract another maximum variance for the second factor and the process continued up to the last factor.

Table 4.18: Strategic Planning Principle Component Matrix

Opinion Statements	Component 1
The firm has a Process of defining company's strategy or direction and making decisions on allocating its resources to pursue this strategy	.764
The firm has a Systematic process of envisioning a desired future and translating this vision into broadly defined goals and steps achieve them	.816
The organization formulates the strategic vision for the future in a timely manner	.686
The company has a framework for Evaluating and monitoring the overall strategic plan	.825
We regularly forecast internal and external development	.818
We always Specify the tactical "action" strategies to be accomplish	.659
The firm has a Smart Budgeting strategy to maximize resources and minimize costs	.834

From table 4.18, Principal component analysis (PCA) with Varimax rotation was conducted to identify the underlying factors of all the research constructs relating to Strategic Planning, Factor loadings were generated for all the items to assess construct validity (Huang & Van Der Veen, 2018).The results depicted that factor loadings of all items used to measure Strategic Planning were all above the minimum recommended value of 0.50 (Hair et al., 2014). Further, the high factor loading scores showed that all the items explained Strategic Planning.

4.8.3 Strategic Planning Scree Plot

This is a simple line segment that shows a single fraction of the total variance in the whole data. In the factor analysis or principle analysis context, a sharp drop in the plot implies that the subsequent factors can be ignored. This plot is used in research to determine the exact number of factors that can be retained in an exploratory factor or principle components to keep in a principal as displayed in the figure 4.8 below;

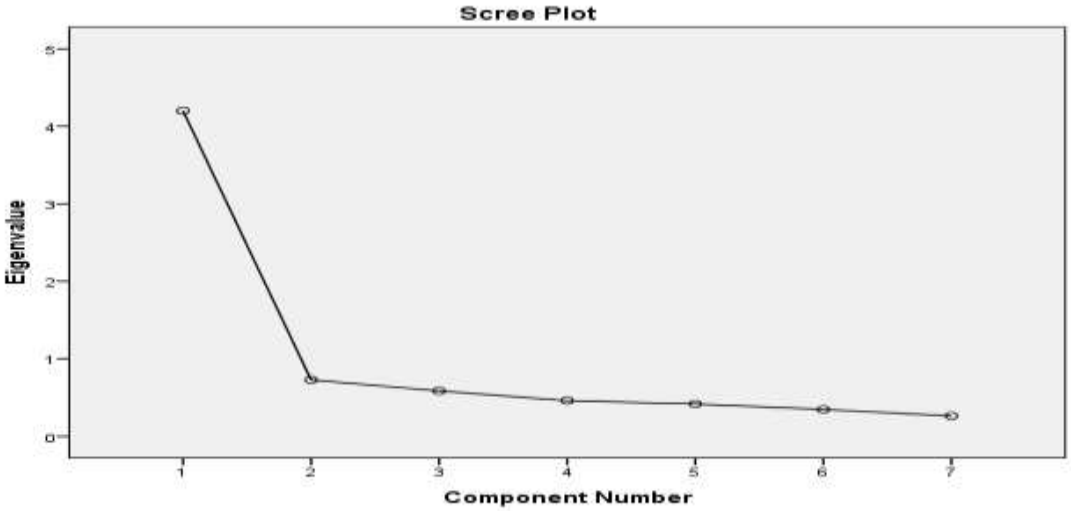

Figure 4.8: Strategic Planning Scree plot

Figure 4.8 presents the results of the number of factors extracted from the factor analysis process. The opening component always has the highest total variance while the last component has the list variance. Component 2 has the largest drop reflected through the elbow joint. The graph shows that there are seven factors but only one is above the threshold value of one.

4.8.4 Strategic Planning Total variance explained

Explained variance sometimes referred to as explained variation is used in research to measure the inconsistency and discrepancy between the said model and the actual data. Actually, it is part of the model's total variance that is explained by the different factors which are essentially present and are not caused by the error variance. The higher percentage of explained variance indicates a strong strength of association. In essence, the percentage of the variance Colum gives the ratio that is expressed as a percentage of the variance accounted for by each component to the total variance among all the variables. This therefore implies that better predictions were made (Rosenthal & Rosenthal, 2011).

Table 4.19: Strategic Planning Total Variance Explained

Total Variance Explained						
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	4.200	59.997	59.997	4.200	59.997	59.997
2	.728	10.405	70.401			
3	.585	8.364	78.765			
4	.460	6.565	85.330			
5	.418	5.971	91.301			
6	.346	4.948	96.249			
7	.263	3.751	100.000			

Further, The EFA extracted 1 factor with an Eigen value of 4.200 which is above the accepted value of 1 and cumulative extracted variance of 59.997 %. Thus, none of the seven items was dropped (Yong & Pearce, 2013). The results on table 4.19 show that the constructs can be condensed into one factor which has a loading greater than one.

4.9. Strategic Innovation Factor Analysis

4.9.1 Strategic Innovation Communalities

Communalities specifically explain what proportion of the particular variable is the result of either the principle component or a mare correlation between each particular variable and the individual factor. It can also be noted as the h^2 which is the sum of squared factor loadings. It is a clear definition of the common variances that normally range between 00 and 1. Values that are closer to one (1) have a suggestion that the factors extracted explain the variance of an individual item.

Table 4.20: Strategic Innovation Communalities

Opinion statement	Initial	Extraction
The company is always looking for innovative ways to improve on the Service delivered to our customers	1.000	0.617
The company has a process of introducing new and cost-effective ways of doing things that create new demands and new market space	1.000	0.686
The company is always investing in new and modern infrastructures to improve on the Service delivered to our customers	1.000	0.558
The firm is quick to adopt new Technological advancements in the market	1.000	0.712
The company always use internet and social media platforms to attract potential innovative man power in the firm	1.000	0.658
A plan made by an organization to encourage advancements in either technology or service usually by investing in research and development activities	1.000	0.513
Employees are always involved in the innovation process in the company	1.000	0.735

Table 4.20 presents the results on the sum of squared multiple correlation coefficient between the constructs and the factor. Since the extracted values were very high, all the variables will be retrained in further analysis during the final data analysis. The highest value is 0.735 and the lowest is 0.513, which is more than the minimum acceptable value of 0.30. These values also show that the reliability of these constructs was very high.

4.9.2 Strategic Innovation Principle Component Matrix

The Principle component analysis was used to extract the maximum variance and put them into the first factor. After that, it removed that particular variance which was explained by the first factor to use it to extract another maximum variance for the second factor and the process continued up to the last factor.

Table 4.21: Strategic Innovation Principle Component Matrix

Opinion statement	Component1
The company is always looking for innovative ways to improve on the Service delivered to our customers	0.785
The company has a process of introducing new and cost-effective ways of doing things that create new demands and new market space	0.828
The company is always investing in new and modern infrastructures to improve on the Service delivered to our customers	0.747
The firm is quick to adopt new Technological advancements in the market	0.844
The company always use internet and social media platforms to attract potential innovative man power in the firm	0.811
A plan made by an organization to encourage advancements in either technology or service usually by investing in research and development activities	0.716
Employees are always involved in the innovation process in the company	0.857

Equally, principal component analysis (PCA) with Varimax rotation was conducted to identify the underlying factors of all the research constructs relating to strategic innovation. Factor loadings were generated for all the items to assess construct validity (Huang & Van Der Veen, 2018). The results depicted that factor loadings of all items used to measure strategic innovation were all above the minimum recommended value of 0.50 (Hair *et al.*, 2014). Further, the high factor loading scores showed that all the items explained strategic innovation. The range was between 0.716 - 0.857 this was indication of very high loading values.

4.9.3 Strategic Innovation Scree Plot

This is a simple line segment that shows a single fraction of the total variance in the whole data. In the factor analysis or principle analysis context, a sharp drop in the plot implies that the subsequent factors can be ignored. This plot is used in research to determine the exact number of factors that can be retained in an exploratory factor or principle components to keep in a principal as displayed in the figure 4.9 below;

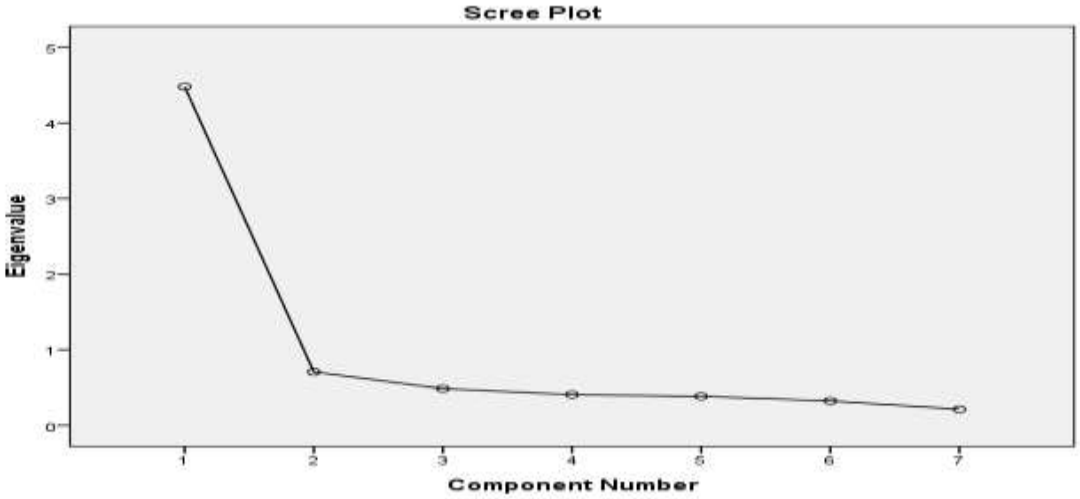

Figure 4.9: Strategic Innovation Scree plot

Figure 4.9, presents the results of the number of factors extracted from the factor analysis process. The opening component has the highest total variance while the last component has the list variance. Component 2 has the largest drop reflected through the elbow joint. The graph shows that there are seven factors but only one is above the threshold value of one.

4.9.4 Strategic Innovation Total Variance Explained

Explained variance sometimes referred to as explained variation is used in research to measure the inconsistency and discrepancy between the said model and the actual data. Actually, it is part of the model's total variance that is explained by the different factors which are essentially present and are not caused by the error variance. The higher percentage of explained variance indicates a strong strength of association. In essence, the percentage of the variance Colum gives the ratio that is expressed as a percentage of the variance accounted for by each component to the total variance among all the variables. This therefore implies that better predictions were made (Rosenthal & Rosenthal, 2011).

Table 4.22: Strategic Innovation Total Variance Explained

Total Variance Explained						
Component	**Initial Eigenvalues**			**Extraction Sums of Squared Loadings**		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	4.478	63.976	63.976	4.478	63.976	63.976
2	0.708	10.108	74.084			
3	0.486	6.947	81.031			
4	0.407	5.808	86.838			
5	0.385	5.494	92.332			
6	0.324	4.629	96.961			

Further, the high factor loading scores showed that all the items explained strategic innovation. The EFA extracted 1 factor with an Eigen value of 4.478 which is above the accepted value of 1 and cumulative extracted variance of 63.976 % (Yong & Pearce, 2013). Thus, none of the seven items was dropped.

4.10. Strategic Alliance Factor Analysis

4.10.1 Strategic Alliance Communalities

Communalities explain the quantity of variance a particular variable share with all other variables. That particular proportion of the variance that is explained by the common factors. It is a clear definition of the common variances that normally range between 00 and 1. Values that which are closer to one (1) have a suggestion that the factors extracted explain the variance of an individual item. According to Field, (2000) it is stated that “as the communalities become low, the sample size importance steadily increases.” Therefore, as such, if the variable is actually high, the extracted factors account for a bigger proportion of the variance of the variable. If the communalities are not found to be high, then the sample size has to compensate for this as displayed in table 4.23.

Table 4.23: Strategic Alliance Communalities

Opinion statement	Initial	Extraction
The firm has always adopted Inter-organizational synergy to expand its operations	1.000	.530
Cooperation with other firms in the industry has brought about Low investment costs for the company	1.000	.841
Formation of development cooperation has brought a broad range of skills and expertise to the firm	1.000	.655
The formation of alliances has helped the firm in the Mitigation of market uncertainties through risk sharing	1.000	.515
The formation of alliances has help in enhancing stakeholder's satisfaction	1.000	.603
The formation of alliances has brought Operating efficiency and effectiveness in the company	1.000	.768
The firm has always adopted Inter-organizational synergy to expand its operations	1.000	.576

Table 4.23 presents the results on the sum of squared multiple correlation coefficient between the constructs and the factor. Since the extracted values were very high all the variables will be retrained in further analysis during the final data analysis. The highest value is 0.841 and the lowest is 0.515 which is more than the minimum acceptable value of 0.30. These values also show that the reliability of these constructs was very high.

4.10.2 Strategic Alliance Principle Component Matrix

The Principle component analysis was used to extract the maximum variance and put them into the first factor. After that, it removed that particular variance which was explained by the first factor to use it to extract another maximum variance for the second factor and the process continued up to the last factor.

Table 4.24: Strategic Alliance Component Matrix

Opinion statement	Component1
The firm has always adopted Inter-organizational synergy to expand its operations	.728
Cooperation with other firms in the industry has brought about Low investment costs for the company	.917
Formation of development cooperation has brought a broad range of skills and expertise to the firm	.810
The formation of alliances has helped the firm in the Mitigation of market uncertainties through risk sharing	.718
The formation of alliances has help in enhancing stakeholder's satisfaction	.777
The formation of alliances has brought Operating efficiency and effectiveness in the company	.877
The firm has always adopted Inter-organizational synergy to expand its operations	.759

The study conducted the, principal component analysis (PCA) factor extraction method with Varimax rotation was conducted to identify the underlying factors of all the research constructs relating to Strategic Alliance (Huang & Van Der Veen, 2018). Factor loadings were generated for all the items to assess construct validity. The results depicted that factor loadings of all items used to measure Strategic Alliance were all above the minimum recommended value of 0.50 (Hair *et al.*, 2014). Further, the high factor loading scores showed that all the items explained Strategic Alliance.

4.10.3 Strategic Alliance Scree Plot

This plot is used in research to determine the exact number of factors that can be retained in an exploratory factor or principle components to keep in a principal. This is a simple line segment that shows a single fraction of the total variance in the whole data. In the factor analysis or principle analysis context, a sharp drop in the plot implies that the subsequent factors can be ignored.

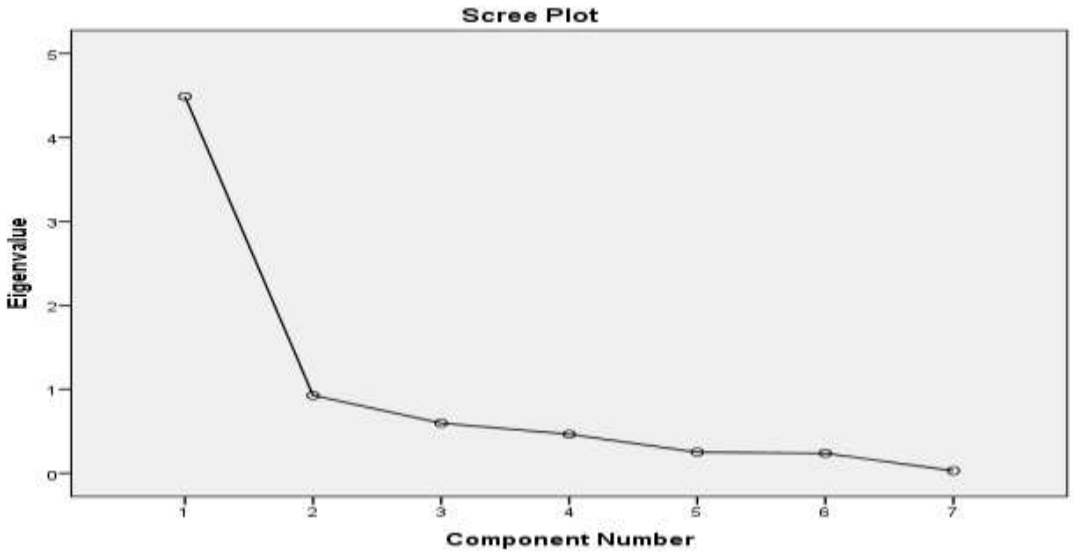

Figure 4.10: Strategic Alliance Scree plot

Figure 4.10 presents the results of the number of factors extracted from the factor analysis process. The opening component has the highest total variance while the last component has the list variance. Component 2 has the largest drop reflected through the elbow joint. The graph shows that there are seven factors but only one is above the threshold value of one.

4.10.4 Strategic Alliance Total Variance Explained

Explained variance sometimes referred to as explained variation is used in research to measure the inconsistency and discrepancy between the said model and the actual data. Actually, it is part of the model's total variance that is explained by the different factors which are essentially present and are not caused by the error variance. The higher percentage of explained variance indicates a strong strength of association. In essence, the percentage of the variance Colum gives the ratio that is expressed as a percentage of the variance accounted for by each component to the total variance among all the variables. This therefore implies that better predictions were made (Rosenthal & Rosenthal, 2011).

Table 4.25: Strategic Alliance Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.489	64.132	64.132	4.489	64.132	64.132
2	.927	13.247	77.379			
3	.598	8.538	85.917			
4	.466	6.653	92.570			
5	.252	3.596	96.166			
6	.238	3.407	99.573			
7	.030	0.427	100.000			

Further, the high factor loading scores showed that all the items explained strategic alliance. The EFA extracted 1 factor with an Eigen value of 4.489 which is above the accepted value of 1 and cumulative extracted variance of 64.132 % (Yong & Pearce, 2013). Thus, none of the seven items was dropped.

4.11 Strategic Marketing Factor Analysis

4.11.1 Strategic Marketing Communalities

Communalities specifically explain what proportion of the particular variable is the result of either the principle component or a mare correlation between each particular variable and the individual factor. It can also be noted as the h^2 which is the sum of squared factor loadings. It is a clear definition of the common variances that normally range between 00 and 1. Values that are closer to one (1) have a suggestion that the factors extracted explain the variance of an individual item.

Table 4.26: Strategic Marketing Communalities

Opinion statement	Initial	Extraction
The company always identifies one or more sustainable competitive advantages and allocate resources to explain them	1.000	.655
Our firm effectively differentiates itself from its competitors by capitalizing on its strength to provide consistently better value to customer than its competitors	1.000	.715
We have an overall game plan for reaching people and turning them to customers of the product or service that the business provides	1.000	.569
We have a long-term forward-looking approach to planning with the fundamental goal of achieving a sustainable competitive advantage	1.000	.736
We have a competitive Pricing strategy compared to our competitors	1.000	.671
The firm has always adopted the Sales promotion strategy to expand our market base	1.000	.529
The firm has always adopted the Advertising strategy to expand our market base	1.000	.753

Table 4.26 presents the results on the sum of squared multiple correlation coefficient between the constructs and the factor. Since the extracted values were very high all the variables will be retrained in further analysis during the final data analysis. The highest value is 0.753 and the lowest is 0.529 which is more than the minimum acceptable value of 0.30. These values also show that the reliability of these constructs was very high.

4.11.2 Strategic Marketing Principle Component Matrix

Principle component Matrix was applied to describe as much the variation in the first few axes of the factors. This sought the linear combination of strategic marketing variable so that the maximum variance gets extracted from the variables. After the variance was removed, the principle component analysis sought for a second linear combination which explained the maximum proportion of the variance remaining and the trend continued. The Varimax rotation which comes as a result of change of coordinates was used to maximize the sum of the variances of the squared loadings

as all the coefficients were either larger or near zero with very few intermediate values.

Table 4.27: Strategic Marketing Principle Component Matrix

Opinion statement	Component1
The company always identifies one or more sustainable competitive advantages and allocate resources to explain them	.810
Our firm effectively differentiates itself from its competitors by capitalizing on its strength to provide consistently better value to customer than its competitors	.846
We have an overall game plan for reaching people and turning them to customers of the product or service that the business provides	.754
We have a long-term forward-looking approach to planning with the fundamental goal of achieving a sustainable competitive advantage	.858
We have a competitive Pricing strategy compared to our competitors	.819
The firm has always adopted the Sales promotion strategy to expand our market base	.727
The firm has always adopted the Advertising strategy to expand our market base	.868

The study conducted the principal component analysis (PCA) factor extraction method with Varimax rotation to identify the underlying factors of all the research constructs relating to strategic marketing (Huang & Van Der Veen, 2018). Factor loadings were generated for all the items to assess construct validity. The results depicted that factor loadings of all items used to measure strategic marketing were all above the minimum recommended value of 0.50 (Hair *et al.*, 2014). Further, the high factor loading scores showed that all the items explained strategic marketing.

4.11.3 Strategic Marketing Scree plot

This plot is used in research to determine the exact number of factors that can be retained in an exploratory factor or principle components to keep in a principal. This is a simple line segment that shows a single fraction of the total variance in the whole data. In the factor analysis or principle analysis context, a sharp drop in the plot implies that the subsequent factors can be ignored.

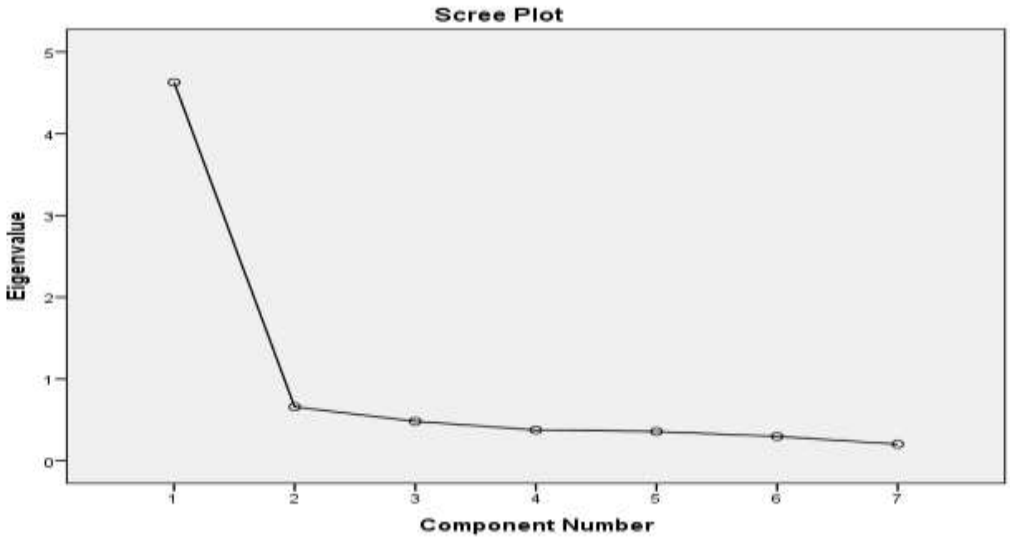

Figure 4.11: Strategic Marketing Scree plot

Figure 4.11 presents the results of the number of factors extracted from the factor analysis process. The opening component has the highest total variance while the last component has the list variance. Component 2 has the largest drop reflected through the elbow joint. The graph shows that there are seven factors but only one is above the threshold value of one.

4.11.4 Strategic Marketing Total Variance Explained

It is part of the model's total variance that is explained by the different factors which are essentially present and are not caused by the error variance. The higher percentage of explained variance indicates a strong strength of association. In essence, the percentage of the variance Colum gives the ratio that is expressed as a percentage of the variance accounted for by each component to the total variance among all the variables. This therefore implies that better predictions were made (Rosenthal & Rosenthal, 2011).

Table 4.28: Strategic Marketing Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.630	66.136	66.136	4.630	66.136	66.136
2	.658	9.400	75.536			
3	.481	6.873	82.409			
4	.375	5.360	87.768			
5	.357	5.102	92.870			
6	.297	4.243	97.113			
7	.202	2.887	100.000			

Further, the high factor loading scores showed that all the items explained strategic marketing. The EFA extracted 1 factor with an Eigen value of 4.630 which is above the accepted value of 1 (Yong & Pearce, 2013) and cumulative extracted variance of 66.136 %. Thus, none of the seven items was dropped.

4.12 Legal and Regulatory Framework factor analysis

4.12.1 Legal and Regulatory Framework Communalities

Communalities explain the quantity of variance a particular variable share with all other variables. That particular proportion of the variance that is explained by the common factors. It is a clear definition of the common variances that normally range between 00 and 1. Values that which are closer to one have a suggestion that the factors extracted explain the variance of an individual item. According to Field, (2000) he asserted that "as the communalities become low, the sample size importance steadily increases." Therefore, as such, if the variable is actually high, the extracted factors account for a bigger proportion of the variance of the variable. If the communalities are not found to be high, then the sample size has to compensate for this.

Table 4.29: Legal & Regulatory Framework Communalities

Opinion statement	Initial	Extraction
Our employees are aware and adheres to the laws and regulations governing the telecommunications industry in Rwanda	1.000	.673
The laws and regulations favours the operation of our telecommunications industry in Rwanda	1.000	.684
The investments regulations do favours the operation of our telecommunications industry in Rwanda	1.000	.613
The firm is always able to comply with the tax laws in the country	1.000	.688
The company always comply with labour laws in the country	1.000	.631

Table 4.29 presents the results on the sum of squared multiple correlation coefficient between the constructs and the factor. Since the extracted values were very high all the variables will be retrained in further analysis during the final data analysis. The highest value is 0.688 and the lowest is 0.613 which is more than the minimum acceptable value of 0.30. These values also show that the reliability of these constructs was very high.

4.12.2 Legal and Regulatory Framework Component Matrix

The Principle component analysis was used to extract the maximum variance and put them into the first factor. After that, it removed that particular variance which is explained by the first factor to use it to extract another maximum variance for the second factor and the process continued up to the last factor. This component can actually can be interpreted as the correlation of each particular item with the component and every item has a loading corresponding to each of the 5 components present.

Table 4.30: Legal & Regulatory Framework Component Matrix

Opinion statements	Component1
Our employees are aware and adheres to the laws and regulations governing the telecommunications industry in Rwanda	0.821
The laws and regulations favours the operation of our telecommunications industry in Rwanda	0.827
The investments regulations do favours the operation of our telecommunications industry in Rwanda	0.643
The firm is always able to comply with the tax laws in the country	0.829
The company always comply with labour laws in the country	0.794

The study conducted the, principal component analysis (PCA) with Varimax rotation as the orthogonalization method to identify the underlying factors of all the research constructs relating to legal and regulatory framework (Huang & Van Der Veen, 2018). Factor loadings were generated for all the items to assess construct validity. Our employees are aware and adheres to the laws and regulations governing the telecommunications industry in Rwanda 0.821, The laws and regulations favors the operation of our telecommunications industry in Rwanda 0.827, The investments regulations do favors the operation of our telecommunications industry in Rwanda 0.643, The firm is always able to comply with the tax laws in the country 0.829 and The company always comply with labour laws in the country 0.794. The results depicted that factor loadings of all items used to measure legal and regulatory framework were all above the minimum recommended value of 0.50 (Hair *et al.*, 2014).

4.12.3 Legal and Regulatory Framework Scree plot

The scree plot helps to show the cumulative variance which is explained by every particular principle component. Application of this technique is important to determine how many factors to retain or not to retain depending on the decision based on visual inspection of the scree plot. In the factor analysis or principle analysis context, a sharp drop in the plot implies that the subsequent factors can be ignored.

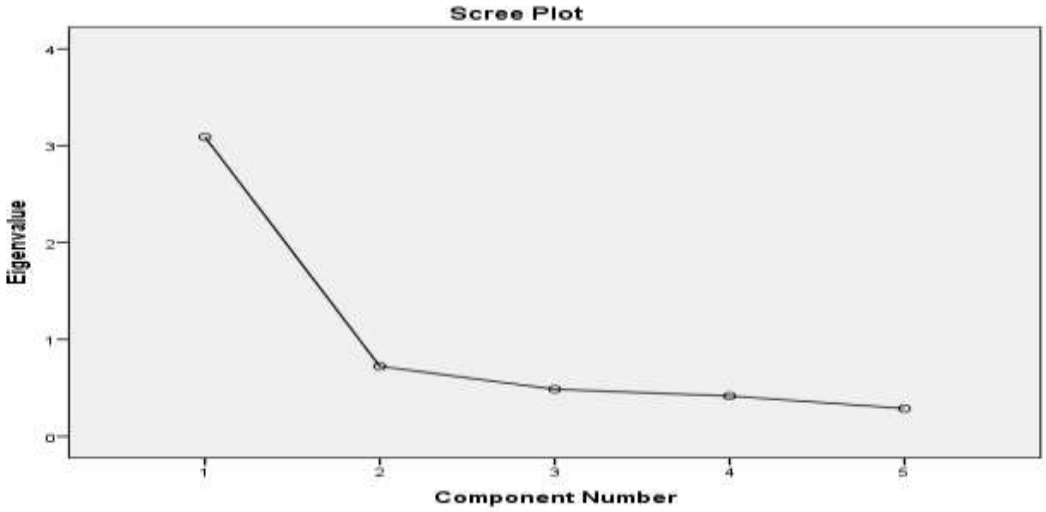

Figure 4.12: Legal and Regulatory Framework Scree plot

Figure 4.12 presents the results of the number of factors extracted from the factor analysis process. The opening component has the highest total variance while the last component has the list variance. Component 2 has the largest drop reflected through the elbow joint. The graph shows that there are seven factors but only one is above the threshold value of one.

4.12.4 Legal and Regulatory Framework Total Variance Explained

It is part of the model's total variance that is explained by the different factors which are essentially present and are not caused by the error variance. The higher percentage of explained variance indicates a strong strength of association. In essence, the percentage of the variance Colum gives the ratio that is expressed as a percentage of the variance accounted for by each component to the total variance among all the variables. This therefore implies that better predictions were made (Rosenthal & Rosenthal, 2011).

Table 4.31: Legal and Regulatory Framework Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.089	61.781	61.781	3.089	61.781	61.781
2	.722	14.440	76.220			
3	.486	9.716	85.936			
4	.416	8.323	94.260			
5	.287	5.740	100.000			

Further, the high factor loading scores showed that all the items explained strategic planning. The EFA extracted 1 factor with an Eigen value of 3.089 which is above the accepted value of 1 and cumulative extracted variance of 61.781 % (Yong & Pearce, 2013). Thus, none of the seven items was dropped.

4.13 Diagnostic Tests

4.13.1 Normality Test

When comparing two empirical distributions, the traditional one-dimensional Kolmogorov-Smirnov test is a non-parametric statistic that uses the largest absolute difference between the two cumulative distributions functions as a disagreement metric (Lopes, Reid & Hobson, 2007). The null and alternative hypotheses are as follows; Ho: the data is not normally distributed and H1: the data is normally distributed. Given that $\alpha = 0.05$, the rule is that if the p-value is greater than 0.05, H1 is accepted; if the p -value is less than 0.05, Ho is not rejected and H1 accepted is rejected.

Table 4.32: Kolmogorov-Smirnov Test

Test statistic	Performance of Telecommunication industry	Strategic Planning	Strategic innovation	Strategicalliance	Strategic marketing	Legal and regulatory
Kolmogorov-Smirnov Z	.980	.980	1.205	1.571	1.480	.890
p-value	.292	.292	.109	.114	.325	.406

The results obtained in Table 4.32 below indicate that Kolmogorov-Smirnov Z statistic is 0.980, 0.980, 1.205, 1.571, 1.480, 0.890 and (p-values = 0.292, 0.292, 0.109, 0.114, 0.325, 0.406). Given that the p-value is less than 0.05, the null hypothesis was rejected and the alternative hypothesis accepted. It was therefore concluded that the data for the study were normally distributed and fit for linear regression analysis.

4.13.3 Autocorrelation Test

When the error term at one point in time (t) correlates with the error term at a different past value, this is known as serial correlation. The null hypothesis that there is no serial correlation between the variables is tested in this study using the Breusch-Godfrey Serial Correlation LM test. When the P=value of the Chi-square statistic is more than 5%, the null hypothesis is rejected.

Table 4.34: Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	2.019550	Prob. F(2,86)	0.1390
Obs*R-squared	4.396221	Prob. Chi-Square(2)	0.1110

In Table 4.34, the probability value of the Chi-square (P=0.0000) is less than 5%. Thus, the null hypothesis that there is no serial correlation is not rejected. The variables in the equation are, therefore, not correlated. The value of the F-statistic also has a p=value of more than 0.1390.

4.14 Correlation Results

Correlation analysis forms a basis for regression analysis; thus, it is appropriate to analyze in research. Extant studies have described the concept of correlation as the degree of association between variables in the study (Mukaka, 2012; Asuero*et al.,* 2006). Equally, it quantifies the strength of the linear relationship between a pair of variables (Bewick*et al.,* 2003). The present study sought to probe the relationship strategic management practices and Performance of Telecommunication industry under the moderating role of Legal & regulatory framework. Therefore, the study

analyzed the relationships that are inherent among the variables using Pearson product moment correlation coefficient (*r)* to assess or infer on the strength of the linear link between study variables (Mukaka, 2012).

Statistically, correlation coefficient always falls between -1.0 and +1.0 such that if the correlation (*r*) is positive, there is a positive relationship whereas if correlation (*r*) is negative, then the relationship between variables is negative (Samuel & Okey, 2015; Rebekić*et al.,* 2015). Further, if the correlation (r) falls within 0.00 to 0.10 then it is a negligible correlation; 0.10 to 0.39 means weak correlation; 0.40 to 0.69 infers a moderate correlation; 0.70 to 0.89 implies a strong correlation and 0.90 to 1.00 signifies a very strong correlation (Schober *et al.,* 2018). Accordingly, bivariate correlation analyses were performed and Pearson correlation coefficients were generated to measure the strength of the link between the study variables (Field, 2000). From the results on table 4.35, there is a positive and significant correlation between the independent variables and Performance of Telecommunication industry.

Table 4.35: Correlation Matrix

Variable		**Performance of Telecommunication industry**	**Strategic Planning**	**Strategic innovation**	**Strategic alliance**	**Strategic marketing**	**Legal and regulatory**
Performance of Telecommunication industry	Pearson Correlation	1					
	p-value						
Strategic Planning	Pearson Correlation	0.953**	1				
	p-value	.000					
Strategic innovation	Pearson Correlation	0.868**	.821**	1			
	p-value	.000	.000				
Strategic Alliance	Pearson Correlation	0.729**	.674**	.618**	1		
	p-value	.000	.000	.000			
Strategic marketing	Pearson Correlation	0.846**	.787**	.723**	.581**	1	
	p-value	.000	.000	.000	.000		
Legal and regulatory	Pearson Correlation	0.905**	.837**	.779**	.599**	.752**	1
	p-value	.000	.000	.000	.000	.000	

Notably, the correlation results revealed that Strategic Planning has a positive and significant moderate relationship with Performance of Telecommunication industry's (r =0.953**, ρ<.05). Strategic innovation positively correlates with Performance of

Telecommunication industry (r =0.868**, ρ<.05). Moreover, results indicate that a Strategic Alliance positively relates to Performance of Telecommunication industry (r =0.729**, ρ<.05). From the results, Strategic Marketing is positively and significantly correlated with Performance of Telecommunication industry (r = 0.846**, ρ<.05). Moderating variables showed a positive and significant correlation with Performance of Telecommunication industry. As revealed, Legal & regulatory framework (r =0.905**, ρ<.05) is positively associated with Performance of Telecommunication industry. Based on the above results there is an indication of the linear relationship between all predictors on performance, hence the need to perform a more sophisticated model such as multiple regression model to show a cause-effect relationship.

4.15 Regression Results

The test of hypothesis is simply a statistical method which is often applied in the statistical decision-making by use of experimental data. Hypothesis testing involves making decisions as to whether to accept or reject the null hypothesis because every particular test in the hypothesis testing produces the value of significance of a particular test. In this case, if the significant value happens to be greater than the predetermined significance level, then the null hypothesis is definitely accepted. However, if the significant value happens to be less than the predetermined significance level, then the null hypothesis is definitely rejected.

4.13.2 Heteroskedasticity Test

Heteroscedasticity means unequal scatter in the context of residual or error term. This is actually a systematic change in the spread of the residuals over the range of measured values. This is a problem because ordinary least squares regression has an assumption that all residuals are drawn from a population with constant variable which is homoscedasticity. When the squared errors are function of a transformation of the explanatory variable of the main equation, we have the Koenker (1981) test for unconditional Heteroscedasticity.

Table 4.33: Koenker Heteroskedasticity Test

Koenker Test Results	**Lagrange Multiplier**	**p-value**
Koenker	3.484	0.480

Table 4.33, presents the results on the heteroskedasticity test of the model one of all the independent variables. The residuals were treated as the dependent variable. From the results all the regression coefficients were not significant. This indicates that there is no heteroskedasticity test.

4.15.1 Strategic Planning Practice

H_1: Strategic planning and performance of telecommunication industry in Rwanda

Table 4.36: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.953	0.908	0.907	0.30553632

From table 4.36 above, the combined prediction of all the variables accounted for approximately 92.8 % of the total variation in Performance of Telecommunication industry (R2 = .908 and Adjusted R2 = .907) as depicted in Table 3.36. Thus, the model was fit to predict Performance of Telecommunication industry using Strategic Planning as an independent variable.

Table 4.37: Analysis Of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78.065	1	78.065	836.240	.000[b]
	Residual	7.935	85	.093		
	Total	86.000	86			

The results in Table 4.37 indicates that the overall models were a good fit since the variables; Strategic Planning, were found to have a value of F-statistic of 836.240 and the p-value was found to be 0.000 which is less than the critical value of 0.05.

Coefficients do measure some properties of elements of data sets or process under given specific conditions. Specifically, in the following model summary 4.45, the null hypothesis Strategic Planning and performance of the telecommunications industry were subjected to the hypothesis to determine whether to accept or reject the null hypothesis and the results are illustrated in the table 4.38 below;

Table 4.38: Coefficients of Strategic planning on performance

Variable	Coefficients	Std. Error	t-statistic	p-value
(Constant)	-1.713E-016	.033	.000	1.000
Strategic planning	.953	.033	28.918	0.000

H_1 predicted that there is no significant effect of the Strategic Planning on Performance of Telecommunication industry. However, the results presented in Table 4.38 above showed a positive and significant association between Strategic Planning and Performance of Telecommunication industry (β = 0.953, ρ< .05). These result show that a one unit increase in strategic planning causes a 0.953 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. Thus, Performance of Telecommunication industry increases as strategic planning increases. These findings are in line with those of (Simerson, 2011; John & Mathew, 2012) who note that strategic planning looks at the long-term goals or objectives which is how organizations survive and thrive. Young, (2013); Pearce & Robinson, (2011) and Barney, (2009) also support this study by arguing that the current movement suggest that, there is needs for a strong bottom-up component to the planning process both to ensure that the important views of all people at all levels of the Organization are heard and that they are part of the process and part of the organization survival. Thus, the findings of these scholars just like in this study support a positive association between strategic planning and performance of telecommunication industry in Rwanda.

Strategic Planning*Regulatory framework and performance of telecommunication industry in Rwanda

Table 4.39: Model summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.969	.938	.936	.25316684

From table 4.39 above, the combined prediction of all the variables accounted for approximately 94% of the total variation in Performance of Telecommunication industry (R2 = .938 and Adjusted R2 = .936) as depicted in Table 3.37. Thus, the model was fit to predict Performance of Telecommunication industry using Strategic Planning as an independent variable.

Table 4.40: Analysis of variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	80.680	3	26.893	419.597	.000[b]
Residual	5.320	83	.064		
Total	86.000	86			

Analysis of variance sometimes reoffered to as ANOVA is a statistical tool of analysis which splits observed sum of variables which are found inside a data set into two parts which include the random factors and the symmetric factors. The results in Table 4.40 indicates that the overall models were a good fit since the variables; Strategic Planning, were found to have a value of F-statistic of 419.597 and the p-value was found to be 0.000 which is less than the critical value of 0.05.

Table 4.41: Coefficients Table

Variables	Coefficients	Std. Error	t-results	p-value
(Constant)	.020	.033	.620	0.537
Strategic planning	0.655	.054	12.080	0.000
Regulatory framework	0.343	.054	6.388	0.000
Strategic planning*Regulatory framework	0.024	.021	1.123	0.265

H_{01} predicted that there is no significant effect of the Strategic Planning on Performance of Telecommunication industry. However, the results presented in Table 4.41 above showed a positive and significant association between Strategic Planning and Performance of Telecommunication industry (β = 0.655, ρ< .05). These result show that a one unit increase in strategic planning causes a 0.655 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. Thus, Performance of Telecommunication industry increases as strategic planning increases. These findings are in line with those of (Simerson, 2011; John & Mathew, 2012) who note that strategic planning looks at the long-term goals or objectives which is how organizations survive and thrive. Young, (2013); Pearce &Robinson, (2011) and Barney, (2009) also support this study by arguing that the current movement suggest that, there is needs for a strong bottom-up component to the planning process both to ensure that the important views of all people at all levels of the Organization are heard and that they are part of the process and part of the organization survival. Thus, the findings of these scholars just like in this study support a positive association between strategic planning and performance of telecommunication industry in Rwanda.

The regression results show a positive and significant association between Legal and regulatory framework and Performance of Telecommunication industry (β = 0.343, ρ< .05). So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda. The regression results show a positive and significant association between Legal and regulatory framework*Strategic Planning term and Performance of Telecommunication industry (β = 0.024, ρ< .05). So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda.

4.15.2 Strategic Innovation Practice

H2: Strategic innovation and performance of telecommunication industry in Rwanda

Table 4.42: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.868	0.753	0.750	.50022192

From table 4.42 above, the combined prediction of all the variables accounted for approximately 75.0% of the total variation in Performance of Telecommunication industry (R2 = .753 and Adjusted R2 = .750) as depicted in Table 4.48. Thus, the model was fit to predict Performance of Telecommunication industry using Strategic Innovation as an independent variable.

Table 4.43: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.731	1	64.731	258.695	0.000[b]
	Residual	21.269	85	.250		
	Total	86.000	86			

The results in Table 4.43 indicates that the overall models were a good fit since the variables; Strategic Innovation, were found to have a value of F-statistic of 258.695 and the p-value was found to be 0.000 which is less than the critical value of 0.05.

Table 4.44: Regression Coefficients

Variable	Coefficients	Std. Error	t- results	p-value
(Constant)	4.672E-017	.054	0.000	1.000
Strategic innovation	0.868	.054	16.084	0.000

H_{02} proposed that there is no significant effect of Strategic Innovation on Performance of Telecommunication industry. However, the results showed a positive

and significant relationship between Strategic Innovation and Performance of Telecommunication industry (β = .868, ρ< .05). These result show that a one unit increase in strategic innovation causes a 0.868 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. This means that if the level of Strategic Innovation is enhanced, there is a high chance that he or she will set strategies that will increase the performance of telecommunication industry in Rwanda. These results support the opinions of (Zhou & Wu, 2010; Mwania & Muganda 2011) who concluded that innovations have a significant contribution to performance. They state further that innovation is usually as a result of employees' creativity in a firm and that it should always be targeted at consumers to bring an added value. They summarize by stating that it is therefore very necessary to acknowledge that the most inventive part of innovation is based on people's skills, knowledge and experience. Organizations can benefit more if they develop, embrace and communicate an innovation orientation. Innovation oriented organizations have a better chance of succeeding financially.

Strategic innovation*regulatory framework and performance of telecommunication industry in Rwanda

Table 4.45: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.950[a]	.902	.898	.31913554	2.382

From table 4.45 above, the combined prediction of all the variables accounted for approximately 90 % of the total variation in Performance of Telecommunication industry (R2 = 0.902 and Adjusted R2 = 0.898) as depicted in Table 4.45. Thus, the model was fit to predict Performance of Telecommunication industry using Strategic Innovation as an independent variable.

Table 4.46: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F-statistic	p-value
Regression	77.547	3	25.849	253.800	.000[b]
Residual	8.453	83	.102		
Total	86.000	86			

The results in Table 4.46 indicates that the overall models were a good fit since the variables; Strategic Innovation, were found to have a value of F-statistic of 253.800 and the p-value was found to be 0.000 which is less than the critical value of 0.05.

Table 4.47: Regression Coefficients

Variables	Coefficients	Std. Error	t	Sig.
(Constant)	.076	.040	1.903	.061
Strategic Innovation	.425	.055	7.743	.000
Regulatory framework	.563	.055	10.221	.000
Strategic Innovation*Regulatory framework	.099	.027	3.637	.000

H_{02} proposed that there is no significant effect of Strategic Innovation on Performance of Telecommunication industry. However, the results showed a positive and significant relationship between Strategic Innovation and Performance of Telecommunication industry (β = 0.425, $\rho<$ .05). These result show that a one unit increase in strategic innovation causes a 0.425 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. This means that if the level of Strategic Innovation is enhanced, there is a high chance that he or she will set strategies that will increase the performance of telecommunication industry in Rwanda. These results support the opinions of (Zhou & Wu, 2010; Mwania & Muganda, 2011), who concluded that innovations have a significant contribution to performance. They state further that innovation is usually as a result of employees' creativity in a firm and that it should always be targeted at consumers to bring an added value. They summarize by stating

that it is therefore very necessary to acknowledge that the most inventive part of innovation is based on people's skills, knowledge and experience. Organizations can benefit more if they develop, embrace and communicate an innovation orientation. Innovation oriented organizations have a better chance of succeeding financially.

The regression results show a positive and significant association between Legal and regulatory framework and Performance of Telecommunication industry (β = 0.563, ρ< .05). So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda.

The regression results show a positive and significant association between Legal and regulatory framework*Strategic innovation term and Performance of Telecommunication industry (β = 0.099, ρ< .05). So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda.

4.15.3 Strategic Alliance Practice

H3: Strategic alliance and performance of telecommunication industry in Rwanda

Table 4.48: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.729[a]	.532	.526	0.68825616

From table 4.48 above, the combined prediction of all the variables accounted for approximately 53 % of the total variation in Performance of Telecommunication industry (R2 = .532 and Adjusted R2 = .526) as depicted in Table 3.37. Thus, the model was fit to predict Performance of Telecommunication industry using Strategic Alliance as an independent variable.

Table 4.49: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F-statistic	p-value
Regression	45.736	1	45.736	96.551	0.000
Residual	40.264	85	0.474		
Total	86.000	86			

The results in Table 4.49 indicates that the overall models were a good fit since the variables; Strategic Alliance, were found to have a value of F-statistic of 96.551 and the p-value was found to be 0.000 which is less than the critical value of 0.05.

Table 4.50: Coefficients

Variable	Coefficients	Std. Error	t-statistic	p-value
(Constant)	3.795E-017	.074	0.000	1.000
Strategic alliance	0.729	.074	9.826	0.000

H_3 postulated that there is no significant effect of Strategic Alliance on Performance of Telecommunication industry. As observed in Table 4.50 above, results demonstrate a positive and significant link between Strategic Alliance and Performance of Telecommunication industry (β = 0.729, ρ< .05). These result show that a one unit increase in strategic alliance causes a 0.729 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. This suggested that an increased level of strategic alliances enhanced the Performance of Telecommunication industries in Rwanda. Strategic alliances have significant implications of the financial performance of the organizations involved (Amita, Richard & Robinson, 2011). Elmuti, and Kathewala, (2011), posit that strategic alliance can be effective ways of diffusing new technologies rapidly, entering new markets, bypassing government restrictions expeditiously, and learning quickly from the leading firms in a given field. Elmuti, and Kathewala, (2011), looked into how strategic alliances between banks and mobile phone companies can be used to overcome these

challenges with a specific focus on the recent alliance between Equity bank (Kenya), and Safaricom Ltd. The authors found that strategic alliances can be used as a tool which enables firms to overcome threats from their competitors while gaining additional benefits.

Strategic alliance*Regulatory and legal framework and performance of telecommunication industry in Rwanda

Table 4.51: Model Summary

R	R-Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.941[a]	0.885	0.881	0.34458093	2.258

From table 4.51 above, the combined prediction of all the variables accounted for approximately 89 % of the total variation in Performance of Telecommunication industry (R2 = 0.885 and Adjusted R2 = 0.881) as depicted in Table 4.58. Thus, the model was fit to predict Performance of Telecommunication industry using Strategic Alliance as an independent variable.

Table 4.52: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	76.145	3	25.382	213.765	.000[b]
	Residual	9.855	83	.119		
	Total	86.000	86			

The results in Table 4.52, indicates that the overall models were a good fit since the variables; Strategic Alliance, were found to have a value of F-statistic of 213.765 and the p-value was found to be 0.000 which is less than the critical value of 0.05.

Table 4.53: Regression Coefficients

Variables	Coefficients	Std. Error	t-results	p-value
(Constant)	0.053	.041	1.292	0.200
Strategic alliance	0.302	.047	6.495	0.000
legal and regulatory framework	0.710	.047	15.132	0.000
Strategic alliance* legal and regulatory framework	0.089	.030	2.983	0.004

H3 postulated that there is no significant effect of Strategic Alliance on Performance of Telecommunication industry. As observed in Table 4.53 above, results demonstrate a positive and significant link between Strategic Alliance and Performance of Telecommunication industry (β = 0.302, ρ< .05). These result show that a one unit increase in strategic alliance causes a 0.302 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. This suggested that an increased level of strategic alliances enhanced the Performance of Telecommunication industries in Rwanda. Strategic alliances have significant implications of the financial performance of the organizations involved (Amita, Richard & Robinson, 2011). Elmuti, and Kathewala, (2011), posit that strategic alliance can be effective ways of diffusing new technologies rapidly, entering new markets, bypassing government restrictions expeditiously, and learning quickly from the leading firms in a given field.

The regression results show a positive and significant association between Legal and regulatory framework and Performance of Telecommunication industry (β = .710, ρ< .05). So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda. The regression results show a positive and significant association between Legal and regulatory framework*Strategic alliance term and Performance of Telecommunication industry (β = 0.089, ρ< .05).

So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda.

4.15.4 Strategic Marketing Practice

H4: Strategic marketing and performance of Telecommunication industry in Rwanda

Table 4.54: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846[a]	.715	.712	.53656025

From table 4.54 above, the combined prediction of all the variables accounted for approximately 72% of the total variation in Performance of Telecommunication industry (R2 = .715 and Adjusted R2 = .712) as depicted in Table 4.61. Thus, the model was fit to predict Performance of Telecommunication industry using strategic marketing as an independent variable.

Table 4.55: Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.529	1	61.529	213.718	.000[b]
	Residual	24.471	85	.288		
	Total	86.000	86			

The results in Table 4.55 indicates that the overall models were a good fit since the variables; Strategic Marketing, were found to have a value of F-statistic of 213.718 and the p-value was found to be 0.000 which is less than the critical value of 0.05.

Table 4.56: Regression Coefficients

Model	Coefficients		t-statistic	Sig.
	B	Std. Error		
(Constant)	2.013E-016	0.058	.000	1.000
Strategic marketing	0.846	0.058	14.619	0.000

H_4 hypothesized that there is no significant effect of Strategic Marketing on Performance of Telecommunication industry. The regression results showed a positive and significant association between Strategic Marketing and Performance of Telecommunication industry (β = 0.846, ρ< 0.05). These result show that a one unit increase in strategic marketing causes a 0.846 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda. Odongo, 2008; Oyedijo, (2013), confirms the positive effect of strategic marketing management of organization performance in terms of competitive advantage, profitability, survival and market share. Their study also reveals that strategic marketing management has some effects on performance measures, such as process efficiency, service quality, cost saving, organization and process flexibility and customer satisfaction.

Strategic marketing * legal and regulatory framework and performance of Telecommunication industry in Rwanda

Table 4.57: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.941[a]	.885	.880	.34583025	2.334

From table 4.57 above, the combined prediction of all the variables accounted for approximately 89 % of the total variation in Performance of Telecommunication industry (R2 = 0.885 and Adjusted R2 = 0.880) as depicted in Table 4.57. Thus, the model was fit to predict Performance of Telecommunication industry using strategic marketing and an independent variable.

Table 4.58: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F-statistic	p-value
Regression	76.073	3	25.358	212.024	0.000
Residual	9.927	83	.120		
Total	86.000	86			

The results in Table 4.58 indicates that the overall models were a good fit since the variables; Strategic Marketing, were found to have a value of F-statistic of 212.024 and the p-value was found to be 0.000 which is less than the critical value of 0.05.

Table 4.59: Regression Coefficients

Variables	Coefficients	Std. Error	t-results	p-value
(Constant)	0.038	0.045	.847	0.400
Strategic marketing	0.365	0.058	6.352	0.000
legal and regulatory framework	0.634	0.058	11.019	0.000
Strategic marketing* legal and regulatory framework	0.051	0.003	5.000	0.000

H_4 hypothesized that there is no significant effect of Strategic Marketing on Performance of Telecommunication industry. The regression results showed a positive and significant association between Strategic Marketing and Performance of Telecommunication industry (β = .365, ρ< .05). These result show that a one unit increase in Strategic Marketing causes a 0.365 unit increase in performance of

telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda.

The regression results show a positive and significant association between Legal and regulatory framework and Performance of Telecommunication industry (β = .634, ρ< .05). So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda. The regression results show a positive and significant association between Legal and regulatory framework*Strategic Marketing term and Performance of Telecommunication industry (β = .051, ρ< .05). So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda.

4.16 Hierarchical Regression Model for Moderation Testing

H_5 Legal and regulatory framework has no significant moderating effect on the relationship between strategic management practices and the performance of Telecommunication industry in Rwanda

The regression results explain whether there exists a positive or negative correlation between each independent variable of strategic planning, innovation, alliance, strategic marketing and Legal and regulatory framework with the dependent variable performance of the telecommunication industry. To this effect, the positive coefficient implies that when the values of the independent variable increase, the mean of the dependent variable also increases

Table 4.60: Model summary

Model	R	R Square	Adjusted R Square	R Square Change	F Change	df1	df2	Sig. F Change
1	0.562[a]	0.316	0.286	0.316	10.605	4	92	0.000
2	0.684[b]	0.468	0.438	0.152	25.990	1	91	0.000
3	0.742[c]	0.550	0.503	0.082	3.982	4	87	0.005

A multiple linear regression analysis was performed to regression of independent variables on Performance of Telecommunication industry. The combined prediction of all the variables accounted for approximately 55% of the total variation in Performance of Telecommunication industry (R2 = 0.55, Adjusted R2 = 0.503) as depicted in Table 4.60 above after. Thus, the model was fit to predict Performance of Telecommunication industry using Strategic Planning, Strategic Innovation, Strategic Alliance, Strategic Marketing as independence variables and Legal and regulatory as an independent model as well as moderator. The results also show that the f-change was also found to be significant with a value of 3.982 and an associated p-value of 0.005. This shows a significant positive moderation effect of Legal and regulatory framework.

Table 4.61: Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	66.821	4	16.705	10.605	0.000[a]
	Residual	144.916	92	1.575		
	Total	211.737	96			
2	Regression	99.015	5	19.803	15.987	0.000[b]
	Residual	112.722	91	1.239		
	Total	211.737	96			
3	Regression	116.460	9	12.940	11.816	0.000[c]
	Residual	95.277	87	1.095		
	Total	211.737	96			

The results in Table 4.61 indicates that the overall models were a good fit since the variables; Strategic Planning, Strategic Innovation, Strategic Alliance, Strategic Marketing, Legal and regulatory framework and their associated interaction terms as were found to have a value of F-statistic of 10.605, 15.987 and 11.816 respectively and the p-value were found to be 0.000a, 0.000b and respectively 0.000c which is less than the critical value of 0.05.

Table 4.62: Coefficient Table

	Variables	**Coefficients**	**Std. Error**	**t-** results	**p-value**
1	(Constant)	-6.152	0.240	25.633	1.000
	Strategic Planning	0.560	0.050	11.157	0.000
	Strategic innovation	0.192	0.043	4.457	0.000
	Strategic Alliance	0.118	0.033	3.602	0.001
	Strategic Marketing	0.197	0.040	4.958	0.000
2	(Constant)	2.126	.020	.000	1.000
	Strategic Planning	.427	.049	8.735	0.000
	Strategic innovation	.147	.038	3.910	0.000
	Strategic Alliance	.118	.028	4.214	0.000
	Strategic Marketing	.158	.035	4.572	0.000
	Legal and regulatory framework	.235	.042	5.645	0.000
3	(Constant)	.006	.024	.261	0.795
	Strategic Planning	.353	.053	6.731	0.000
	Strategic innovation	.223	.048	4.640	0.000
	Strategic Alliance	.114	.032	3.619	0.001
	Strategic Marketing	.171	.036	4.804	0.000
	Legal and regulatory framework	.214	.042	5.118	0.000
	Strategic Planning*	.025	.010	2.500	0.000
	Legal and regulatory framework Strategic innovation*	.094	.035	2.686	0.008
	Legal and regulatory framework Strategic Alliance*	.015	.004	3.750	0.007
	Legal and regulatory framework Strategic Marketing*	.072	.034	2.118	0.039
	Legal and regulatory framework				

$Y= \beta_0 + 0.353X_1 + 0.223\ X_2 + 0.114\ X_3 + 0.171X_4 + 0.214\ Z + 0.025\ X_1{*}\ Z + 0.094X_2{*}\ Z + 0.015X_3{*}\ Z + 0.072\ X_4{*}\ Z$

Y = Performance of Telecommunication industry; X_1 = Strategic Planning, X_2 = Strategic Innovation, X_3 = Strategic Alliance, X_4 = Strategic Marketing and Z= Legal & regulatory framework, β1X1*Z= Strategic Planning* Legal & regulatory framework, X2*Z= Strategic Innovation* Legal & regulatory framework, β3X3* Z= Strategic Alliance* Legal & regulatory framework and β4X4*Z= Strategic Marketing are the interaction term; ε = Error term, Z=is the moderator

4.17. Moderation effect

4.17.1. Strategic Planning Practice

H5 stated that there is no significant moderating effect of Legal & regulatory framework on the association between Strategic Planning and Performance of Telecommunication industries in Rwanda. The regression results showed that Legal and regulatory framework had a positive and significant moderating effect on the relationship between strategic planning and Performance of Telecommunication industry (β = 0.353, ρ< .05). These results show that a one unit increase in strategic planning causes a 0.353 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. This implied that telecommunication institutions in Rwanda with good legal and regulatory framework tend to support strategic planning interactions and contributions to Performance of Telecommunication industries in Rwanda. These findings are in line with those of Simerson, (2011); John and Mathew (2012) who note that strategic planning looks at the long-term goals or objectives which is how organizations survive and thrive. Young (2013); Pearce and Robinson, (2011) and Barney (2009) also support this study by arguing that the current movement suggest that, there is needs for a strong bottom-up component to the planning process both to ensure that the important views of all people at all levels of the Organization are heard and that they are part of the process and part of the organization survival. Thus, the findings of these scholars just like in this study support a positive association between strategic planning and performance of telecommunication industry in Rwanda.

4.17.2: Strategic Innovation Practice

H5 predicted that Legal & regulatory framework does not significantly moderate the relationship between Strategic Innovation and Performance of Telecommunication industry. The results indicated that Legal & regulatory framework positively and significantly moderate the link between Strategic Innovation and Performance of Telecommunication industry (β = 0.223, ρ< .05). These result show that a one unit increase in Strategic Innovation causes a 0.223 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. Thus, firms with optimistic Legal & regulatory framework are likely to strengthen the Strategic Innovation influence on Performance of Telecommunication industries in Rwanda. These results support the opinions of (Zhou & Wu, 2010; Mwania & Muganda 2011) who concluded that innovations have a significant contribution to performance. They state further that innovation is usually as a result of employees' creativity in a firm and that it should always be targeted at consumers to bring an added value. They summarize by stating that it is therefore very necessary to acknowledge that the most inventive part of innovation is based on people's skills, knowledge and experience. Organizations can benefit more if they develop, embrace and communicate an innovation orientation. Innovation oriented organizations have a better chance of succeeding financially.

4.17.3. Strategic Alliance Practice

H5 hypothesized that Legal and regulatory framework does not matter in the relationship between the Strategic Alliance and Performance of Telecommunication industry. Nonetheless, the results showed that Legal and regulatory framework positively and significantly moderated the link between Strategic Alliance and Performance of Telecommunication industry (β = .114, ρ<.05). These result show that a one unit increase in Strategic Alliance causes a 0.114 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. The results suggest that optimistic Legal and regulatory likely weakens the Strategic Alliance influence on Performance of Telecommunication industries in Rwanda. Strategic alliances have significant

implications of the financial performance of the organizations involved (Amita, Richard & Robinson, 2011). Elmuti and Kathewala (2011), posit that strategic alliance can be effective ways of diffusing new technologies rapidly, entering new markets, bypassing government restrictions expeditiously, and learning quickly from the leading firms in a given field. Strategic alliances can be used as a tool which enables firms to overcome threats from their competitors while gaining additional benefits.

4.17.4. Strategic Marketing Practice

H5 postulated that Legal and regulatory framework does not significantly moderate the association between strategic marketing and Performance of Telecommunication industry. Nevertheless, the results revealed that Legal & regulatory framework positively and significantly moderate the link between Strategic Marketing and Performance of Telecommunication industry (β = 0.171, ρ< .05). These result show that a one unit increase in Legal and regulatory framework causes a 0.171 unit increase in performance of telecommunication in firms in Rwanda. Therefore, the null hypothesis of no significant effect was rejected. Thus, the results suggest that optimistic Legal and regulatory likely strengthens the Strategic marketing influence on Performance of Telecommunication industries in Rwanda. Odongo, 2008; Oyedijo, (2013), confirms the positive effect of strategic marketing management of organization performance in terms of competitive advantage, profitability, survival and market share. Their study also reveals that strategic marketing management has some effects on performance measures, such as process efficiency, service quality, cost saving, organization and process flexibility and customer satisfaction.

The regression results show a positive and significant association between Legal and regulatory framework and Performance of Telecommunication industry (β = 0.214, ρ< .05). So, the hypothesis was not supported. This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda. There are various regulations that can hinder successful management of the various business strategies especially with regards to industries that fall under government regulatory authorities such as the

telecommunication industry. Oglietti and Pontarollo, (2003), asserted that government licensing can often force significant changes in industry practices as well as strategic approaches. This is well achieved through deregulation given that it limits the activities of competitors in the market in different industries.

Table 4.63: Moderation summary results

Test Statistic Before Moderation		**Test Statistic After Moderation**	
Coefficient of determination R	0.684b	Coefficient of determination R	0.742c
Coefficient of determination R-squared	0.468	Coefficient of determination R-squared	0.550
Coefficient of determination Adjusted R Square	0.438	Coefficient of determination Adjusted R Square	0.503
		Sig. F Change	0.005

Table 4.63 presents the results on the moderation test upon the regression of the independent variables on the dependent variable which is the performance of the telecommunication firms I Rwanda.

Table 4.64: Hypotheses summary

No	Null Hypotheses	Decision criteria	Conclusion
1	**H_1**: There is no significant relationship between strategic planning and performance of telecommunication industry in Rwanda	Reject the null hypothesis if p<0.05	The null was rejected since p-value was found to be < 0.05
2	**H_2:** There is no significant relationship between strategic innovation and performance of telecommunication industry in Rwanda	Reject the null hypothesis if p<0.05	The null was rejected since p-value was found to be < 0.05
3	**H_3:** There is No significant Relationship between strategic alliance and performance of telecommunication industry in Rwanda	Reject the null hypothesis if p<0.05	The null was rejected since p-value was found to be < 0.05
4	**H_4:** There is No significant relationship between strategic marketing and performance of Telecommunication industry in Rwanda.	Reject the null hypothesis if p<0.05	The null was rejected since p-value was found to be < 0.05
5	**H_5:** There is no significant moderation effect of legal and regulatory framework on the relationship between strategic management practices and the performance of Telecommunication industry in Rwanda	Reject the null hypothesis if p<0.05	The null was rejected since p-value was found to be < 0.05

The study was based on the assertion that strategic management practices, had an influence on organizational performance of firms in the telecommunication industry in Rwanda. Consequently, there were four important hypotheses that were set aside to guide the study to the finding as to whether to confirm, or avert from the earlier researcher's hypotheses. For the researcher to determine the statistical significance of the respective hypotheses, simple and multiple linear regression analysis was conducted at 95% level of confidence (a=0.05) under the p-values of 0.000, 0.001, 0.011 and 0.121 respectively. These values are less than 0.05. These results therefore affirmed that; there was a significantly positive relationship between strategic planning practice, strategic innovation practice, strategic alliance practice as well as strategic marketing practice on the organizational performance of firms in the telecommunication industry in Rwanda

4.18. Optimal Conceptual Framework

After all the hypotheses were accepted, the optimal model remained the same as the estimated model, and the revised conceptual framework was the same as the conceptual framework as illustrated under figure 4.13.

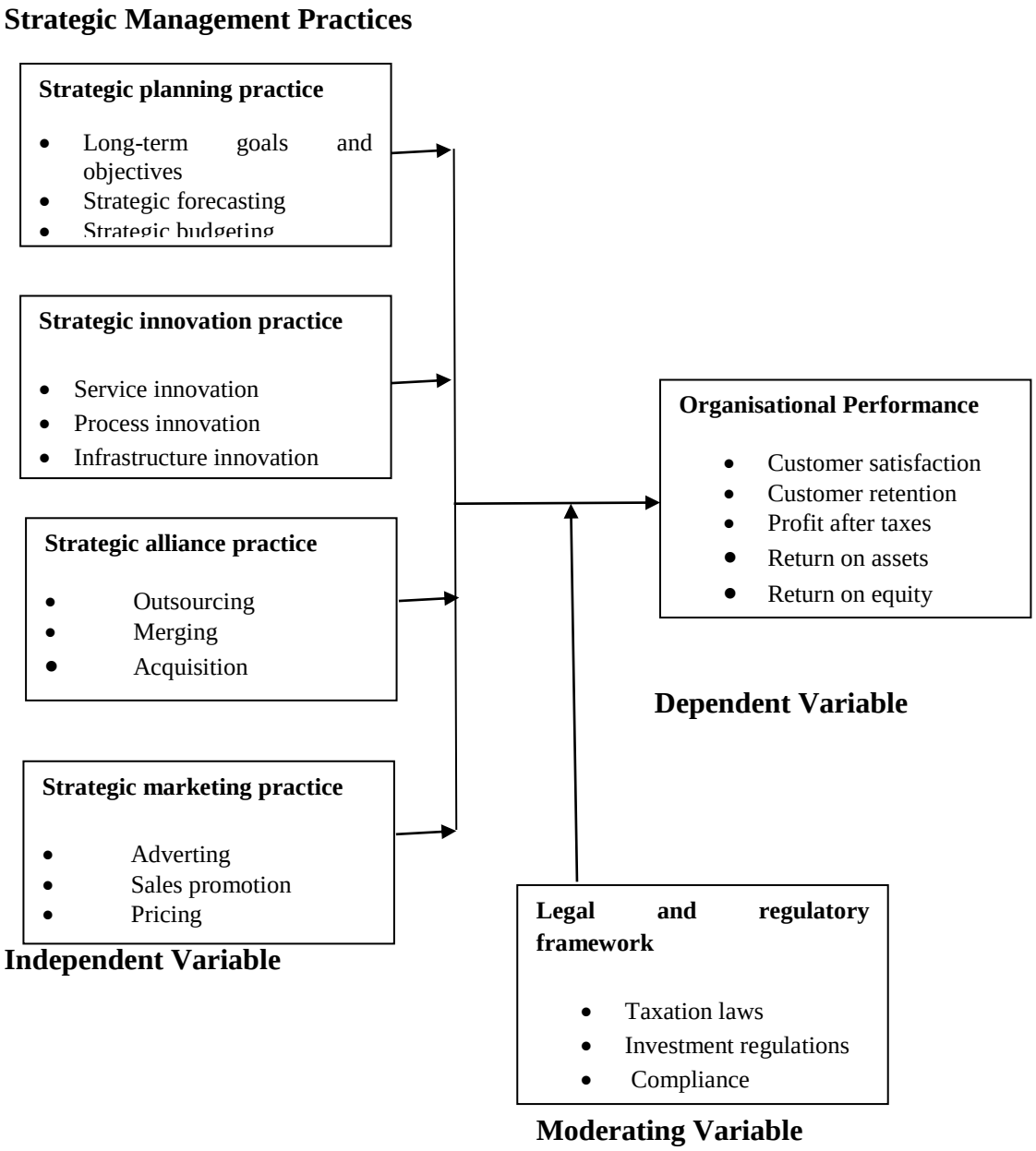

Figure 4.13: conceptual Framework

As afore mentioned in the optimal Conceptual Framework in the test in table 4.64, the variables in the conceptual framework as earlier provided are upheld giving exactly the same conceptual framework.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and finding of this study. From the results, this study has concluded that the five factors considered had a significant effect on the performance of telecommunication industry in Rwanda.

5.2 Summary

5.2.1. To evaluate the influence of strategic planning practice on organisational performance of firms in the telecommunication industry in Rwanda

Specific objective one was to evaluate the influence of strategic planning on the performance of telecommunication industry in Rwanda. This specific objective was set to ascertain whether strategic planning has a substantial influence on the performance of the telecommunications company. To that effect, the indicators of strategic planning include the strategic forecasting, strategic budgeting and long-term goals and objectives. Descriptive statics was applied as a focal starting point for data analysis thereby organizing, simplifying and summarizing data for advanced inferential results. The research utilized measures of central tendency especially the "mean" which was used to describe the central position of the frequency distribution and the measures of spread including the standard deviation described how spread out or dispersed the scores were. The high factor loading scores showed that all the items explained strategic planning.

All the respondents were strongly in agreement with statements that; The firm has a Process of defining company's strategy or direction and making decisions on allocating its resources to pursue this strategy, The firm has a Systematic process of envisioning a desired future and translating this vision into broadly defined goals and steps achieve them, The organization formulates the strategic vision for the future in a timely manner, The company has a framework for Evaluating and monitoring the overall strategic plan, We regularly forecast internal and external development, We

always Specify the tactical “action” strategies to be accomplish and The firm has a Smart Budgeting strategy to maximize resources and minimize costs.

Notably, the correlation results revealed that Strategic Planning has a positive and significant moderate relationship with Performance of Telecommunication industry. The results on linearity test for strategic planning and performance of the telecommunication industry since the level of linear association was found to be high which was also positive and statistically significant. Similarly, the null hypothesis Strategic Planning and performance of the telecommunications industry were subjected to the hypothesis to determine whether to accept or reject the null hypothesis and the results showed a positive and significant association between Strategic Planning and Performance of Telecommunication industry. Therefore, the hypothesis was rejected. Thus, as the Performance of Telecommunication industry increased, the strategic planning too increased.

5.2.2. To examine the influence of strategic innovation practice on organizational performance of firms in the Telecommunication industry in Rwanda.

Specific objective two was to examine the influence of strategic innovation on the performance of Telecommunication industry in Rwanda. This objective was designed to evaluate the extent to which strategic innovation influences performance of the telecommunication industry. The indicators of strategic innovation include the service innovation, process innovation and infrastructure innovation. To that effect, the study concludes that strategic innovation measurers had strong effect on the performance of telecommunication firms in Rwanda.

The company is always looking for innovative ways to improve on the Service delivered to our customers, The company has a process of introducing new and cost effective ways of doing things that create new demands and new market space, The company is always investing in new and modern infrastructures to improve on the Service delivered to our customers, The firm is quick to adopt new Technological advancements in the market, The company always use internet and social media platforms to attract potential innovative man power in the firm and A plan made by

an organization to encourage advancements in either technology or service usually by investing in research and development activities. The results showed a positive and significant relationship between Strategic Innovation and Performance of Telecommunication industry. Thus, the hypothesis was rejected. This means that if the level of Strategic Innovation is enhanced, there is a high chance that the set strategies definitely will increase the performance of telecommunication industry in Rwanda.

5.2.3. To establish the influence of strategic alliance practice on organisational performance of firms in the Telecommunication industry in Rwanda

Specific objective three was to determine the influence of strategic alliance on the performance of the Telecommunication industry in Rwanda. This objective was designed to assess the extent to which strategic alliances with other companies in the same telecommunication industry influence performance of a particular telecommunications industry. The indicators of strategic alliance include; strategic outsourcing, strategic merging and strategic acquisition.

To that effect, the study ascertained that strategic alliance measurers had strong effect on the performance of telecommunication firms in Rwanda. the firm has always adopted Inter-organizational synergy to expand its operations, cooperation with other firms in the industry has brought about Low investment costs for the company, formation of development cooperation has brought a broad range of skills and expertise to the firm, the formation of alliances has helped the firm in the Mitigation of market uncertainties through risk sharing ,The formation of alliances has helped in enhancing stakeholders satisfaction and the formation of alliances has brought Operating efficiency and effectiveness in the company. The results demonstrated a positive and significant link between Strategic Alliance and Performance of Telecommunication industry. Consequently, the hypothesis was not held. This suggested that an increased level of strategic alliances enhanced the Performance of Telecommunication industries in Rwanda.

5.2.4. To ascertain the influence of strategic marketing practice on organizational performance of firms in the Telecommunication industry in Rwanda.

The fourth specific objective was set to determine whether or not, strategic marketing has any influence on the performance of the telecommunication industry. The indicators of strategic marketing include; strategic adverting, strategic sales promotion and strategic pricing. Descriptive statics was applied as a focal starting point for data analysis thereby organizing, simplifying and summarizing data for advanced inferential results. The research utilized measures of central tendency especially the "mean" which was used to describe the central position of the frequency distribution and the measures of spread including the standard deviation described how spread out or dispersed the scores were. The high factor loading scores showed that all the items explained strategic marketing.

The study found out that strategic marketing measurers had strong effect on the performance of telecommunication firms in Rwanda. The company always identifies one or more sustainable competitive advantages and allocate resources to explain them, our firm effectively differentiates itself from its competitors by capitalizing on its strength to provide consistently better value to customer than its competitors, we have an overall game plan for reaching people and turning them to customers of the product or service that the business provides, we have a long-term forward-looking approach to planning with the fundamental goal of achieving a sustainable competitive advantage, we have a competitive Pricing strategy compared to our competitors, the firm has always adopted the Sales promotion strategy to expand our market base and the firm has always adopted the Advertising strategy to expand our market base.

5.2.5. To assess the moderating influence of legal and regulatory framework on relationship between strategic management practices performance of firms in the Telecommunication industry in Rwanda

Specific objective five was to assess the moderating influence of legal and regulatory framework on the performance of Telecommunication industry in Rwanda. This

specific objective was designed to determine the extent to which, legal and regulatory framework really affect the performance of the telecommunications industry in Rwanda. The indicators for legal and regulatory framework include; taxation laws and investment regulations Regression results showed a positive and significant association between Legal and regulatory framework and Performance of Telecommunication industry.

This connoted that increased level of strategic marketing create value to the firm in the form of Performance of Telecommunication industries in Rwanda. There are various regulations that can hinder successful management of the various business strategies especially with regards to industries that fall under government regulatory authorities such as the telecommunication industry. (Oglietti & Pontarollo, 2003), asserted that government licensing can often force significant changes in industry practices as well as strategic approaches. This is well achieved through deregulation given that it limits the activities of competitors in the market in different industries. Based on the findings of the study and as per the specific objectives, the study recommends as follows:

5.3 Conclusions

The general objective of this study was to determine the influence of strategic management practices on the performance of telecommunication industry in Rwanda. The research was driven by five specific objectives which include:

5.3.1. To evaluate the influence of strategic planning practice on organisational performance of firms in the telecommunication industry in Rwanda

It was concluded in this study that, ideally, on strategic planning, the companies benefited tremendously when the strategic planning was taken into account for the efficient performance of the telecommunication industry in Rwanda. It was established that; All the respondents were strongly in agreement with statements that; The firm has a Process of defining company's strategy or direction and making decisions on allocating its resources to pursue this strategy, The firm has a Systematic process of envisioning a desired future and translating this vision into

broadly defined goals and steps achieve them, The organization formulates the strategic vision for the future in a timely manner, The company has a framework for Evaluating and monitoring the overall strategic plan, We regularly forecast internal and external development, We always Specify the tactical "action" strategies to be accomplish and The firm has a Smart Budgeting strategy to maximize resources and minimize costs. Particularly, the correlation results revealed that Strategic Planning has a positive and significant moderate relationship with Performance of Telecommunication industry'

5.3.2. To examine the influence of strategic innovation practice on organizational performance of firms in the Telecommunication industry in Rwanda.

The results showed a positive and significant relationship between Strategic Innovation and Performance of Telecommunication industry. Thus, the hypothesis was rejected. This means that if the level of Strategic Innovation is enhanced, there is a high chance that the set strategies definitely will increase the performance of telecommunication industry in Rwanda. Evidence showed that companies were more successfully at innovation approach in the systematic and holistic way, developing innovation strategy that were fully integrated with their business mission, vision and goals, and aligned their organizational culture and organizational system with strategy.

5.3.3. To establish the influence of strategic alliance practice on organisational performance of firms in the Telecommunication industry in Rwanda

It was concluded regarding strategic alliance, the companies were able to have access to new technologies and resources and also this had an effect in preventing unnecessary competition beforehand. This benefited the company tremendously. The formation of alliances helped in enhancing stakeholder's satisfaction and the formation of alliances brought Operating efficiency and effectiveness in the both the two telecommunication companies. The results demonstrated a positive and significant link between Strategic Alliance and Performance of Telecommunication

industry. This suggested that an increased level of strategic alliances enhanced the Performance of Telecommunication industries in Rwanda.

5.3.4. To ascertain the influence of strategic marketing practice on organizational performance of firms in the Telecommunication industry in Rwanda.

When it came to strategic marketing, it was concluded that digital marketing played a significant role to spur growth in both the telecommunication companies. It was clear that, without strategic marketing, the company would fall far below the competition line. From the results, Strategic Marketing was positively and significantly correlated with Performance of Telecommunication industry at. It focused on organizational performance, rather than no increasing sales. Strategic marketing linked the organization with the environment and viewed marketing as the responsibility of the entire organization rather than as specialized function. The two telecommunication companies were consistent with serving the needs of the target market within the framework of a long-term plan which was the key to achieving organizational goals and objectives.

5.4 Recommendations

5.4.1 Managerial Recommendations

Managerial decisions and strategic plans that managers make have a daily impact on the success of the entire telecom company. The most important ingredient of such company success is inclusive decision-making in the strategic planning process. Hence, this research recommends the need for telecom managers to build a strong bottom-up component in the strategic planning structures to ensure that views and opinions of people across all levels of the organization are heard and that they are part of the plan and part of the process. Such diversity leads to better decision-making because the action of bringing people into the strategic conversation with different specializations and cultural experiences promotes creativity with fresh perspectives on the task or problem at hand.

Importantly, the telecommunications firms' managerial decisions should leverage systematic processes of envisioning the desired future and translating this vision into broadly defined goals and steps to achieve them. Ideally, the firms should define their company's strategy or direction and make decisions on allocating their resources through designing smart budgeting policies that maximize resources and minimize costs in the pursuit of their strategies in a timely manner. Managerial decisions in the telecom companies should have a framework for evaluating and monitoring the overall strategic plan, regularly forecast internal and external development, always specifying the tactical "action" strategies to be accomplished.

Management decisions in the telecom industry should focus on creation of innovation-oriented business culture across the telecommunications industry to dramatically promote the development of new improvement ideas, products, and services and make huge digital transformations. This should be best done through regularly innovative workshops and where new ideas regarding products and new services can be developed. The company should hire competent personnel with innovative mindset who want to bring change to the company and work on building teams of creative thinkers with diverse backgrounds and motivate them regularly towards new innovation and change. The companies benefit tremendously when the strategic innovation is taken into account for the efficient performance.

Top telecom managers should put in place strategic alliance tools which are fit for the firm's compatibility paying special attention to the unique existence of the company's unique resources and the most appropriate technology in consideration of their expertise. Only strategic alliance is recommended when there exists resource dependency theory that explains how external resources of an organization affect its behavior. Purchasing of external resources is a very crucial tool to both the tactical and strategic management of a telecommunication company at large. This is because, in the contemporary globally connected world, it is quite paramount to reexamine the market as it continues to attract new competitors

The is need for telecom companies to identify sustainable competitive advantages and allocate resources to explain if the firm effectively differentiates themselves

from its competitors by capitalizing on its strength to provide consistently better value to customers than its competitors. Companies should have an overall game plan for reaching people and turning them to customers of the product or service that the business provides, companies should have a long-term forward-looking approach to planning with the fundamental goal of achieving a sustainable competitive advantage, companies should have a competitive pricing strategy compared to our competitors, the firms should always adopted the sales promotion strategy to expand their market base and the firm should always adopted the advertising strategy to expand their market base. The recommendation here was thus that the companies benefits tremendously when the strategic marketing is taken into account for the efficient performance of the telecommunication industry in Rwanda.

5.4.2 Policy Recommendations

Rwandan telecommunications industry is dominated by only big telecom companies with a high bargaining power for market penetration and influence on the regulatory decisions. The industry does not give open opportunities for small telecom firms to penetrate the market to enable consumers to benefit from a variety of the rich telecommunication innovation services from companies for whom their innovation and flexibility provide possibilities to survive in the competitive environment. Such obstruction stem from the threat of giant telecom companies that try to convince policy-makers that telecommunication rivalry could potentially endanger the health of the Rwandan digital economy.

This research recommends that; Policy should require that, Rwanda Utility and Regulatory Authority (RURA) ensures a successful evolution towards competing markets, regulate and properly supervise the relations between the incumbent telecom companies and the new comers, who are known to depend on the incumbent's services. Policy-makers should ensure that the services of the regulatory authorities are periodically evaluated concerning performance of the market they regulate plus their ability to draw a balance between the possible conflicting goals and their ability to yield high quality regulations as well as the degree of adherence to the accountability standards. This is because, it is possible that some company

operators hide and manipulate important information required for the evaluation process.

The research also recommends that, policy-makers in Rwanda should intensify the credibility of regulatory commitment, which is protected from direct political intervention in order to encourage new telecom investors in the telecommunications industry in Rwanda. The regulatory authorities should exercise the highest standards of transparency and professionalism to remain neutral in the analysis procedures of their functions. The analysis should require creation of ad hoc bureaucratic structure that duplicates regulatory costs that normally affects the evaluation process.

The policy framework should be established, developed and implemented in a manner that provides guidance and strictness on labor issues for international telecom companies in the country. This is because there exists a discrepancy between the numerous foreign-owned companies and lack of any locally owned Telecom Company in the country. Policy should be designed to attract local investment in the telecommunication companies through offering subsidies to local investors to boost telecommunications performance within the local Rwandan perspective.

5.5 Area of Further Research

This study was limited to one sector of the country. Thus, this study recommends that future research be directed to other sectors of the economy such as; public transport, airlines and learning institutions in order to be studied on a much broader perspective. Such a broader perspective on strategic management practices will raise a variety of interesting new research questions that would spark and expand our understanding of strategic management beyond just one sector.

The study also recommends the inclusion of other management variables to come up with more vibrant model regarding operational practices and strategic objective. Research is glaringly lacking which links daily operational practices that implement larger strategic objectives. There is need for a scientific investigation on how management and staff should breakdown larger strategic goals into workable daily tasks in the telecommunications industry

The researcher also suggests that future researchers investigate the link between strategic management competences and telecommunications growth. The telecommunications industry often continues to experience sweeping transformation in new advanced technologies which often renders existing managerial skills and competences obsolete. To what extent do the telecommunications leaders possess solid track record of performance. Urgent research is needed to address the gap between telecommunications leadership and innovative strategies, customer relationships, analytical skills and diversification of revenue streams and the costs. The research further suggests scientific investigation on the media monitoring in the telecommunication industry to strike a balance between knowledge of constant trends, fluctuating customer preferences and the threat of competition.

REFERENCES

Abdi, A. M., & Ali, A. Y. S. (2013). Innovation and business performance in telecommunication industry in Sub-Saharan African context: Case of Somalia. *Innovation*, *2*(4), 53-67.

Abdi, MA. & Sasaka, DPS. (2017), Role Of Strategic Planning In Organizational Performance Of Telecommunication Companies In Mogadishu, Somalia: A Case Of Hormuud Telecom. *Journal of management*, *3*(43), 664 – 683.

Adegbie, F. F., & Fakile, A. S. (2011). Petroleum profit tax and Nigeria economic development. *International Journal of Research in Computer Application & Management*, *1*(1), 11-18.

Aderemi, J. (2003). *Marketing Principles and Practice.* Mushin: Concept Publication Limited.

Agency, G. O. (2017). *operators-regulators.* Retrieved from www.africantelecomsnews.

Akanni, L. F., Oba, R. B., & Ishola, M. B. (2022). Strategic marketing practice, a panacea for achieving greather organization performance in Nigeria telecommunication industries. *KWASU Journal of the Business of Education*, *3*(1), 100-111.

Al Muala, A. (2012). Assessing the relationship between marketing mix and loyalty through tourists satisfaction in Jordan curative tourism. *American academic & scholarly research journal*, *4*(2), 7-23.

Ali, D.Y.. (2013). Strategic Management Practices and Corporate Performance of Selected Small Business Enterprises in Legos Metropolis. *International Journal of Business and Management*, *5*(11), 97-107.

Alotaibi, H. J. (2019). Foresightful strategic planning and organisational flexibility in the saudi telecommunications sector under turbulent economic

conditions. *International Journal of Advanced Research in Management and Social Sciences*, *8*(11), 114-134.

Amisu, O. A., Otegbade, T. O., & Shomade, S. O. (2015). Performance Effects of Strategic Marketing Management in the Nigerian Telecoms Industry: Empirical Insight from Globacoms Ltd. *Journal of Marketing*, *84*(12), 78-92.

Amita, P.J. Richard, R.B & Robinson, S. (2011). *Strategic Management formulation, Implementation and Contro.* New York: McGraw-Hill.

Analoui, F. & Karami, A. (2003). *Strategic management in small and medium enterprises.* London: International Thomson Learning Publication.

Andrews, R. (2010). Organizational social capital, structure and performance. human relations, 63(5), 583-608.

Arasa, R., & Gathinji, L. (2014). The relationship between competitive strategies and firm performance: A case of mobile telecommunication companies in Kenya. Retrieved from http://ir.mksu.ac.ke/handle/123456780/4669

Asamoah, E. S. (2021). The Effect of the Marketing Mix on Customer Purchase Decision in the Mobile Telecommunication Industry in Sub-Sahara Africa. *Journal of Applied Business & Economics*, *23*(7).

Askarany, MR. & Yazdifar, E. (2012). Strategy and Society: The link between competitive advantage and corporate social responsibility. . *Harvard Business Review*, *84*(12), 78-92.

Aswani, S. (2013). *(2013) Strategic Innovation and Performance of Public Universities in Kenya.* Nairobi: University of Nairobi.

Ayende, RA. (2010). Competitive Strategies and Firm Performance in mobile telecommunication service in Safaricom Kenya. *Limited International Knowledge and sharing platforms*, 1105-1121.

Babafemi, I. D. (2015). Corporate strategy, planning and performance evaluation: A survey of literature. *Journal of Management Policies and Practices*, *3*(1), 43-49.

Barney, J. B., Ketchen Jr, D. J., & Wright, M. (2021). Resource-based theory and the value creation framework. *Journal of Management*, *47*(7), 1936-1955.

Barney, JP. (2009). Strategic Management Theories and the linkages with organizational competitive advantage from the Resource Based view. *European Journal of social sciences, 7*.

Bastian, H & Andreas, W . (2012). A Biometric View on the uses of Contingency Theory . *Project Management Journal*, 4-23.

Bauer, J. M. (2010). Regulation, public policy, and investment in communications infrastructure. *Telecommunications Policy*, *34*(1-2), 65-79.

Bharti Airtel. (2013). *Annual Report* . Retrieved from www.airtel.com.

Bharti Airtel. (2016). *Limited Annual Report* . Retrieved from www.airtel.com.

Bigliardi, B., Ivo Dormio, A., & Galati, F. (2012). The adoption of open innovation within the telecommunication industry. *European Journal of Innovation Management*, *15*(1), 27-54.

Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses Association*, *22*(2), 27-30.

Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses Association*, *22*(2), 27-30.

Bradley. (2008). *principles of Marketing* (5th edition). Australia: Pearson.

Brown, R. (2013). Managing the “S” curves of innovation. *Journal of consumer Marketing.*, 50-69.

Bryman, A. & Bell, E. (2003). *Business Research Methods* . Oxford: Oxford University Press .

Bryman, A. (2017). Quantitative and qualitative research: further reflections on their integration. In *Mixing methods: Qualitative and quantitative research* (pp. 57-78). London: Routledge.

Cameron, A. C., & Miller, D. L. (2015). A practitioner's guide to cluster-robust inference. *Journal of human resources*, *50*(2), 317-372.

Carton, N. (2004). *Principles of marketing* (12th edition). New delhi: Prentice Hall of India.

Chandler, P. (2012). Effects of executive departures on the performance of acquired firms. *Strategic Management Journal*, 137-152.

Chesbrough, H., & Bogers, M. (2014). *Explicating open innovation: Clarifying an emerging paradigm for understanding innovation.* Oxford: Oxford University Press.

Chetty, T. (2010). *The Drivers and Inhibitors of strategy Execution.* Pretoria: Gordon Institute of Business Studies

Cooper & Schindler. (2014). Research design & Methodology. *an International Journal of Social Sciences, volume 1*.

Cooper, D. R., & Schindler, P. (2014). *Business research methods*. New York: Mcgraw-hill.

Covey, C. (2015). *Innovation excellence book:* Oxford: Oxford University press.

Cravens, D. (2000). *Strategic Marketing* . New York: Richard D.Irwin.

Crook, T. R., Ketchen Jr, D. J., Combs, J. G., & Todd, S. Y. (2008). Strategic resources and performance: a meta-analysis. *Strategic management journal*, *29*(11), 1141-1154.

Cuéllar-Fernández, B., Fuertes-Callén, Y., & Laínez-Gadea, J. A. (2011). The impact of strategic alliances on the market value of telecommunications firms. *The journal of high technology management research*, *22*(1), 1-13.

Dave, K. & Jeremy, S. (2013). *Mastering Strategic Management.Flat* . New York : World Knowledge, Inc.

David, FR. (2015). *Strategic Management: Concept and Cases.* (T. Edition, Ed.) New Jersey: Prentice Hall.

Del Chiappa, G. (2013). Internet versus travel agencies.The perception of different groups of Italian online buyers. *Journal of vacation marketing*, *19*(1), 55-66.

Dilunga, A. (2020). *The Influence of Strategic Innovations on the Performance of Mobile Telecommunication Companies in Tanzania: The Case of Vodacom Tanzania Plc,* Unpublished PhD dissertation, Dar es salaam: Mzumbe University.

Donald Ary Lucy Cheser Jacobs Christine K. Sorensen. (2010). *Introduction to Research in Education* (8th Ed.). Belmont: Wadsworh.

Doval, E. (2016). Is outsourcing a strategic tool to enhance the competitive advantage. *Review of General Management*, 78-87.

Dragomir, C. C. (2016). Analysis of the factors that discourage the businesses development. *Review of General Management*, 26-33.

Drucker, P. (2016). *strategic alliance: Formation, Implementation and Evolution* . Cambridge: Blackwell Publisher.

Dua'a Adnan, M., Shariah, A., Aljber, E. J., Al-amryeen, B., & Alghushami, A. (2022). The Impact of Strategic Planning on the Performance of Telecommunications Sector in Jordan. *Saudi J Bus Manag Stud*, *7*(2), 61-64.

Elmuti, D, & Kathewala, Y. (2011). *An overview of strategic alliances, Management decision, 39.*

Emami, A., Welsh, D. H., Davari, A., & Rezazadeh, A. (2022). Examining the relationship between strategic alliances and the performance of small entrepreneurial firms in telecommunications. *International Entrepreneurship and Management Journal*, 1-26.

Emore, C.W. (2007). *Business Research Methods* (3rd ed.). London: Homewood.

Fain, P. (2007). Vision for Excellence. *Chronicle of Higher Education*, *54*(6).

Field A. (2000). *Discovering Statistics using SPSS for Windows.* London, Thousand Oaks- New Delhi: Sage Publication.

Flint, D. J., Blocker, C. P., & Boutin Jr, P. J. (2011). Customer value anticipation, customer satisfaction and loyalty: An empirical examination. *Industrial marketing management*, *40*(2), 219-230.

Ford, H. & Noury, S. (2010). Telecom in Africa moving up to the next level. *African Business*, 24-26.

Forum, I. B. (2011). *Telecommunication regulation institute structures and responsibilities.* NewDelhi: Pearson.

Fraihat, B. A. M., Bataineh, M. T., Taha, I. B., & Mbeadeen, B. A. (2023). The Role of Strategic Management In Enhancing Competitive Advantage And Firm Performance In The Jordanian Telecom Industry. *Journal of Namibian Studies: History Politics Culture*, *33*, 1004-1022.

Frank, J. (2015). *Advertising* . London Uk: Pearson Education Limited.

Friedberg, E. (2010). *Local Order .The Dynamics of Organized Action.* Greenwich: CT: JAI Press.

Gachigo, S. M., Kahuthia, J., & Muraguri, C. (2019). Exploration innovative strategy and performance of the telecommunication industry in Kenya: A case of Safaricom Plc in Nairobi Metropolis. *International Academic Journal of Human Resource and Business Administration*, *3*(6), 299-319.

Gallego-Álvarez, I., Manuel Prado-Lorenzo, J., & García-Sánchez, I. M. (2011). Corporate social responsibility and innovation: A resource-based theory. *Management Decision*, *49*(10), 1709-1727.

Gilardi, F. (2005). Delegation to Independence Rgulatory Agencies in Western Europe. *Credibility, Political Uncertainty and Diffusion, in Braun, D. and Gilardi Deligation in Contemporary Democracies*. *The Annals of the American Academy of Political and Social Science*, *598*(1), 84-101.

Gitonga, T. (2003). *Innovation process and the perceived role of the CEO in the telecommunication industry*. Nairobi: Unpublished MBA project Nairobi: University of Nairobi.

Gujarati, D. N. (2012). *Basic Econometrics* (4th ed.). New Jersey: Prentice Hall.

Hair, JF. (2006).*Multivariate Data Analysis.* New Jersey: Prentice Hall. .

Harald, G. & Pantelis, C. (2010). On the relationship between telecommunications investment and economic growth in the United State. *International Economic Journal*, *19*(1), 3-9.

Henisz, G. (2002). *Foundations in strategic management* (3rd ed.). Mason: Thomson South Weston.

Henry, K. (2008). The drivers and Inhibitors of strategic execution, Gordon Institute of Business Studies. *Strategic management journal, 29*, 271-284.

Hitt, M. A., Carnes, C. M., & Xu, K. (2016). A current view of resource based theory in operations management: A response to Bromiley and Rau. *Journal of Operations Management*, *41*(10), 107-109.

Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Guest editors' introduction to the special issue strategic entrepreneurship: Entrepreneurial strategies for wealth. *Strategic management journal*, *22*(6/7), 479-492.

Hollensen, S. (2015). *Marketing Management: A relationship approach.* New Delhi: Pearson Education.

Hu, R. (2022, April). Research on Product Development of China's Telecommunication Market Based on Pricing Strategy. In *2022 7th International Conference on Social Sciences and Economic Development (ICSSED 2022)* (pp. 1487-1490). Atlantis Press.

Ikonya, JM. (2015). *Business strategies on the performance of telecommunication companies in Kenya*, Unpublished PhD thesis, Nairobi: Nairobi university.

Intwaza, V & Mulyungi, P. (2018). effects of corporate strategy on financial performance of MTN telecommunications company in Rwanda. *International Journal of Science and Research*, 2319-7064.

Ireri, D. K., Wasike, S., & Mungai, C. (2020). Innovative strategies and organizational performance: A case of Telkom Kenya Limited. *International Journal of Research in Engineering*, *10*(10), 20-26.

Jeong, V. (2012). *Principles of Public Administration: Malaysian Perspectives.* Kuala Lumpur: Pearson Publishers.

Jin, Z. H. (2014). Innovativeness and Performance: Evidence from manufacturing sectors. *Journal of strategic marketing* , 255-266.

John, D. & Mathew, J. (2012). *Strategy and leadership.* Boston: Oliver Wight Americas, Inc.

Jones, B. (2009). Perception of South African Leaders. *Southern African Business Review*, 51-69.

Kamande, W. (2010). *Competitive strategy adopted by mobile phone companies in Kenya.* Unpublished MBA Research Project, Nairobi: University of Nairobi.

Karami, A. (2003). *Strategic management in small and medium enterprises.* London: International Thomson Learning Publication. .

Kariuki, J. N. (2014). *The effect of strategic innovation on performance of mobile telecommunication firms in Kenya,* Unpublished PhD dissertation, Nairobi: University of Nairobi.

Kavale, S., Mugambi, F., & Namusonge, G. (2014). Strategic Management Determinants of Corporate Growthin Selected Micro-Finance Institutions in Kenya. *Global journal of commerce and management perspective, 3*(5), 95-119.

Keith, M. (2009). *Institutionalization of monitoring and Evaluation system to improve public sector management.* Washington: World Bank.

Kerlinger, H. (2014). *Foundations of Behavioural Research* (3rd ed.). New York: Wiley.

Kitchen, S. (2013). *Mastering Strategic Management.,*. Chicago: Flat World Knowledge.

Kithamba, JK. (2014). *Competitive strategy adopted by mobile service providers in Kenya* . Nairobi : Unpublished MBA Project, Nairobi: University of Nairobi.

Koi-Akrofi, G. Y., Koi-Akrofi, J., & Welbeck, J. N. (2013). Relationship marketing tactics and customer loyalty-a case of the mobile telecommunication industry in Ghana. *Asian Journal of Business Management, 5*(1), 77-92.

Kotakorpi, K. (2006). Access price regulation investment and entry in telecommunications. *International Journal of Industrial Organization, 24*(5), 1013-1020.

Kothari, U. (Ed.). (2019). *A radical history of development studies: Individuals, institutions and ideologies*. New Delhi: Bloomsbury Publishing.

Kothari. U.(2004). *Research Methodology: Methods and Techniques.* New Delhi.: Asia Publishing house.

Kozlenkova, I. V., Samaha, S. A., & Palmatier, R. W. (2014). Resource-based theory in marketing. *Journal of the academy of marketing science, 42*, 1-21.

Kwizera, Mico, Nayebare & Garba . (2018). The Impact of over the Top Service Providers in the Rwandan Telecommunications Market: An Analysis of Business Models. *Intersol Second International Conference* , (pp. 62-71). Kigali .

Lebans, C & Euske, J. (2011). Management and Marketing Challenges for the Knowledge society. *European Journal of Business and Strategic Management, 5*(2), 30-49.

Leigh, T. W., & Marshall, G. W. (2001). Research priorities in sales strategy and performance. *Journal of Personal Selling & Sales Management*, *21*(2), 83-93.

Leisen, B & Vance, C. (2001). On the relationship between telecommunications investment and economic growth in the United States and Germany. *Journal of Sociology and Social Policy, 39*(9/10), 796-811.

Lightfoot. (2013). *Competitive Strategy of Telecom Operators in post -3G Era Based on Industry Chain Value Stream.* Paris : Paris Atlantis press.

Lopes, R. H., Reid, I. D., & Hobson, P. R. (2007). *The two-dimensional Kolmogorov-Smirnov test.* London: Brunel University

Lumpkin, GT. (2013). *Strategic Management: Creating competitive advantages* . New York: McGraw-Hill Irwin.

Makau, N. (2012). *Strategic alliance and organizational competitiveness among commercial banks in Kenya: a case study of Kenya commercial Bank.* unPublished MBA project, Nairobi: University of Nairobi.

Makonyango, E., & Bichanga, W. (2015). Contribution of employee diversity management on job performance in Kenya Telecommunication

Industry. *International Journal of Social Sciences and Information Technology, 1*(5).

Malburg, C. (2007). *Strategic safari your complete guide through the wilds of strategic management* . United Kingdom: Prentice Hall.

Margarita.V. (2010). Importance of strategic alliance in company's activity. *Strategic management Journal, 9.*

Mastio, E., & Dovey, K. (2019). Power dynamics in organizational change: an Australian case. *International Journal of Sociology and Social Policy*, *39*(9/10), 796-811.

Mauwa, Namusonge & Onyango. (2016). Effect Of Capital Structure On Financial Performance Of. *European Journal of Business, Economics and Accountancy, 4.*

Mohamed, R., Ngui, T., Njambi, C., Ayako, A. B., Kamazima, B. K., & Mathenge, P. (2019). Business process outsourcing, leadership styles, strategic planning and organization productivity a case survey of telecommunication industry in Kenya. *The International Journal of Logistics Management*, *26*(1), 195– 214

Morgan, S. (2010). *The Execution Trap: Drawing a line between strategy and execution almost guarantees failure* . Boston : Harvard Business Review.

Mugo, P. (2020). Porter's five forces influence on competitive advantage in telecommunication industry in Kenya. *European Journal of Business and Strategic Management*, *5*(2), 30-49.

Mugo, P. C., & Macharia, J. (2020). Technological innovation and competitive advantage in telecommunication companies in Kenya. *International Journal of Research in Business and Social Science (2147-4478), 9*(5), 38-47.

Musembi, M.G. (2009). Marketing strategies and performance of telecommunication companies: a case study of Uganda Telecom. *European Journal of Business and Management*, *6*(4), 197-209.

Mutindi, UJM, Namusonge, G. S. & Obwogi, J. (2013). Effects Of Strategic Management Drivers On The Performance. *European Journal of Business and Innovation Research, 2*, 63-92.

Mwania M & Muganda N. (2011). A investigation on the relationship between information technology conceptualization and bank performance. *Kenya in AIBUMA Conference paper*. Nairobi: Kimathi University College of technology.

Mwizerwa, J., Mulyungi, P., & Rukia, A. (2018). Effect of Competitive Strategies on Market Penetration in the Telecommunication Industry in Rwanda-Case Study of Tigo Rwanda Ltd. *International Journal of Research in Management, Economics and Commerce*, *8*(5), 93-101.

Namusonge, G. S., Muturi, W., & Olaniran, O. (2016). The role of innovation on performance of firms on Nigerian stock exchange. *European Journal of Research and reflection in Management sciences*, *4*(1), 40-50.

Ndunge, M. M., Arasa, R., & Ombuki, C. N. (2019). Moderating Effect of Alliance Network on the Relationship between Competitive Strategies and Firm Performance in the Telecommunication Industry in Kenya. *American Based Research Journal*, *8*(09).

Njuguna, E. M., Mbithi, M., & Rintari, A. T. (2023). Influence of Technology Alliances on Performance of Telecommunication Organizations in Kenya: A Case of Safaricom Limited. *International Journal of Professional Practice*, *11*(5), 41-53.

Nyaga, G. N., Lynch, D. F., Marshall, D., & Ambrose, E. (2013). Power asymmetry, adaptation and collaboration in dyadic relationships involving a powerful partner. *Journal of supply chain management*, *49*(3), 42-65.

Nybakk. E & Jenssen I. (2012). Innovation strategy, working climate and financial performance in traditional manufacturing firms: An empirical analysis. *International Journal of Innovation Management.* 1*2*(1), 16-23.

O'Shannassy, T. (2012). Lessons from the evolution of the strategy paradigm. *Tim O'Shannassy School of management* . *2*(1), 16-23.

Odongo.E. (2008). Complexity Considerations and Market behaviour: 224-235. *The Rand Journal of Economic*, 224-235.

Odunlami & Ogunsiji . (2011). Effects of sales promotion as a tool on organizational performance. *Journal of Emerging Trends in Economics and Magazine Science*. *2*(1), 16-23.

Oglietti & Pontarollo. (2003). Regulatory Effectiveness: The Impact of Regulation and Regulatory Governance Arrangements on Electricity Industry Outcomes: A Review paper. *London Business School Regulation Initiative, Working paper*.

Ogunnaike, O., Ibidunni, A., & Adetowubo-King, S. (2014). Assessing the link between service innovation and performance in telecommunication industry. *Science Journal of Business and Management*, *2*(1), 16-23.

Okwako, A. (2013). *Strategic Planning and Performance of Public secondary Schools in Rarieda District, Kenya.* Unpublished PhD thesis Nairobi: Nairobi University .

Oliver, C. (2012). Sustainable Competitive Advantage: Combining Institute and Resource-Based View. *Strategic Management Journal*, 697-713.

Olmsted, H. & Jamison, M. (2001). *Rivary Through Alliances: Competitive strategy in the Global Telecommunications Market* . Florida : University of Florida.

Omongot, F. (2022). *Strategic Planning, Technological Adoption and Innovation in The Plastics Recycling Industry In Uganda*, Unpublished PhD dissertation, Kampalla: Makerere University Business School).

Osuri, B. A. (2015). *Factors determining women involvement in managerial positions within the telecommunication industry in Nairobi county, Kenya* Unpublished Masters thesis, Nairobi: University of Nairobi.

Oyedijo, A. (2013). Business Policy and Strategic Management Formulation. *European Journal of Business and management, 7*.

Pantelis, H. a. (2010). On the relationship between telecommunications investment and economic growth in the United State. *SSRN electronic Journal*. *3*(8), 25 - 45.

Pearce.J & Robinson R . (2011). Strategic Management formulation, Implementation and Control: An empirical analysis of process development. *Strategic management journal*, *6*(8), 255.

Philips. (2010). Managing for stakeholders utility functions and competitive advantage. *Strategic Management Journal*(31 (1)), 58-74.

Porter. (2001). Strategy and the Internet. *Harvard Business Review*, 62-78.

Preskill, H & Mack K. (2013). *Building strategic learning and Evaluation System for Your Organization.* Boston.

Putri, N. A. (2022). The Intersection Between Data Privacy and Competition Law in Zero-Price Market-Based Digital Platforms. *The Lawpreneurship Journal*, *2*(2), 172-187.

Qiuhong, F. & Tiorini, V. (2009). *Advertising and society: Contemporary scio-economic issues in advertising and public relations.* . Lagos: Raindrops Ltd.

Remneland Wikhamn, B., & Wikhamn, W. (2013). Structuring of the open innovation field. *Journal of technology management & innovation*, *8*(3), 173-185.

Robinson. (2014). *Out of minds: learning to be creative,* . Newyork: McGraw –Hill Irwin.

Samadi, Alghafis & Al-Zuman. (2018). Examining the effects of strategic management and organizational culture on organizational performance. *Management Sceince Letters*, 1363-1374.

Schindler, C. (2014). Research design & Methodology. *an International Journal of Social Sciences, 1*.

Schumacher, R. (2013). Deconstructing the theory of comparative advantage. *World Social and Economic Review, 2013*(2, 2013), 83.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. New York: John wiley & sons.

Short, K. (2013). *Mastering Strategic Management* . London: Flat World Knowledge

Sigalas, C. (2015). Competitive advantage: the known unknown concept. *Management Decision*, *53*(9), 2004-2016.

Simerson. K. (2011). Organizational information processing, competitive responses and performance in the United States domestic airline industry. *Academy of management journal*, 60-85.

Strydom, J. (2011). *Principles of Business Management* (2nd ed ed.). Cape Town: Oxford University Press.

Tella, N & Ahamefule, J. (2003). *Communications Infrastructure and Economic Growth* . New Delhi: Tata McGraw-Hill Publishing Company Limited .

Uwambayingabire, C., & Mulyungi, P. (2018). The Influence of Strategic Planning on Organizational Performance; Case Study Cogebanque Rwanda. *International Journal of Research & Review, 5*(6), 36-46.

Uwizeye, O., Namusonge G. S., Mugambi F., & Kule J., (2019) Influence of Strategic Management Drivers on the Growth of Coffee Export Processing Firms in Rwanda. Unpublished PhD thesis. Nairobi; Jomo Kenyatta University of Agriculture and Technology.

Vanhaverbeke, W., & Cloodt, M. (2014). Theories of the firm and open innovation. *New frontiers in open innovation, 256*.

Varadarajan, K. (2010). *Introduction to the Theory and application of data envelopment analysis* . New Delhi: Kluwer Academy Publishers.

Verboven, C. (2011). *Managing acquisitions: Creating value through corporate renewal.* New York: Free Press.

Waema, TM. (2017). *A supply side analysis of policy outcomes.* Research ICT Africa.: Nairobi: Kenya Telecommunications sector performance review.

Waiswa, B. E., Nduhura, A., Mugerwa, B., Settumba, J. P., Wanume, P., & Businge, H. (2016). Marketing Strategies and Market Performance of M-Sente a Mobile Money Product of Uganda Telecom Ltd. Retrieved from https://nru.uncst.go.ug/handle/123456789/7557

Wambua, J. & Mulyungi, P.. (2019). Effect of Strategic Quality Management Practices on Organizational Performance of Mobile Telecommunications Companies in Rwanda. *The International Journal of Innovative Research and Development*, 11-28.

Wang, H. L. (2014). *Theories for competitive advantage.* Australia: Wollongong.

Ward, J & Peppard, J. (2016). *The strategic management of information systems: Building a digital strategy* (4th edition ed.). New York: John Wiley and sons.

Waterhouse, P. (2014). Telecoms in Africa: Innovation and inspiring. *A journal for telecom, cable, satellite and executives, 17*.

Wheelen. T & Hunger J. (2007). *Strategic management and business policy* (11th ed.). New York: Prentice Hall Inc.

Winata, L., Mia, L., & Langmann, C. (2016). Strategic alliance, information and communication technology, and customer-related performance: the role of industry characteristics. *Contemporary Management Research*, *12*(3).

Worlu, C & Nkoro,.J. (2012). Access regulation, competition, and broadband penetration: An international study. *Telecommunications Policy*, *34*(11), 661-671.

Yano, J., & Matanda, J. (2021). Tourism-led growth hypothesis and economic growth in kenya. *International Journal of Economics, 6*(1), 1-22.

Yeager, V. A., Menachemi, N., Savage, G. T., Ginter, P. M., Sen, B. P., & Beitsch, L. M. (2014). Using resource dependency theory to measure the environment in health care organizational studies. *Health Care Management Review*, *39*(1), 50-65.

Young, R. D. (2013). *Perspective on Strategic Planning in the Public Sector: Institute for public service and policy research.* Carolina: University of South Carolina.

Zhou. K & Wu.F . (2010). Technological capability, strategic flexibility and product innovation . *Strategic management journal*, 547-561.

APPENDICES

Appendix I: Letter of Introduction

Dear Respondent,

My name is Joyce Kirabo and I am PhD student of Jomo Kenyatta University of Agriculture and Technology in the department of business and economics. I am conducting a research titled "Strategic management practices and performance of telecommunication industry in Rwanda". With your expertise in corporate administration and telecommunication management, you have been selected as one of the most experienced respondents who can provide reliable information about Strategic management practices and performance of telecommunication industry to give a clear picture about the practical strategic management practices and how they influence performance in the telecommunications industry.

The questionnaires require only 5 minutes to fill by indicating the extent to which you strongly agree, agree, not sure, disagree or strongly disagree with the statements provided in the subsequent sections of this questionnaire. I will pick the questionnaires as soon as you finish filling them. I hereby assure you of the level of professionalism and confidentiality in handling the information you will provide to me.

I would really appreciate your participation to this study and I would ask you to feel free to contact me as per the contacts below should you have any need for clarification on any vital issues concerning this particular study.

Thank you very much.

Yours Sincerely
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Appendix II: Questionnaire

SECTION A: SOCIAL DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Instructions: Kindly fill in the following and all the subsequent questions by putting a tick (√), mark (x) or number in the appropriate box that closely matches your view or opinion

What is your Gender?

a) Male ☐

b) Female ☐

1. Please indicate your age bracket

a) Less than 25 years. ☐

b) 26-35 ☐

c) 36-45 ☐

d) 46-55 ☐

e) 56 years and above ☐

3. Please what is your Level of education?

☐

b) Diploma

c) Bachelor's Degree ☐

d) Masters ☐

e) PhD ☐

4. For how long have you worked in the telecommunication industry?

a) Less than1 year ☐

b) 1-2years ☐

c) 3-4 years ☐

d) 5-6 years ☐

e) Above six years ☐

SECTION B: STRATEGIC PLANNING PRACTICE

Please indicate the extent to which you agree or disagree on the following statements of the implementation of strategic planning in your company

Use the scale; 1= strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=Agree, 5=strongly Agree

No	Item Statement	(1)	(2)	(3)	(4)	(5)
1	The firm has a Process of defining company's strategy or direction and making decisions on allocating its resources to pursue this strategy					
2	The firm has a Systematic process of envisioning a desired future and translating this vision into broadly defined goals and steps achieve them					
3	The organization formulates the strategic vision for the future in a timely manner					
4	The company has a framework for Evaluating and monitoring the overall strategic plan					
5	We regularly forecast internal and external development					
6	We always Specify the tactical "action" strategies to be accomplish					
7	The firm has a Smart Budgeting strategy to maximize resources and minimize costs					

SECTION C: STRATEGIC INNOVATION

Please indicate the extent to which you agree or disagree on the following statements of the implementation of strategic innovation in your company.

Use the scale; 1= strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=Agree, 5=strongly Agree

No	Item Statement	(1)	(2)	(3)	(4)	(5)
1	The company is always looking for innovative ways to improve on the Service delivered to our customers					
2	The company has a process of introducing new and cost-effective ways of doing things that create new demands and new market space					
3	The company is always investing in new and modern infrastructures to improve on the Service delivered to our customers					
4	The firm is quick to adopt new Technological advancements in the market					
5	The company always use internet and social media platforms to attract potential innovative man power in the firm					
6	A plan made by an organization to encourage advancements in either technology or service usually by investing in research and development activities					

SECTION D: STRATEGIC ALLIANCES

Please indicate the extent to which you agree or disagree on the following statements of the implementation of strategic alliance in your company.

Use the scale; 1= strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=Agree, 5=strongly Agree

No	Statement	(1)	(2)	(3)	(4)	(5)
1. a	The firm has always adopted Inter-organizational synergy to expand it operations					
2. b	Cooperation with other firms in the industry has brought about Low investment costs for the company					
3. c	Formation of development cooperation has brought a broad range of skills and expertise to the firm					
4. d	The formation of alliances has helped the firm in the Mitigation of market uncertainties through risk sharing					
5. f	The formation of alliances has help in enhancing stakeholder's satisfaction					
6. g	The formation of alliances has brought Operating efficiency and effectiveness in the company					

SECTION E: STRATEGIC MARKETING

Please indicate the extent to which you agree or disagree on the following statements of the implementation of Strategic Marketing in your company

Use the scale; 1= strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=Agree, 5=strongly Agree

No	Item Statement	(1)	(2)	(3)	(4)	(5)
1. a	The company always identifies one or more sustainable competitive advantages and allocate resources to explain them					
2. b	Our firm effectively differentiates itself from its competitors by capitalizing on its strength to provide consistently better value to customer than its competitors					
3. c	We have an overall game plan for reaching people and turning them to customers of the product or service that the business provides					
4. d	We have a long-term forward-looking approach to planning with the fundamental goal of achieving a sustainable competitive advantage					
5. e	We have a competitive Pricing strategy compared to our competitors					
6. f	The firm has always adopted the Sales promotion strategy to expand our market base					
7. g	The firm has always adopted the Advertising strategy to expand our market base					

PART TWO

SECTION F: LEGAL AND REGULATORY FRAMEWORK

Please indicate the extent to which you agree or disagree on the following statements of the implementation of legal and regulatory framework in your company Use the scale;

Use the scale; 1= strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=Agree, 5=strongly Agree

No	**Statement**	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**
1. a	Our employees are aware and adheres to the laws and regulations governing the telecommunications industry in Rwanda					
2. b	The laws and regulations favours the operation of our telecommunications industry in Rwanda					
3. c	The investments regulations do favours the operation of our telecommunications industry in Rwanda					
4. d	The firm is always able to comply with the tax laws in the country					
5. e	The company always comply with labour laws in the country					

PART THREE: PERFORMANCE OF THE TELECOMMUNICATION INDUSTRY

Please indicate the extent to which you agree or disagree on the following statements of the implementation of legal and regulatory framework in your company

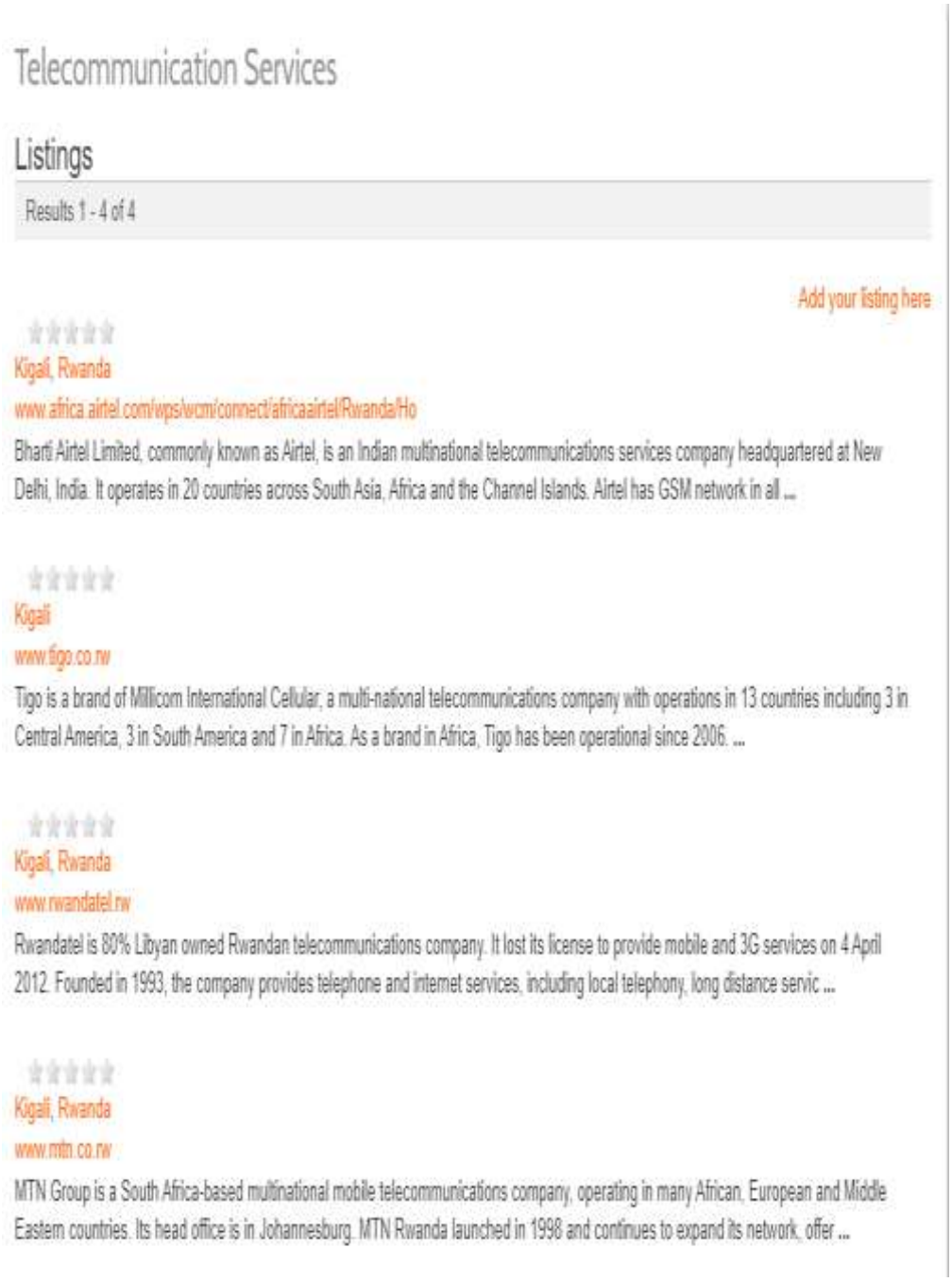
Use the scale; 1= strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=Agree, 5=strongly Agree

No	Item Statement	(1)	(2)	(3)	(4)	(5)
1. a	The firm's financial return on assets has improved significantly over the duration of our operations in the country					
2. b	Returns on equity has really improved significantly over the duration of our operations in the country					
3. c	Sales growth has gone up over the duration of our operations in the country					
4. d	Cash flows has improved over the duration of our operations in the country					
5. e	Our firm enjoys a huge service market share and customer retention					
6. f	The company has experienced increased new and loyal customers subscriptions to our products					
7. g	Our customers are always satisfied with our products					

Appendix III: Secondary Data Collection Sheet

Individual Variables	**2017**	**2018**	**2019**	**2020**
Profit after Taxes				
Returns on Assets				
Returns on Equity				
Total				

Appendix IV: List of Telecommunication Companies In Rwanda



Telecommunication Services

Listings

Results 1 - 4 of 4

Add your listing here

Kigali, Rwanda

www.africa.airtel.com/wps/wcm/connect/africaairtel/Rwanda/Ho

Bharti Airtel Limited, commonly known as Airtel, is an Indian multinational telecommunications services company headquartered at New Delhi, India. It operates in 20 countries across South Asia, Africa and the Channel Islands. Airtel has GSM network in all ...

Kigali

www.tigo.co.rw

Tigo is a brand of Millicom International Cellular, a multi-national telecommunications company with operations in 13 countries including 3 in Central America, 3 in South America and 7 in Africa. As a brand in Africa, Tigo has been operational since 2006. ...

Kigali, Rwanda

www.rwandatel.rw

Rwandatel is 80% Libyan owned Rwandan telecommunications company. It lost its license to provide mobile and 3G services on 4 April 2012. Founded in 1993, the company provides telephone and internet services, including local telephony, long distance servic ...

Kigali, Rwanda

www.mtn.co.rw

MTN Group is a South Africa-based multinational mobile telecommunications company, operating in many African, European and Middle Eastern countries. Its head office is in Johannesburg. MTN Rwanda launched in 1998 and continues to expand its network, offer ...

Appendix V: Research Permit

AIRTEL RWANDA LIMITED

Airtel Building, Remera, KG 17 Ave, Kigali
Rwanda

17/08/2020

To: Ms Kirabo Joyce
Reg No: HD433-C010-1683/2016.

Dear Madam,

REF: Acceptance letter to conduct academic research from Airtel premises
Reference is made to your letter in which you requested permission to conduct research from our premises.
In order to support you to accomplish your academic research for an award of a PhD titled; "Influence of Strategic management practices and performance of telecommunication industry in Rwanda" of Jomo Kenyatta University of Agriculture and technology,
I hereby accept your request and I will request you to provide us with a copy of your findings at the end of the study
I wish you all the best in your academic endeavor

Yours faithfully

Andry Raisimbason
HR Director