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Department of Business Administration

ENVIRONMENTAL INFLUENCE ON BUSINESS PERFORMANCE IN THE NIGERIAN TELECOMMUNICATIONS INDUSTRY, FOCUSING ON MTN USING PESTEL ANALYSIS

Master Thesis

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Supervisor

Asst. Prof. Dr. Mehdi SAFAEI

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DECLARATION

I hereby declare that in the preparation of this thesis, scientific ethical rules have been followed, the works of other persons have been referenced in accordance with the scientific norms if used, there is no falsification in the used data, and any part of the thesis has not been submitted to this university or any other university as another thesis.

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SUMMARY

Telecommunication is a vital part of today's world. It is one of the major ways we connect to the world around and outside of us. Phone calls, text messages, internet access and financial transactions in one way or another have been made possible through telecommunications. In many African countries like Nigeria, MTN remains one of the major service providers. A position they have maintained for more than 20 years. Consequently, the study of how these Businesses perform using PESTEL Analysis can provide a valuable perspective on factors that influence their operations.

Nigeria, located in the Western part of the continent, is Africa's most populous country. It is a nation with a large youth population that depends majorly on their mobile phone for calls, messages, internet access, and banking services. In the year 2001, MTN began its operation in the country, starting with 2G networks, before introducing the 3G, 4G, and 5G networks respectively over the years to improve the quality of service and meet global standards.

This study analyses the political, economic, social, technological, environmental, and legal framework of the country and how they affect MTN's business performance through data collection techniques like online questionnaires and statistical computing like Reliability test and regression analysis. The study involved the use of a diverse dataset of 69 respondents, which included 25 employees, of whom 13 were male. 11 were female, 1 did not disclose their gender, and 44 customers where 61% were male, and 39% were female. The sample also draws participants from various regions of the country, different age groups, and various educational backgrounds.

This thesis revealed very interesting information, including the role of technological innovation in MTN's business performance. Data from the 69 samples showed that political, economic, social, environmental, and legal factors played a relatively small role in influencing MTN's business performance. While technological innovation played a major role in how well the business performs. The study also showed multi-collinearity among the various factors.

The limited data on the study has also led to some limitations on the study of Environmental Influence on Business Performance in Nigeria

Telecommunications Industry, namely, the inability to determine how older age groups and people with less education perceive MTN's performance, since the dataset was predominantly filled with younger participants and respondents with at least a Bachelor's degree.

Keywords: Pestel, Telecommunications, performance, technology, participants, business, Regression.

ÖZET

Telekomünikasyon, günümüz dünyasının hayati bir parçasıdır. Dünyayla bağlantı kurmanın en önemli yollarından biridir. Telefon görüşmeleri, kısa mesajlar, internet erişimi ve finansal işlemler, bir şekilde telekomünikasyon sayesinde mümkün olmuştur. Nijerya gibi birçok Afrika ülkesinde MTN, 20 yılı aşkın süredir koruduğu önemli hizmet sağlayıcılarından biridir. Sonuç olarak, bu işletmelerin PESTEL Analizi kullanılarak nasıl performans gösterdiğinin incelenmesi, faaliyetlerini etkileyen faktörler hakkında değerli bir bakış açısı sağlayabilir.

Afrika kıtasının batı kesiminde yer alan Nijerya, Afrika'nın en kalabalık ülkesidir. Genç nüfusu büyük ölçüde cep telefonlarına bağımlı olan bu ülke, aramalar, mesajlar, internet erişimi ve bankacılık hizmetleri için mobil telefonlarını kullanmaktadır. MTN, 2001 yılında ülkede faaliyetlerine 2G ağlarıyla başlamış, yıllar içinde hizmet kalitesini artırmak ve küresel standartlara ulaşmak için sırasıyla 3G, 4G ve 5G ağlarını kullanıma sunmuştur.

Bu çalışma, ülkenin siyasi, ekonomik, sosyal, teknolojik, çevresel ve yasal çerçevesini ve bunların MTN'nin iş performansını nasıl etkilediğini, çevrimiçi anketler gibi veri toplama teknikleri ve güvenilirlik testi ve regresyon analizi gibi istatistiksel hesaplamalar yoluyla analiz etmektedir. Çalışmada, 25'i çalışan (13'ü erkek, 11'i kadın, 1'i cinsiyetini belirtmedi) ve 44'ü müşteri (%61'i erkek, %39'u kadın) olmak üzere toplam 69 katılımcıdan oluşan çeşitli bir veri seti kullanılmıştır. Örneklem, ülkenin çeşitli bölgelerinden, farklı yaş gruplarından ve çeşitli eğitim geçmişlerinden katılımcıları da içermektedir.

Bu tez, MTN'nin iş performansında teknolojik yeniliğin rolü de dahil olmak üzere çok ilginç bilgiler ortaya koymuştur. 69 örneklemden elde edilen veriler, siyasi, ekonomik, sosyal, çevresel ve yasal faktörlerin MTN'nin iş performansını etkilemede nispeten küçük bir rol oynadığını göstermiştir. Buna karşılık, teknolojik yenilik, işletmenin ne kadar iyi performans gösterdiğinde büyük bir rol oynamıştır. Çalışma ayrıca çeşitli faktörler arasında çoklu doğrusal bağıntı olduğunu da göstermiştir.

Çalışmaya ilişkin sınırlı veriler, Nijerya Telekomünikasyon Sektöründe Çevresel Etkinin İşletme Performansı Üzerindeki Rolü araştırmasında da bazı sınırlamalara yol açmıştır; özellikle, veri setinin ağırlıklı olarak genç katılımcılar ve en az lisans derecesine sahip kişilerden oluşması nedeniyle, daha yaşlı yaş gruplarının

ve daha az eğitimli kişilerin MTN'nin performansını nasıl algıladığını belirleyememe durumu söz konusudur.

Anahtar Kelimeler: PESTEL, Telekomünikasyon, performans, teknoloji, katılımcılar, işletme, Regresyon.

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ABBREVIATIONS

MTN **:** Mobile telecommunications Network

SPSS **:** Statistical package for social sciences

PESTEL **:** Political, Economic, Social, Technological, Environmental and Legal

ANOVA **:** Analysis of Variance

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PREFACE

Understanding the Environmental Influence on Nigeria's Telecommunications Industry has been a long-term goal for me. This work is a product of both passion and a journey to comprehending the factors that shape business performance in the Nigerian telecommunication industry. In the course of this thesis, I have gained insight from both stakeholders and users. I have also engaged in other academic works relating to this study to gain the necessary wherewithal to carry out this project.

All through this challenging journey, I have learnt a great deal, which in turn nourished this study. From steering the complex exercise of data collection to balancing academic responsibilities, these steps taught me valuable lessons to persevere and reason things critically before implementation and execution. This would also have been impossible without the help and support of many people.

I am forever grateful to my supervisor, Dr Mehdi Safaei, whose guidance has made this work a possibility. His expertise and knowledge brought more life to my research. A big thank you to my faculty for their support and for providing me with an excellent research environment. I am eternally grateful to my family and friends for their patience with me while I worked on this research. I do hope my work inspires more people to pursue further study in this field

INTRODUCTION

The telecommunications industry has become one of the key drivers of economic growth, technological advancement, and digital transformation across the world. In Nigeria, the sector has experienced remarkable growth over the past two decades, improving communication, financial services, and internet accessibility. Among the leading operators, MTN Nigeria has maintained a dominant position through continuous investment in network infrastructure and innovative digital services.

Despite this growth, the performance of telecommunications companies is influenced by several external environmental factors beyond their control. Political decisions, economic conditions, social changes, technological advancements, environmental concerns, and legal regulations all shape business operations and strategic decision-making. Understanding these factors is essential for organisations seeking to remain competitive in a rapidly changing business environment.

This study examines the environmental factors influencing MTN Nigeria's business performance using the PESTEL framework. The research investigates how Political, Economic, Social, Technological, Environmental, and Legal factors affect the company's performance and strategic decisions. Data collected from MTN employees and customers are analysed using appropriate statistical techniques to evaluate the relationship between these environmental factors and business performance.

The findings of this study are expected to contribute to the understanding of strategic management within the Nigerian telecommunications industry while providing practical recommendations for business managers, policymakers, researchers, and other stakeholders.

CHAPTER ONE

BACKGROUND TO THE STUDY

1.1 Background to the Study

Politically, MTN, the South African business, has long been established in many African, European, and Asian Countries. In contrast to many African countries, Europe and Asia have achieved a great measure of political stability, while the African continent continues to battle these problems, as stated by Sutherland (2015). The ongoing Biafran agitations that resulted in the destruction of public and private institutions in the eastern part of Nigeria, as well as the unrest caused by attacks by numerous insurgent groups in the country's north. According to Brück et al. (2011), the ongoing abduction spree in western Nigeria has also been a cause of grave concern and has proven to slow down the expansion of businesses in the nation, irrespective of industry or region. MTN is charged with serious corruption in Nigeria. Ifechukwu (2022) reported that MTN Nigeria became involved in a dispute with Nigerian regulatory authorities in 2018 after the Central Bank questioned the illegal transfer of about $8.1 billion from the country. The study further stated that the Attorney General of the Federation accused the company of owing more than $2 billion in unpaid taxes.

Ogbonna (2017) observed that in times when the economy seemed tough, MTN struggled to retain its customers, and these struggles were the main cause of a decrease in users. MTN’s revenue from digital activities also fell by almost 41%, even though outgoing calls and data sales rose by a great margin. Additionally, the establishment has experienced severe cases of battery theft. Reports show that around 700 batteries have been stolen from its facilities. MTN's expenses will rise to almost 7 million Rands as a result. The rise of other telecommunication giants like GLOBACOM, Nigeria's first indigenous telecommunication firm, saw to the drop in the dominance of MTN in Nigeria (Uchenna, 2011).

According to Chiazor (2022), MTN in Nigeria faced complaints about voice and internet issues due to technical glitches and a broken fibre. To address the issue, the company provided 500 Mb of data as freebies. MTN also conducts social campaigns and offers educational programs to empower locals through its Y'ello Care program. According to Olojede et al. (2013), since the country's population is large yet its

literacy rate is low, educating the public requires a significant investment of resources. Infrastructure, community social services, and the high cost of living in the nation are only a few of the many societal issues influencing MTN Nigeria (Chioma & Agbaenyi, 2021).

From a technological standpoint, according to Mokhesi (2019), MTN must continuously invest in technology if the demand for its services is to grow in the telecom industry. Being aware of this, MTN continues to invest in its Digital Finance and mobile banking products. The Telcom service now owns a super-agent license, which allows it to establish itself in Nigeria's Fintech industry. Following its success in deploying the 3G and 4G networks, the business has also commenced testing on the 5G network in South Africa(Skosana et al., 2024).

From a legal perspective, the dispute between MTN and the Central Bank of Nigeria is one of MTN's greatest legal encounters. The Apex Bank had alleged that the company had illegally transferred $8 billion from the country. It was penalized $53 million when it was discovered to have violated the country's laws. This led to the drop in MTN's share price to about 67% of its initial price. More than $15 billion in fines had been settled in Nigeria alone (Ifechukwu, 2022).

Dang et al. (2021) describe MTN's sustainability approach as built around three pillars: sustainable societies, eco-responsibility, and sustainable economic value. These pillars guide the company's goal of operating in a responsible and long-lasting way while supporting its broader business objectives.

The company also focuses on widening access to modern technology through digital inclusion and affordable communication services for customers. Alongside this, MTN introduced a three-year initiative in selected countries, including Nigeria, aimed at supporting women by improving their access to digital tools and technology.

1.2. Statement of Problem

The Nigerian telecommunications industry has experienced rapid growth, contributing to GDP, employment, digital transformation, and global market access. However, business performance remains influenced by political instability, economic uncertainties, technological disruptions, environmental challenges, and legal inconsistencies (Adeleke et al., 2020; NCC, 2021).

Though leadership style plays a huge role in shaping strategic planning and day-to-day operations, the level of innovation within organisations is also another major factor. External factors like political instability, weak economic conditions, technological shifts, social inequality, and inconsistent law enforcement are also another set of variables that influence business performance (Johnson, Scholes & Whittington, 2017; Egbunike & Okerekeoti, 2018; Okoli & Irabor, 2021).

Studies concerning the environmental factors that affect strategic performance in Nigerian telecom firms are lacking due to a lack of a thorough analysis of these factors using an integrated framework such as PESTEL (Onuoha, 2012; Iwu et al., 2016).

PESTEL Analysis, while focusing on MTN, offers a clear understanding of how environmental factors impact Nigeria's telecommunications sector as the market evolves.

1.3. Statement of Purpose

In today's Nigeria, how well the telecommunications sector performs through job creation, economic growth, and technical innovation all strongly influences the development of the country. Nigeria's telecommunication industry, in the last 20 years, has seen tremendous growth. This is due to increasing mobile phone usage, internet penetration, and digital services. Outside its internal operations, the sector is also affected by external variables, which it has no control over. Using PESTEL Analysis, this study seeks to investigate the environmental factors influencing Business performance in the telecommunications industry, with a focus on MTN, which is one of the earliest and most patronised service providers in the country.

The goal of this study is to examine and then understand how variables out of the control of Nigeria's telecommunication establishments affect the business performance of the entity using PESTEL Analysis. PESTEL Analysis, a strategic management tool, helps identify the Political, Economic, Social, Technological, Environmental, and Legal Factors influencing an industry.

1.4. Research Questions

- Are MTN's business performance and strategic decisions affected by political changes in Nigeria?

- What economic conditions in Nigeria influence the operational efficiency and profitability of MTN?
- How do social trends and user behaviour inform market decisions and operations in Nigeria?
- Does technological advancement give MTN a competitive edge in the Nigerian telecommunications sector?
- What legal regulations and compliance issues in Nigeria affect MTN's business operations?
- To what degree do environmental variables such as sustainability practices and climate change influence MTN's business performance in Nigeria?
- How can MTN leverage PESTEL analysis to enhance its strategic planning and decision-making processes in the Nigerian telecommunications market?

1.5. Importance of Study

The findings of this study will be beneficial to:

- Telecommunications Industry: The study will help telecommunications organisations predict changes in the macroenvironment and build plans to avoid risks and capitalise on opportunities by offering a thorough examination of the external factors driving business performance.
- Policymakers: By comprehending the function of laws, rules, and political considerations, policymakers may better foster an atmosphere that supports the expansion of the industry at large.
- Investors: Those looking to enter or grow in the Nigerian telecom business will learn about the main outside variables that may have an impact on the companies' performance.
- Academic: The study will contribute to the body of knowledge on business performance, strategic management, and the telecommunications sector, particularly in light of Africa's developing markets.

1.6. Hypothesis

- Political instability in Nigeria negatively impacts MTN's strategic decision-making.
- Inflation impacts MTN's profitability negatively.
- Investment in 5G technology enhances MTN's market share in Nigeria.
- Customer perception of MTN's corporate social responsibility positively influences their loyalty.
- Regulatory laws affect MTN's competitiveness in the industry.

1.7. Literature Review

Adeleke (2009) focused on outlining the macroenvironmental and industry factors influencing MTN Nigeria’s e-business strategy, along with the implications of future developments. The work did not include a PESTEL-based examination of the macroenvironmental factors affecting MTN Nigeria. Abe (2024) examines MTN Nigeria's prospects in the areas of population growth, telecommunications sector liberalisation, financial and digital innovation, middle class expansion, unexplored market niches, and strategic alliances. It highlights the necessity of adaptability to changing market circumstances by contrasting findings with previous research. In an effort to advance international business research, Okeakwalam (2020) studied how culture affects MTN Nigeria's internationalisation as a global company based in Nigeria.

Nene and Moraka (2023) state that their research examines the impact of legal and regulatory constraints on eco-friendly businesses, such as those in the telecommunications industry. The study showcases the importance of making proper value-added tax (VAT) adjustments because failing to do so could lead to overbilling or underbilling, which could affect income, trigger complaints from customers, and damage one's reputation. According to Nene (2023), with an emphasis on the end-to-end telecommunications business process, this paper investigates how the VAT hike has affected the functioning of Mobile Telephone Networks (MTN). With a sole focus on South Africa, it draws attention to the intricacy of telecom strategies.

Using a case study and descriptive research methodology, Hieu and Nwachukwu (2019) investigate strategic management methods in Nigerian mobile

telecommunications companies. The findings indicate that long-term goals, strategic analysis, vision, and mission are essential for effective strategy development. The implementation of a plan depends on a number of factors, including organisational structure, human resources, financial resources, employee dedication, and organisational policies.

Given the aforementioned, it is imperative to conduct a thorough investigation that will yield a wealth of new information that can be used as a model for the Nigerian telecom sector and how businesses can improve their connectivity with the internal and, more crucially, external environments. To examine how external factors influence the telecom industry, this study focuses on MTN, a key industry player, using PESTEL as an analytical tool.

1.8. Limitations

- Applicability & Sample Size: The sample size of 69 participants comprising of 25 employees and 44 customers is regarded as a limitation to this research but it does not affect the validity of this study. The outcome of this study may vary in its application to other telecom players in the country. The distinct positions, ownership structures, or operational strategies of other networks (such as Airtel, Glo, or 9mobile) may add another layer of complexity not considered since this research exclusively focuses on MTN Nigeria.

- Nature of the External Environment: PESTEL elements are time-sensitive, particularly in unstable markets like Nigeria. Changes in politics, economic shifts, and regulatory updates may drastically change the external environment within a short period.

- Subjectivity in Data Interpretation: A number of PESTEL study components, particularly the social and political aspects, mostly rely on qualitative data and expert opinions. This adds a level of subjectivity that could influence how the environment is interpreted in relation to performance.

- Overlap Between PESTEL Factors: The PESTEL factors may overlap and be dependent on one another. For instance, it is challenging to separate the effects of each distinct element on MTN's performance because political actions can have both legal and economic ramifications.

1.9 Definition of Key Terms

1.9.1. PESTEL

Francis Aguilar (1967) introduced the early version known as ETPS, which stands for Economic, Technical, Political, Social, in his famous book titled Scanning the Business Environment. PESTEL is a technique for examining the effects of the macroenvironment on organisations, according to Johnson et al. (2008). Environmental scanning is a crucial strategic procedure, according to Henry Mintzberg (1994).

1.9.2. Macro-Environment

In PESTEL, the external environment that influences strategic choices due to political, economic, social, technological, environmental, and legal issues is referred to as the macro environment. According to Johnson et al. (2008), it includes wide-ranging environmental factors that affect every company in a sector and are frequently examined using PESTEL.

1.9.3. Business Environment

According to Johnson (2008), the business environmental influences represented by PESTEL have a considerable impact on the corporate environment. These outside factors that influence company opportunities and risks and have an impact on how companies operate, compete, and make decisions are identified by PESTEL analysis.

Key Performance Indicators (KPIs)

In PESTEL analysis, KPIs are quantitative indicators that convert macroenvironmental elements into data that can be measured and analysed. According to Kaplan and Norton (1996), KPIs are essential for measuring performance, coordinating strategy with quantifiable results, and keeping an eye on the outside world.

1.10. Data Collection Technique

The study is both descriptive and exploratory in its nature. It will include quantitative research approaches, which involve questionnaires, SPSS, 69 valid responses, including 25 employees and 44 customers. Relevant scholarly works,

industry reports, and government publications will also be used to validate and support the findings.

Primary data includes surveys. Surveys: Distribute questionnaires to MTN employees, management, and customers to gather insights on perceptions of environmental influences.

Secondary data includes literature review and market analysis reports. Literature Review: Assess published studies on PESTEL analysis, telecommunications industry reports, and MTN's annual reports. Market Analysis Reports: Utilise reports from telecommunications regulatory authorities and market research firms.

1.11. Sampling Technique

- Target Population: Employees of MTN, customers, industry experts, and regulatory officials.
- Sample Size: A sample of approximately 69 respondents for surveys, which includes 25 employees and 44 customers.
- Sampling Method: Stratified sampling to ensure representation from different levels within MTN and various customer demographics.

1.12. Research Instruments

With the use of the PESTEL framework, these research tools will offer a complete method for obtaining quantitative data, enabling an in-depth examination of the environmental factors influencing MTN's commercial performance in the Nigerian telecom sector.

Questionnaires

Purpose: To gather quantitative data from a broad group of respondents, including MTN employees, customers, and industry stakeholders. The questionnaire contains closed-ended items measured on a five-point Likert scale to capture views on political, economic, social, technological, legal, and environmental influences on MTN. Demographic items cover age, gender, occupation, and respondents' connection to MTN. Responses will be processed using IBM SPSS Statistics, applying descriptive statistics and regression techniques. Data collection will be done through online forms and paper-based questionnaires distributed to selected participants.

1.13. Validity and Reliability of Instruments

Questionnaires – Validity

Content Validity: Ensure that the questionnaire items cover all relevant aspects of the PESTEL framework. This can be achieved by consulting experts in telecommunications and business performance to review the questionnaire. Construct Validity: Use established scales and measures where possible. For example, if measuring customer satisfaction, utilise validated scales from previous research.

Questionnaires – Reliability

Internal consistency will be assessed using Cronbach's alpha to measure how closely related the questionnaire items are within each construct. A coefficient of 0.70 and above will be treated as an acceptable level of reliability for the scale. Stability over time will be checked through test–retest reliability. A small group of respondents will complete the questionnaire twice at different points in time, and the correlation between both sets of responses will be calculated to determine consistency of the instrument across time.

1.14. Ethical Considerations

- Ensure informed consent from all participants.
- Maintain confidentiality and anonymity of respondents.
- Use data solely for research purposes and disclose any potential conflicts of interest.

1.15. Expected Outcomes

- A comprehensive understanding of how environmental factors influence MTN's business performance.
- Strategic recommendations for MTN to navigate challenges and leverage opportunities in the Nigerian telecommunications market.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The literature review is a thorough examination of the body of knowledge concerning the influence of the environment on corporate establishment performance, specifically, the telecom industry. It goes further to establish factors that affect business operations through PESTEL Analysis.

2.1. Concept of Business Performance in the Telecommunication Industry

Business Performance Definition

According to Franco-Santos and Bourne (2005), management researchers across different fields like marketing, information systems, human resources, organizational behavior, strategy management, operations management, and management accounting and control, have improved the concept of performance measurement, although claims by Bulut and Can (2013)argues that the absence of a universally accepted definition leads to misunderstandings and clearly limits the potential for generalizability and comparability of research in this area.

Business performance in the telecom industry is a complex endeavour. It entails making a profit, satisfying the user, network efficiency, creativity, and adapting to changes in regulations and technology. According to Kumbhar (2011) and Adeleke and Aminu (2012), it demonstrates how successfully a telecom provider, such as MTN Nigeria, adjusts to its macroenvironment in order to achieve long-term success.

Key Performance Indicators (KPIs)

KPI's are an important part of corporate establishments. In the telecom industry, they help track business performance and improve decision-making. They also help spot service issues, which in turn adjust the services to client expectations in a rapidly evolving market. To meet company goals, stay competitive, and boost customer loyalty, companies like MTN rely on KPIs in one way or another.

Customers Focused KPI

Churn Rate measures the proportion of customers who stop using a service over a given period. Net Promoter Score (NPS) and Customer Satisfaction (CSAT) are used

to evaluate brand loyalty and overall customer experience. Yusuf and Adeniran (2019) assert that customer satisfaction and churn are key performance indicators that are highly significant in the telecom industry since they are a direct reflection of service quality and competitive position.

Financial KPI

The average amount of money made per subscriber is known as the Average Revenue Per User (ARPU). Operational profitability before taxes and depreciation is known as the EBITDA margin. Revenue Growth Rate monitors the growth or contraction of a business. ARPU and EBITDA are important performance indicators that are used globally to evaluate the financial health of telecom companies, according to Osei (2014).

Operational KPIs

Call Setup Success Rate (CSSR) is the percentage of successfully connected phone calls. WCR, which stands for Dropped Call Rate, indicates how reliable a network is. Mean Time to Repair (MTTR) measures how well technical issues are handled. Operational KPIs like DCR and MTTR are essential for assessing the quality-of-service delivery and infrastructure capability, claim Adeleke and Aminu (2012).

Networks and Technological KPIs

Uptime/Network Availability measures the amount of time the service is continuously accessible. Data Throughput/Latency measures the speed and responsiveness of mobile internet and data services. Network KPIs like latency and throughput are now essential to telecom performance evaluation in the era of digital convergence, claim Maguire and Ojiako (2007).

Challenges and Opportunities in the Telecom Sectors of the Developing Countries

In emerging nations like Nigeria, the telecommunications industry is essential to promoting economic expansion, sociopolitical advancement, and digital inclusion. This industry does, however, have a number of structural, legal, technological, and market-related difficulties in addition to chances for investment, innovation, and sustainable growth.

Challenges

• Poor Infrastructure: In rural locations like villages, service delivery remains a problem due to inadequate broadband coverage, a lack of stable power supplies, and poor network backbone equipment (Shah and Khan, 2019; Mbarika et al., 2003).

• Regulation and Policy Inconsistency: Licensing procedures can be inconsistent, taxes can be high, and changes to telecom regulations can sometimes be frequent. All these can discourage foreign direct investment and hinder growth (Adeleke and Aminu, 2012).

• Exorbitant Operating Expenses: Areas with unstable electricity can impose extra operational expenses. From security to telecom tower maintenance to diesel-powered power backups, the price of keeping services running can be challenging for businesses (Esselaar, Gillwald, & Stork, 2007).

• Unequal Digital Access and Low Adoption: When one combines the high cost of digital devices and Inequalities in income, one can see how this can lead to unequal digital access. On the other hand, a low digital literacy rate, in addition to the other factors mentioned, can also lead to low adoption (James, 2011).

Opportunities

• Expanding Internet and Mobile Penetration: Establishing avenues for services like e-learning, e-health, and mobile money, as broadband continues to surpass fixed-line connections (Donner, 2008).

• Growing Need for Digital Services and Data: As the youthful, tech-savvy demographic increases, so does the demand for data-intensive services (ITU, 2020).

• Public-Private Partnerships (PPPs) and Investment: Partnerships with governments and international investors present more opportunities for infrastructure development, especially in the areas of 5G networks and fibre optic deployment (World Bank, 2016).

• Regional Integration and Policy Reforms: Initiatives to standardise ICT rules throughout regional economic blocs are producing a more stable and scalable market environment (Gillwald and Moyo, 2016).

2.2. Analysis of the Macro Business Environment

Introduction to the PESTEL Model

The PESTEL model is an analytical tool used to investigate Political, Economic, Social, Technological, Environmental, and Legal variables and their influence on a subject. In this study, it is used to analyse those Environmental influences on MTN Nigeria's business performance. Due to technological advancement, economic changes, regulations, and an expanding customer base, the Nigerian telecom industry has remained an extremely volatile environment (Yusuf & Adeniran, 2019; Adeleke & Aminu, 2012; Maguire & Ojiako, 2007).

Background of the PESTEL Model

Like in other industries, telecom businesses are prone to heavy influence from environmental factors. This study specifically examines those influences on MTN's business performance in Nigeria using PESTEL analysis. Political elements such as the role of taxation, government policy, and regulatory measures are applied to measure the degree to which politics affects MTN's operation. Consumer purchasing power, exchange rates, and inflation are the major economic elements applied in the study. Socially, it examines digital inclusivity, social preference, and demographic changes. Technological elements of the analysis include Innovation, network developments, and infrastructure. The legal subfactors include licensing, competition, and regulatory compliance, while sustainability practices and climate-related concerns are the elements of the Environmental category.

Application and Limitations

Application

Though external factors beyond the control of the establishment may influence its performance, PESTEL analysis helps MTN to systematically evaluate these factors to the degree it affects the business outcomes of the company. For instance, investment opportunities and consumer demand can be heavily affected by political instability and economic downturns. This exercise also aids MTN in finding new opportunities to

expand and adapt to the changing environment, like implementing new technological developments, focusing on underserved rural markets, and supporting regulatory incentives that aid innovation. Service expansion and broader market reach are other added benefits to this analysis.

Limitations

- Absence of Quantitative Insight and Depth: PESTEL may offer a comprehensive perspective, but it may lack precise data-driven insights (Yükel, 2012).

- Static Nature in a Dynamic Environment: A PESTEL analysis is an instance of a particular time period and can become out of date in a place like Nigeria, where the environment is continually changing at a fast pace.

- Subjective Interpretation: The significance of the factors involved and their impact are highly dependent on the assessment of the analyst.

- Inadequate for Internal Performance Assessment: PESTEL ignores the internal company dynamics and capabilities. Hence, it lacks the ability to assess internal performance.

2.3. Review of Pestel Factors in the Telecommunications Sector

2.3.1. Political Factor

The political environment of the country has a huge impact on businesses. In sectors like the telecom industry, this can influence operators' performance and choices. In developing nations such as Nigeria, businesses may often experience government interference, draconian regulations, and inconsistent policies, which affect the success of companies.

Policy Instability and Regulatory Oversight: When governments implement regular modifications to telecom laws, license requirements, and spectrum distribution, investors become unsettled and long-term planning becomes less considered. According to Maguire and Ojiako (2007), telecom companies in sub-Saharan Africa frequently function under unstable regulatory frameworks that undermine investor trust and stifle innovation. Industry regulations in Nigeria are

overseen by the Nigerian Communications Commission (NCC) and its rulings, ranging from fines to license requirements, greatly impact MTN's business operations.

Political instability and Insecurity Challenges: Ethnic conflicts, political challenges, and security concerns in Northern Nigeria can cause disruptions to telecom infrastructure, delay growth plans, and raise operating expenses. Telecom companies have reported service interruptions and infrastructure sabotage in conflict-prone areas, which sabotage business continuity (Asongu and Nwachukwu, 2016).

National Policies and Government Intervention: Government policies can hinder growth in many industries. In the telecom sector, policies on national broadband plans, regulations concerning foreign direct investment (FDI), and digital inclusion efforts can either spur or hinder growth (Gillwald & Moyo, 2016).

2.3.2. Economic Factors

Like many other sectors, economic elements like GDP growth, inflation, interest rates, currency rates, consumer purchasing power and unemployment rates directly influence operational stability and profitability of telecommunication firms.

Exchange Rate Volatility and Dependency on Imports: Nigeria is a highly import-dependent nation. Telecom infrastructures like fibre optics, cell towers, and network equipment are frequently imported. Due to fluctuations in the exchange rate, pricing and capital investment plans can be heavily affected (Mbarika et al., 2003). In recent years, the Nigerian Naira has faced severe depreciation. This lowers profits on services priced in local currency and raises MTN's operating costs.

Inflation and Consumer Affordability: When the rate of inflation is high, the consumer's purchasing power reduces. To adjust to these changes, telecom companies increase the price of internet and mobile services. This action, combined with high inflation, makes these services more expensive for the typical consumer. The average revenue per user (ARPU) and market demand as a whole are severely affected (Adeleke and Aminu, 2012).

GDP Growth and Investment in Telecoms: The relationship between GDP growth and telecom infrastructure investment shows operators like MTN are more inclined to make investments in new technologies (like 4G and 5G) and expand their services during times of economic growth (Esselaar, Gillwald, and Stork, 2007).

2.3.3. Social Factors

Understanding how social components like behavioural, cultural, educational, and demographic trends influence market dynamics and corporate strategy is vital for telecom firms to improve user experience, target services, and bridge the digital divide. The PESTEL model analyses these characteristics to assess the degree to which they influence MTN's business performance and institutional choice.

Demographic Trends and Mobile Adoption: Nigeria has a large young population. The median age is about 18. This creates an enormous market for internet and mobile services. In recent years, there has been a high rise in mobile subscriptions; this is often blamed on the tech-savvy, digitally oriented group (Donner, 2008).

Rural areas and low-income communities in the country continue to experience low digital literacy despite widespread mobile phone usage. This limits the adoption of services such as mobile banking, internet-based platforms, and e-governance systems (James, 2011).

Urban-Rural Divide and Access to Services: The difference in availability and quality of service in urban and rural areas continues to be a problem. While urban areas have largely enjoyed the benefit of Smartphones and 3G/4G services, rural communities still lack the most basic mobile services (Adeleke and Aminu, 2012).

2.3.4. Technological Factors

Technology is the backbone of many industries. In the telecom sector, it drives innovation, service delivery, infrastructure, and competitiveness. A company's efficiency, network quality, customer experience, and market reach in Nigeria's telecom industry are greatly influenced by technological development.

Mobile Network Evolution: The quality of a service, how fast it is, and its connectivity are a direct result of technological advancement in mobile networks. Urban areas around the country continued to experience increased reception of 4G and 5G networks due to smartphone penetration, while rural areas are largely dominated by 2G and 3G networks (Esselaar, Gillwald, and Stork, 2007).

Innovation and Digital Service Platforms: Operators such as utilising technology to provide cloud services, e-learning, telemedicine, and mobile money. These value-

added services increase revenue sources and improve customer experience (Donner & Tellez, 2008).

Cybersecurity and Technological Risks: The proliferation of digital platforms raises the possibility of fraud, data breaches, and cyberthreats. Telecom providers need to make investments in encryption, network security, and legal compliance (Chigona and Licker, 2008).

2.3.5. Environmental Factor

The ecological and sustainability-related issues that affect how businesses function are referred to as environmental factors in the PESTEL framework. These elements include energy use, the effects of climate change, electronic waste (e-waste), and adherence to environmental laws in the telecommunications industry.

Energy Consumption and Carbon Footprint: Energy is essential for base stations, data centres, and switching facilities in telecommunications networks. Telecom companies frequently use diesel-powered generators in nations with erratic electrical supplies, such as Nigeria, which raises their operational costs and carbon emissions (Houghton, 2010).

Climate Change and Infrastructure Vulnerability: Flooding, intense heat, and storms are examples of climate-related disasters that can harm telecom infrastructure and cause service interruptions. This is an increasing operational risk in areas of Nigeria that are prone to flooding (Liyanage and Pasqual, 2013).

Green Technologies and Renewable Energy: To cut down on emissions and fuel use, some telecom companies are implementing green BTS (Base Transceiver Stations) powered by solar or hybrid energy. MTN Nigeria has tested solar-powered locations in isolated locations (Samarajiva, 2009).

2.3.6. Legal Factors

The laws, rules, policies, and legal enforcement systems that control corporate activities are referred to as legal factors in the PESTEL framework. These include tax laws, intellectual property rights, data protection and privacy regulations, licensing policies, and competition laws in the telecommunications industry.

Licensing and Regulatory Frameworks: In Nigeria, telecommunications companies are required to acquire operating licenses and adhere to regulations established by the Nigerian Communications Commission (NCC). The market entry and extension strategies of telecom operators in sub-Saharan Africa are influenced by telecom licensing regimes and regulatory structures (Gillwald & Esselaar, 2004).

Data Protection and Privacy Laws: Laws controlling data security, consumer privacy, and digital monitoring are applicable to telecom companies as a result of growing digitisation. Telecoms in Nigeria are required to protect user data under the Nigeria Data Protection Regulation (NDPR) (Oyedemi, 2020).

Taxation and Legal Disputes: For MTN Nigeria, legal disputes over taxes and regulatory fines have presented serious difficulties. Notably, operations have been hampered, and investor trust has been eroded by the 2015 SIM card registration fine and tax conflicts with Nigerian authorities (Rim & Adesanya, 2018).

2.4. Conceptual Framework and Review of Related Studies

According to the framework, MTN Group's operating conditions are influenced by macroenvironmental influences, which are defined by PESTEL dimensions. This eventually affects the company's performance outcomes. The PESTEL aspects are the independent variables (IVs) in this case, while MTN's performance is the dependent variable (DV). Strategy, innovation, and regulation quality are optional mediators or moderators.

Environmental performance in conjunction with corporate social responsibility (CSR): According to Nsikan et al. (2015), who looked at MTN Nigeria's CSR policies, competitive market performance and corporate image are favourably correlated with eco-friendly operations such as waste recycling, clean product design, and community health programs.

Krishnakumar (2021) claims that an examination of the legal issues surrounding telecommunication SIM cards shows how legal and regulatory factors affect business performance, especially in encouraging more compliance-oriented operational behaviour.

Similar environmental risk variables, such as energy inefficiencies, inadequate infrastructure, and rising regulatory requirements, have been linked to telecom firm

performance in studies conducted in Kenya, Ghana, and Tanzania (Gregory & Sovacool, 2019; Pueyo, 2018).

2.5. Theoretical Framework

Three interconnected hypotheses serve as the foundation for this study and advocate for using the PESTEL framework to analyse how the environment affects business performance in the telecommunications industry.

Contingency Theory: According to contingency theory, the external environment has an impact on an organisation's effectiveness, especially in the Nigerian telecom industry. To be competitive, MTN needs to adjust to changes in the political, economic, and technological spheres. These factors are contained in the PESTEL model, and represent what influences can help or hurt business performance (Donaldson, 2001). External problems like political uncertainty, economic volatility, technological advancement, and regulatory implementations are factors that can greatly impact MTN Nigeria's performance.

Institutional Theory: DiMaggio and Powell (1983) describe institutional theory as how external social institutions, such as rules and conventions, influence organisational behaviour and its decision-making process. Market forces, regulatory pressures from organisations like the NCC, societal expectations, and changing consumer behaviour all have an impact on MTN's performance in Nigeria.

PESTEL Framework: The PESTEL framework, combined with institutional and contingency theories cited above, provides a strategic and analytical mechanism for MTN Nigeria to evaluate how well the company has adapted to institutional pressures and environmental influences (Yükel, 2012)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Research Design

The study involved a quantitative research methodology along with a descriptive survey research design. By providing an environment to obtain comprehensive information about the experience, perception, and opinions of the participants regarding the subject matter, the survey approach was deemed appropriate.

The research also relied on quantifiable data from carefully structured questionnaires given to both MTN Nigeria employees and MTN Nigeria users. To determine the degree to which PESTEL factors influence business outcomes, a variety of statitical analysis, including reliability testing, descriptive statistics, and regression analysis, were carried out.

The PESTEL framework, due to its extensive application in research and analysis in the environmental and strategic management fields, was selected for this study. This analytical tool can be applied in assessing how environmental factors outside the control of businesses influences organizational success.

3.2. Area of the Study

MTN Nigeria is a key player in Nigeria's telecommunications industry. The organisation was chosen for this study due to its market reach, duration in the country, and its impact on the country's socio-economic landscape. As Nigeria, by its sheer position as one of the biggest telecom markets on the continent, continues to evolve with continual changes in political, economic, social, technological, environmental, and legal settings, the focus on MTN gives the study analytical credibility.

3.3. Population Of The Study

The population of the study is divided into two primary groups. MTN's employees have the operational and organisational knowledge they have of the company. MTN users, who would go on to assess operational performance from a service-consumption perspective and experience the grounded quality of the MTN services they patronise.

In summary, the target population of the study were users who utilise mobile services like voice calls, SMS, mobile data, and digital services, as well as MTN employees across different departments and locations within Nigeria. The research, by choosing this 2 groups, aimed to obtain a balanced analysis of how the environmental factors discussed throughout this thesis influence MTN's business performance.

3.4. Sample Size and Sampling Technique

Sample Size

The survey had 69 respondents in total, including MTN Nigeria workers and clients. Twenty-five employees and forty-four customers provided the final valid replies used in the analysis. The sample size was deemed sufficient for regression modelling and exploratory quantitative analysis within the parameters of the study.

Sampling Technique

The study used a mix of convenience and selective sampling methods. To choose the employee responders, purposeful sampling was employed. Because MTN Nigeria's organisational processes, business performance, and environmental challenges were the specific subjects of the study. Convenience sampling was employed to choose customer respondents because of the questionnaire's accessibility and participants' desire to answer it. Because telecom clients are geographically scattered and probability sampling is challenging given time and resource constraints, this method seemed suited.

3.5. Data Source

The main method of gathering data was by giving MTN Nigeria workers and clients standardised questionnaires. The primary tool for gathering information on respondents' opinions of the political, social, economic, technological, environmental, and legal aspects influencing business performance was the questionnaire.

3.6. Instrument For Data Collection

A structured questionnaire created by the researcher served as the main tool for gathering data. To gather demographic data and respondents' opinions about how PESTEL elements affect business success, the questionnaire was broken up into

pieces. As seen in Table 1 below, the majority of the questions on the questionnaire were closed-ended and scored on a five-point Likert scale.

Table 1. Likert Scale Interpretation

Scale	Interpretation
5	Strongly Agree
4	Agree
3	Undecided
2	Disagree
1	Strongly Disagree

The questionnaire has two main sections and was created in an organised manner. Section A: Demographic Information gathered the respondents' age, gender, occupation, years of experience, educational background, and affiliation with MTN Nigeria. Political, economic, social, technical, environmental, legal, and business performance indicators were among the topics covered in Section B: PESTEL Variables and Business Performance.

Validity Of The Instrument

The questionnaire was examined by my supervisor and another specialist to guarantee content and face validity. The clarity, relevance, appropriateness, and organisation of the questionnaire items were enhanced by their observations and suggestions. To make sure the instrument appropriately reflected the study's goals, ambiguous questions were changed, and unnecessary items were eliminated. As a result, the instrument was deemed appropriate for assessing how environmental issues affect company performance in Nigeria's telecoms sector.

Reliability Of The Instrument

The Cronbach's Alpha coefficient was employed to evaluate the questionnaire constructs' internal consistency. This was chosen because the study variables were assessed using comments from a multi-item Likert scale. To verify that the items in each scale consistently measured the same notion, a reliability study was carried out independently for each construct. Alpha values that were 0.70 or higher were deemed

acceptable, 0.80 or higher were deemed good, and 0.90 or higher were deemed excellent.

Method Of Data Collection

Two separate questionnaires were created and shared among the 2 goups involved. The first questionnaire, which targeted MTN workers, was issued to employees through offline and online means. Users, on the other hand, were issued the other questionnaire using a variety of approaches, which included online groups and face-to-face interactions. The purpose of the study was explained to both groups, and where assured that there response would be used for academic purposes. The participants of the study were charged with honesty and neutrality, as they participated on their own free will. After data collection, the gathered questionnaires were subjected to data cleaning, validation, and analysis.

Method Of Data Analysis

The collected data were analysed using both descriptive and inferential statistical techniques with the support of the Statistical Package for Social Sciences (SPSS).

Descriptive Statistics

The demographic profile of the respondents and their opinions about the study variables were presented using descriptive statistics, such as frequencies, percentages, tables, and charts. These analyses assisted in identifying important trends in the data and provided a clear picture of the sample composition.

Reliability Analysis

The Cronbach's Alpha test was used to evaluate the reliability and internal consistency of the several constructs assessed in the questionnaire.

Multiple Regression Analysis

Multiple regression analysis was employed to investigate how Political, Economic, Social, Technological, Environmental, and Legal factors affected business performance. For the employee data, the model was formulated as:

Business Performance = f (Political, Economic, Social, Technological, Environmental, Legal).

However, for the customer dataset, the social factor was dropped from the regression model because it showed unacceptable reliability levels during the earlier reliability assessment.

The regression equation was expressed as: $BP = \beta0 + \beta1PF + \beta2EF + \beta3SF + \beta4TF + \beta5ENVF + \beta6LF + \varepsilon$, where BP = Business Performance, PF = Political Factors, EF = Economic Factors, SF = Social Factors, TF = Technological Factors, ENVF = Environmental Factors, LF = Legal Factors, $\beta0$ = Constant, $\beta1–\beta6$ = Regression coefficients, and ε = Error term.

Several key statistical measures were applied when interpreting the regression outputs. These included R and R^2 to assess the model's explanatory power, Adjusted R^2 to evaluate overall model fit, ANOVA F-statistics to test the significance of the model, Beta coefficients to determine the relative contribution of each variable, p-values for assessing statistical significance, and the Variance Inflation Factor (VIF) to check for multicollinearity. A significance level of 0.05 was set as the threshold for hypothesis testing.

3.7. Ethical Considerations

Throughout the whole research process, ethical guidelines were strictly adhered to. Before agreeing to fill out the questionnaire, each respondent received enough and clear information about the study's goals, and participation remained entirely optional. Every participant was guaranteed complete confidentiality and anonymity, and no one was coerced into disclosing any private or delicate information. Furthermore, all data gathered was utilised exclusively for scholarly research.

3.9. Limitations of the Study

The sample size of 69 participants comprising of 25 employees and 44 customers is regarded as a limitation to this research but it does not affect the validity of this study also due to its characteristic leaning towards certain educational classes and areas, may not totally account for all the realities of the PESTEL influences on business performance. Lack of sufficient response from users in rural communities and employees with less educational background may skew the analysis towards how a particular group of people perceives the environmental influence on operational

outcomes. Also, the nature of PESTEL restricts its analysis to only external variables, and so it does not assess the dynamics of MTN's internal operations.

3.10. Summary

The research approach used in the study is described in this chapter. Within a quantitative framework, a descriptive survey approach was used. Both consumers and workers were given structured questionnaires to complete in order to collect the necessary data, which were then analysed using multiple regression analysis, reliability testing, and descriptive statistics. All things considered, the technique provided a clear and organised way to evaluate how PESTEL elements affect business success while providing a strong foundation for the in-depth empirical results covered in the next chapter.

CHAPTER FOUR

DATA ANALYSIS & RESULTS

This chapter is the result of a statistical analysis of the study. This analysis will be presented in two parts. The first part describes the participants who participated in the study. It presents information like gender, age, level of education, department work experience, and geographic location. The second infers the conclusion of the analysis using reliability testing and regression analysis. It analyses how PESTEL factors influence business performance both on their own and collectively. The chapter also discusses model fit, explanatory power, coefficient interpretation, and multicollinearity.

4.1. Employee Description

This section presents information on the participants from questionnaires given to 25 MTN employees.

Table 2. Employee Demographic Distribution (N = 25)

Variable	**Category**	**Frequency (%)**
Gender	Male	52.0%
	Female	44.0%
	Other/Prefer not to say	4.0%
Age Group	Under 25	12.0%
	25–34	52.0%
	35–44	24.0%
	45 and above	4.0%
	Others	8.0%
Education Level	High School	4.0%
	Bachelor's Degree	64.0%

	Master's Degree	28.0%
	PhD or above	4.0%
Years of Work Experience	Less than 1 year	20%
	1–3 years	28%
	4–6 years	20%
	More than 7 years	24%
	Unspecified	8%
Department	Customer Service	44.0%
	Marketing/Sales	12.0%
	IT/Networks	8.0%
	HR/Admin	8.0%
	Technical/Engineering	4.0%
	Other	24.0%
Region	South Nigeria	56.0%
	West Nigeria	16.0%
	East Nigeria	16.0%
	North Nigeria	4.0%
	Unspecified	8.0%

The demographic features of the participants break down the employee results for easy understanding and assessment. It contains 25 employees with information on their gender, age, education, department, years of experience, regional location, and level of satisfaction with the organisation.

Male participants slightly outnumber female participants. The table above shows that 52% of respondents were men, while 44% identified as women. The remaining

4% chose not to disclose their gender. Though the gap between male and female is not a huge one, it is important to note this, as a reasonable gap would reshape the data.

Consistent with the country's young population, a large portion of the participants were youths and young adults. 52% of participants were between the ages of 25 and 34. 24% of them fell between 35 and 44. Participants under the age of 25 were 12% of the study, while 4% of them were over the age of 45. Again, the large number of younger participants in the study should be noted. People in this age range are more likely to consistently engage with digital tools as well as operational technology. Their knowledge of how technology affects performance is grounded in firsthand experience.

A huge portion of the participants have a tertiary education. This is analytically significant since an educated workforce is more capable of arriving at reasonable conclusions about the influence of environmental factors on business performance. While only 4% of participants concluded high school, 64% of them held a Bachelor's degree, 28% a Master's, and 4% a PhD or higher.

The Customer Service department makes up almost half of the participants at 44%. This is because they are the frontline of service delivery. Their regular interaction with users exposes them to how system performance influences customer interaction and business outcomes. Marketing/sales represent 12% of the participants, while IT/Networks and HR/Admin made up 8% of the participants, respectively. The remaining 24 % are participants from other departments in the company.

The work experience of the participants was fairly distributed. 28% had between one and three years, 24% had more than seven, 20% each had less than one year or between four and six years, and 8% were unspecified. The distribution captures perspectives from employees still learning organisational systems alongside those with years of institutional knowledge.

The regional distribution of participants leans towards Southern Nigeria. It is worth noting that this is not a national representation of the sample, but rather a reflection of operational hubs. 56% of participants were based in Southern Nigeria, 16% each in Western and Eastern Nigeria, while participants from Northern Nigeria made up 4% of the sample. The remaining 8% did not specify their location.

The majority of the participants showed satisfaction with the tools and systems made available for their daily work. The employee sample is made up of young people who are well educated, moderately experienced, and work in a customer-oriented position. These features provide the necessary context for interpreting the regression findings that follow.

4.2. Employee Reliability

To confirm that each scale consistently measured the same underlying concept, reliability testing was conducted for each PESTEL construct using Cronbach's Alpha, before applying regression analysis. Consistent with analytical standards, values at or above 0.70 indicate acceptable reliability. 0.80 and above is good. And above 0.90 is excellent.

Table 3. Employee Reliability Statistics

Construct	No. of Items	Cronbach's Alpha	Interpretation
Political	7	0.909	Excellent
Economic	7	0.882	Good
Social	7	0.882	Good
Technological	6	0.919	Excellent
Environmental	7	0.864	Good
Legal	7	0.859	Good
Business Performance	4	0.907	Excellent

Every PESTEL factor involved in the analysis exceeded the 0.70 minimum. The political factor was measured at 0.909, making it excellent. The economic and social factors each returned a value of 0.882; this is good according to Cronbach's standard. The environmental and legal factors were measured at 0.864 and 0.859, respectively.

In carrying out the reliability test on the technological factor, one item was removed as it showed inconsistencies with the others. This action purified the scale

and improved its consistency. Across the remaining 6 items, the technological factor returned a value of 0.919, an excellent score according to Cronbach's standard.

Finally, measuring the Business Performance returned an excellent value of 0.907. It is noteworthy to establish the fact that only 4 items were used in this measurement. 3 of the items were removed as they proved to be redundant, therefore making the result unrealistic. These findings, after data cleaning, validation, and measurement, confirm that every factor of the PESTEL model used was internally consistent and suitable for use in the regression analysis.

4.3. Employee Regression

Following the employee reliability test, this section presents the multiple regression results for the employee sample. The analysis assesses how the PESTEL factors collectively and individually predict business performance. The section further presents the results of the analysis across four dimensions, which include the overall explanatory power, its statistical significance, the individual coefficient interpretation, and multicollinearity diagnostics.

These findings are not without their limitations. The analysis returned multicollinearity among social, environmental, and legal factors. However, these factors were retained because removing them would fragment the PESTEL model and compromise the study's theoretical foundation. One should exercise caution when dealing with their coefficients.

4.3.1 Model Summary and Explanatory Power

As shown by the model summary in Table 4.3a, the relationship between the combined set of independent variables and the business performance is a strong one. It holds a coefficient of determination (R^2) with a value of 0.771. This means that the 6 PESTEL variables account for 77.1% of the changes in business performance. That is a huge influence on the organisation's operation.

The Adjusted R^2 with a value of 0.694, as seen in Table 4.3a, is the more meaningful of the two measurements. It accounts for the number of PESTEL factors relative to the sample size of 25 noted at the beginning of this chapter, thereby reducing noise from the calculations. An Adjusted R^2 of 0.694 shows that the explanatory power is not inflated by the number of PESTEL variables involved.

Table 4. Employee Model Summary

Model	R	R Square	Adjusted R^2	F	Sig.
1	0.878	0.771	0.694	10.092	.000

4.3.2. Model Significance (ANOVA)

Looking at the Employee ANOVA Results in Table 4.3 b, the F value of 10.092 confirms that the 6 PESTEL factors affect a significant change in Business performance as $F > 1$. Also, at $p < 0.001$, the ANOVA results go further to show that these changes are not a product of chance. Finally, the Value of the regression sum of squares of 18.932 against that of the residual of 5.628 in Table 4.3 b shows the model captures considerably more changes in the dependent variable than it leaves unexplained.

Table 5. Employee ANOVA Results

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	18.932	6	3.155	10.092	<0.001
Residual	5.628	18	0.313		
Total	24.560	24			

4.3.3. Interpretation of Regression Coefficients

The regression coefficients in Table 4.3c provide insight into the unique contribution of each PESTEL factor.

The analysis of the dataset in line with the PESTEL model shows that the Technological factor is the only statistically significant variable that strongly influences Business Performance. With a strong positive standardised coefficient ($\beta = 0.883$, $p < 0.01$), the technology change will result in a strong effect on Business Performance outcomes. Therefore, the improvements in technological infrastructure, digital systems, and operational capability are directly related to how well the business will perform.

The other PESTEL factors, like Political, Social, and Legal factors, have a negative, but statistically insignificant effect on Business performance. With a coefficient of β = -0.130, -0.117, and -0.332, respectively, these variables independently have no measurable effect on Business performance. On the other hand, the economic and environmental factors indicated a positive, but statistically insignificant effect. They both record a coefficient of $\beta = 0.182$ and 0.339, respectively. It is worth noting that the Environmental factor is moderate in its value, but still insignificant when operating independently.

Table 6. Employee Coefficients Summary

Variable	Beta	Significance	Interpretation
Political	-0.130	Not Significant	No measurable effect
Economic	0.182	Not Significant	Weak positive effect
Social	-0.117	Not Significant	No measurable effect
Technological	0.883	Significant ($p < 0.01$)	Strong positive effect
Environmental	0.339	Not Significant	Moderate but insignificant
Legal	-0.332	Not Significant	No measurable effect

4.3.4. Multicollinearity Diagnostics

To further validate the findings, multicollinearity diagnostics were conducted using the Variance Inflation Factor(VIF) values. This was done to measure the degree of correlation that exists among the PESTEL factors.

Table 7. Employee Multicollinearity Diagnostics

Variable	VIF	Interpretation
Political	2.124	Acceptable
Economic	4.372	Moderate
Social	7.439	High

Technological	4.306	Acceptable
Environmental	6.814	High
Legal	7.779	High

According to Table 4.3d, the findings showed that political and Technological factors are within acceptable limits as their effect is mildly inflated due to low multicollinearity. While economic factors with a VIF value of 4.372 have a moderate multicollinearity, the social, environmental, and legal indicates high multicollinearity, with VIF values > 5, making it difficult to assess the effect each variable independently has on business performance.

4.4. Customer Description

Table 8. Customer Demographic Distribution (N = 44)

Variable	**Category**	**Frequency (%)**
Gender	Male	61.36%
	Female	38.64%
Age Group	Under 25	22.73%
	25–34	52.27%
	35–44	15.91%
	45 and above	9.09%
Education Level	High School	4.55%
	Bachelor’s Degree	77.27%
	Master’s Degree	15.91%
	PhD or above	2.27%
Location	Urban	65.91%

	Suburban	27.27%
	Rural	6.82%
Length of Network Usage	Less than 1 year	2.27%
	1–3 years	9.09%
	4–6 years	34.09%
	More than 6 years	54.55%
Services Used	Voice Calls	84.09%
	SMS	70.45%
	Mobile Data	95.45%
	Mobile Money/Fintech	11.36%

The demographic features in Table 4.4a above, like those of the employee sample, offer background information on the participants who took part in this study. A total of forty-four MTN customers across different genders, ages, educational backgrounds, and geographic locations participated in the survey. In the course of their participation, customers also shared how long they have used the network, and the type of service they mostly utilise.

Compared to the employee sample, the customer gender distribution shows more male participants. 61.36% than female participants at 38.64%. This gap may, however, reflect broader patterns in network usage within this population.

Age, like the employee sample, followed a similar pattern. 52.27% were between 25 and 34, 22.73% under 25, 15.91% between 35 and 44, and 9.09% aged 45 or older. Again, like the employee age distribution, this reflects the country's huge young population, who are the most active users of internet services, social networks, and digital communication tools.

The Customer Education levels were significantly high, even though fewer people had a PhD or higher. 77.27% of participants held a Bachelor's degree, while 15.91% had completed a Master's degree program. 2.27% held a PhD, and the

remaining 4.55% held a High School qualification. Educated participants are more likely to have sharper expectations, since their perceptions of business performance come from a deliberate assessment.

The Geographic distribution favours residents in urban and suburban areas, which respectively make up 65.91% and 27.27% of the entire sample. Rural areas, however, make up just 6.82%.

54.55% participants have been using the MTN network for more than six years, 34.09% have been customers for 4 - 6 years. Since long-term customers have a rich experience with interacting with the network, it is safe to trust their judgments to be informed and grounded in their experience with MTN.

Internet and data services were the most used services. This is consistent with the activities of a young internet-oriented demographic. 95.45% of participants favoured internet and data services, eclipsing other services like phone calls at 84.09%, SMS at 70.45%, and Mobile money and Fintech at 11.36%. , far ahead of Voice Calls at 84.09%, SMS at 70.45%, and Mobile Money or Fintech at 11.36%.

4.5. Customer Reliability

To establish consistency on each PESTEL factor, a Reliability test was carried out on these factors using Cronbach's Alpha. In line with the same method applied during the analysis of the employee dataset, each factor was tested independently.

Table 9. Customer Reliability Statistics

Construct	No. of Items	Cronbach's Alpha	Interpretation
Political Factors	5	0.748	Acceptable
Economic Factors	3	0.770	Acceptable
Technological Factors	6	0.851	Good
Environmental Factors	7	0.788	Acceptable
Legal Factors	7	0.770	Acceptable
Business Performance	4	0.897	Good

Every PESTEL factor measured cleared the 0.70 threshold. Two items, which proved to be inconsistent, during the measurement of the political factor, were removed. The remaining 5 items returned a value of 0.748. Also, during analysis, the items used to measure the Economic factor were reduced to 3, as 4 deflated the value to levels below the acceptable measures. The remaining 3 returned a Cronbach's Alpha value of 0.770. Though the three items used have shown to be a limitation, Three items are a limitation, the value returned by the remaining items proved to be valid enough to be added to the analysis.

Technological factors, while retaining just 6 items, returned a Cronbach's Alpha value of 0.851. The one element that was removed implied the factor was becoming redundant. The result of the technological factor on the customer sample shows consistency with the employee dataset, which indicates that improving technological innovation and implementation greatly influences business performance.

The Social Factors were excluded from the customer regression entirely. The returned Cronbach's Alpha value during the reliability test fell below the minimum acceptable value of 0.70. This shows that the items used to assess the impact of the variable on MTN business performance failed to consistently measure the same concept across the customer sample. This may be because the dynamic of the social realities manifest themselves differently in the customer experience when compared to the employees'. Despite the exclusion of the social factor, every other PESTEL factor showed consistency,

4.6. Customer Regression

Following the reliability test, the section presents the multiple regression results for the customer sample. The analysis investigates how PESTEL factors predict MTN's Business Performance based on customer responses. It is noteworthy to recall that the social factor was excluded for reasons stated in section 4.5.

4.6.1. Model Summary and Explanatory Power

The model summary in Table 4.6a indicates a somewhat strong relationship between the combined PESTEL factors and business performance. The findings imply that the five factors used in the analysis together account for 52.5% of the change in business performance, according to responses from 44 MTN customers who

participated in the survey. The Adjusted R^2 of 0.462 holds reasonably well as it relates to the sample size of 44 participants.

Compared to the employee model, the explanatory power has a lower value, and that difference deserves more than a passing note. How customers assess business performance is shaped by other complex factors such as service recovery experiences, pricing perceptions, and peer comparisons that are outside the scope of the PESTEL model.

Table 10. Customer Model Summary

Model	R	R Square	Adjusted R^2	F	Sig.
1	0.724	0.525	0.462	8.388	.000

4.6.2. Model Significance (ANOVA)

The ANOVA results according to Table 4.6b indicate that the overall regression model is statistically significant, as $F = 8.388$ and $p < 0.001$ indicate that the 5 PESTEL factors used in this analysis have significant changes in MTN business performance. These changes, according to the result of this analysis, are not subject to chance.

Table 11. Customer ANOVA Results

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	13.369	5	2.674	8.388	<0.001
Residual	12.113	38	0.319		
Total	25.482	45			

4.6.3. Interpretation of Regression Coefficients

The regression coefficients provide insight into the unique contribution of each PESTEL variable while controlling for the effects of the other variables in the model.

Technological Factors were again the only statistically significant predictor on MTN Business performance, returning $\beta = 0.699$ at $p < 0.05$. In line with the

observations in the employee sample, the change in technology will result in a strong effect on Business Performance outcomes. Therefore, the improvements in technological infrastructure, digital systems, and operational capability are directly related to how well the business will perform.

The Political and economic factors showed negligible influence on the company's business performance. With Beta values of 0.077 and 0.180, respectively, one can conclude that independently, they have no reasonable influence on MTN business performance. Economic Factors and legal factors, however, respectively returned beta values of -0.083 and -0.028, which, though negative independently, have no significant impact on the business performance of the establishment.

Table 12. Customer Coefficients Summary

Variable	Beta	Significance	Interpretation
Political	0.077	Not Significant	No measurable effect
Economic	-0.083	Not Significant	No measurable effect
Technological	0.699	Significant ($p < 0.05$)	Strong positive effect
Environmental	0.180	Not Significant	Weak positive effect
Legal	-0.028	Not Significant	No measurable effect

4.6.4. Multicollinearity Diagnostics

To further validate the findings, multicollinearity diagnostics were conducted using the Variance Inflation Factor(VIF) values. This was done to measure the degree of correlation that exists among the PESTEL factors.

Table 13. Customer Multicollinearity Diagnostics

Variable	VIF	Interpretation
Political	1.495	Acceptable
Economic	1.441	Acceptable
Technological	2.047	Acceptable

Environmental	1.104	Acceptable
Legal	2.118	Acceptable

All predictor variables, as seen in Table 4.6d, recorded VIF values well below the commonly accepted threshold of 5.0. These results indicate that the PESTEL factors do not overlap and do not exhibit any serious multicollinearity concerns. This observation strengthens the validity of the customer regression model and supports the conclusion that the strong technological influence on MTN's Business Performance is not due to excessive multicollinearity with other PESTEL factors.

4.7. Summary of Findings

The results across both datasets point in the same direction. Technological factors were the only statistically significant PESTEL factors that strongly influence MTN's business performance in both the employee and customer regression models. No other PESTEL factor attained significance in either model.

A treasure trove of analytical insight can be observed from the consistency of this whole analysis. Both the employee sample, whose observation approached the study from an internal outlook of operations, and the customer sample, which took an external approach, arrived at the same conclusion. Even though both samples using the PESTEL construct returned different levels of explanatory power, they both affirmed that Technology is the dominant factor that influences MTN's business performance in Nigeria.

How both groups of participants perceived the effect, however varied. The employee sample returned a Beta value of 0.883, while the customer sample accounted for about 0.699. The gap in these values suggests the employees have a more grounded experience with the relationship between MTN's technological capabilities and its operational outcomes. This is consistent with the fact that customers experience the network as end users who are less informed about the company's infrastructure and technological depth.

The other five PESTEL factors are worth reflecting on, even though their impact on the company's business performance is significantly less than the technological

factor, as suggested by the analysis. While the analysis goes further, to measure their influence on operational outcomes as less significant, it acknowledges the fact that while each variable may not show an effect independently, they may collectively, as multiple variables together, influence business operations. Finally, the study in the context of Environmental influence on MTN Nigeria business performance using the PESTEL model and the samples provided establishes that at this point, technology is what gives a company a winning or a losing result in the telecommunications sector.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1. Summary of the Study

Using MTN Nigeria as the main case study, this study investigated how external environmental factors affect business performance in Nigeria's telecommunications sector. The investigation was led by the PESTEL framework, which focused on how organisational results are affected by political, economic, social, technical, environmental, and legal factors. Using a quantitative technique, a descriptive survey design was used. Employees and consumers were given structured questionnaires, and 69 valid replies were obtained. These results were then analysed using SPSS multiple regression analysis, reliability testing, and descriptive statistics.

The findings indicated that the reliability scores of the questionnaire constructs ranged from acceptable to outstanding. Overall, both regression models (for customers and workers) demonstrated statistical significance. In all datasets, technical considerations were the only significant predictor of business performance that significantly improved organisational effectiveness. There were no significant independent effects from the other PESTEL components.

Furthermore, due to poor reliability, the social component was eliminated from the customer model. The study concludes that the main environmental factors influencing company performance in the Nigerian telecoms sector are technological capability, innovation, digital infrastructure, and operational efficiency.

5.2. Conclusion

Using MTN Nigeria as the main case study under the PESTEL framework, this study examined how external environmental factors affect business performance in Nigeria's telecommunications sector. The findings demonstrated that, although the degree and kind of their influence vary depending on the different dimensions, these external factors do, when combined, have a significant impact on organisational success. It was evident that the most powerful factor influencing business performance was technology. In both the employee and customer models, they showed a strong positive and statistically significant effect. This implies that increasing consumer

satisfaction, organisational effectiveness, and competitive positioning is largely dependent on advancements in network infrastructure, technical innovation, digital transformation, automation, and overall operational efficiency.

The study also emphasised how much the telecom sector depends on continuous technical advancement to maintain growth and operational excellence. Businesses that continue to invest in innovation, grow their broadband networks, and implement cutting-edge digital solutions typically provide better outcomes and maintain their competitive edge in a market that is changing quickly. Despite not having independent statistically significant impacts in the regression models, political, economic, social, environmental, and legal aspects nevertheless have a substantial role in the larger business environment.

In summary, in the Nigerian telecom sector, technological aptitude is the primary environmental factor influencing corporate performance. In order to increase operational efficiency, boost customer satisfaction, maintain competitiveness, and ensure long-term growth, telecommunications operators should actively embrace technological advancements, develop strong innovation capabilities, and prioritise digital transformation.

5.3. Recommendations

The following suggestions are made for MTN Nigeria and other participants in the Nigerian telecom market based on the study's conclusions:

First, telecom companies should continue to make significant investments in digital innovation and technology infrastructure. Companies should concentrate on increasing broadband coverage, optimising works, advancing automation, bolstering cybersecurity, implementing cloud solutions, and creating powerful digital platforms because technological elements demonstrated the greatest influence on corporate performance. These actions can improve customer happiness, increase operational efficiency, and create a stronger competitive advantage.

Second, companies in the sector ought to increase their dedication to ongoing innovation and digital transformation. To better adapt to shifting customer demands and sustain a dominant market position, technologies like artificial intelligence (AI),

5G networks, big data analytics, and the Internet of Things (IoT) should be carefully integrated into core operations and service delivery.

Third, telecom firms should keep fostering positive interactions with authorities, especially the Nigerian Communications Commission. A stable policy climate and constant regulatory compliance are nevertheless essential for seamless operations and long-term sustainability, even though political and legal elements did not demonstrate significant independent effects in the analysis.

Organisations should also prioritise environmental sustainability by implementing sustainable energy practices, enhancing waste management, lowering pollution, and switching to renewable energy sources. These programs have the potential to improve a company's reputation, increase stakeholder trust, and show true environmental responsibility.

Additionally, the study recommends that telecom companies take a more customer-focused approach to providing services. Customers have demonstrated a great reliance on dependable internet and digital services; thus, efforts should focus on providing faster connection speeds, consistent network quality, reasonable pricing, increased accessibility, and prompt complaint resolution. These upgrades can support improved overall performance and encourage client loyalty.

Continued investment in professional development and personnel training would be especially beneficial for MTN Nigeria. Employees will be more equipped to handle technology changes and contribute to organisational goals if they have current technical skills, digital competencies, and practical operational expertise.

Finally, by routinely using frameworks like PESTEL, telecom businesses should integrate environmental scanning into their strategy. Businesses can identify new opportunities, anticipate dangers, make better decisions, and ensure long-term sustainability by continuously monitoring external conditions.

5.4. Contribution to Knowledge

By expanding the use of the PESTEL framework in the Nigerian telecommunications industry and using MTN Nigeria as a real-world case study, this study advances current understanding. It provides specific empirical results on how company performance in a growing country is influenced by political, economic,

social, technological, environmental, and legal issues. This study identifies the specific environmental component that has the most predictive value on organisational outcomes, whereas previous research frequently considered external influences as a homogenous group.

One important contribution is demonstrating that, in the Nigerian telecom sector, technological variables are the main driver of commercial performance. The findings demonstrate that, in comparison to the other PESTEL dimensions, factors including technological capability, digital infrastructure, innovation, and operational efficiency have a much greater influence on organisational success.

The study also enhances knowledge from a methodological perspective by integrating customer and staff perspectives into a unified analytical model. By recording both internal operational realities and exterior customer experiences, this dual lens provides a more comprehensive and balanced understanding of how external factors impact corporate performance.

5.5. Limitations of the Study

A few constraints surfaced during the research process, despite the study's effective completion of its goals. First of all, the sample size of 69 participants comprising of 25 employees and 44 customers is regarded as a limitation to this research but it does not affect the validity of this study. The results' wider application to the entire Nigerian telecoms sector was limited by the very small sample size. The results may not fully reflect the realities faced by other operators in the industry because the research focused only on MTN Nigeria. Furthermore, a significant portion of the analysis relied on self-reported information obtained from consumer and employee questionnaires. This method meant that rather than being strictly objective assessments, some responses might reflect personal prejudices, unique perspectives, or subjective interpretations. Additionally, there were indications of multicollinearity in some of the variables in the employee regression model, particularly in the social, environmental, and legal elements.

5.6. Suggestions For Further Studies

Expanding the scope of future study beyond MTN Nigeria to include other significant competitors in the Nigerian telecom market, like Airtel Nigeria, Globacom,

and 9mobile, could be beneficial. The results would be more broadly applicable and enable more insightful industry comparisons. Furthermore, increasing sample sizes and expanding data collection throughout Nigeria's many geographic regions will enhance representativeness and bolster the results' statistical robustness.

Additionally, researchers could think about using mixed-methods designs, which combine quantitative data with qualitative methods like in-depth case studies and interviews. Richer insights into the actual realities of businesses and the real-world difficulties brought on by the external environment would result from such an approach. Future research should also look at the moderating linkages and indirect effects of the other PESTEL aspects, particularly how technology interacts with the other dimensions to influence business outcomes.

5.7. Final Summary

Using MTN Nigeria as a case study, this study investigated how external environmental factors affect business performance in Nigeria's telecommunications sector using the PESTEL framework. It evaluated how political, economic, social, technological, environmental, and legal issues affected organisational performance using quantitative techniques and multiple regression analysis.

The findings showed that, in both the employee and customer models, technology factors were the sole and greatest statistically significant predictor of business performance. These results highlighted how crucial technical innovation, digital infrastructure, operational effectiveness, and service quality are to improving customer happiness and organisational effectiveness in the telecom sector.

The study concludes that the primary strategic factor influencing business performance in the Nigerian telecoms industry is technological capability. Therefore, telecom firms are better positioned to achieve sustainable growth, maintain a competitive edge, and assure long-term success if they constantly invest in innovation, digital transformation, infrastructure upgrades, and technical advancement.

REFERENCES

Abe, G. N. (2024). The Challenges and Opportunities of Emerging Markets for Firm Internationalisation: The Case of MTN Nigeria. African Journal of Management and Business Research, 14(1), 124–147. https://doi.org/10.62154/84t90c81

Acheampong, E. O. (2017). Environmental policy and sustainability in ICT deployment in Africa. Environmental Development, 24, 58–72.

Adeleke, A. (2009). How External Forces are influencing the Ebusiness strategy of MTN-Nigeria.

Adeleke, A., & Aminu, S. A. (2012). The Impact of External Environment on Organisational Performance in the Nigerian Telecommunications Industry. British Journal of Arts and Social Sciences, 6(2), 194–201.

Adeleke, A., Ogundele, O. J. K., & Oyenuga, O. O. (2020). Business policy and strategy. Lagos: Concept Publications.

Aguilar, F. J. (1967). Scanning the Business Environment. Macmillan.

Aker, J. C., & Mbiti, I. M. (2010). Mobile phones and economic development in Africa. Journal of Economic Perspectives, 24(3), 207–232.

Alshanty, A. M., & Emeagwali, O. L. (2019). Market-sensing capability, knowledge creation and innovation: The moderating role of entrepreneurial-orientation. Journal of Innovation & Knowledge, 4(3), 171–178.

Asongu, S. A., & Nwachukwu, J. C. (2016). Revolution empirics: predicting the Arab Spring. Empirical Economics, 51(2), 439–482.

Benedict Ogbemudia, I., Wilson, E., Solomon Ebiladei, A., Benjamin Ibe, C., Shedrach Chinwuba, M., & Sylvester Okechukwu, I. (2022). The Evolving Strategic CSR Practices in Africa: Exploring the Multidimensional Implications for Telecommunication Firms' Outcomes in Nigeria. SAGE Open, 12(2).

Brück, T., Naudé, W., & Verwimp, P. (2011). Small Business, Entrepreneurship and Violent Conflict in Developing Countries. Journal of Small Business & Entrepreneurship, 24(2), 161–178.

Bulut, C., & Can, O. (2013). Business Performance. In Encyclopedia of Corporate Social Responsibility (pp. 273–279). Springer, Berlin, Heidelberg.

Chiazor, I. P. (2022). A Survey of Customer Acceptability of MTN Self-Service Delivery in Kogi State, Nigeria.

Chigona, W., & Licker, P. (2008). Using diffusion of innovations framework to explain communal computing facilities adoption among the urban poor. Information Technologies & International Development, 4(3), 57–73.

Chioma, D. L., & Agbaenyi, A. N. (2021). Nigerian Communication Commission (NCC) and Mobile Telephone Network (MTN): Issues in Corporate Social Responsibility. ZIK Journal of Multidisciplinary Research, 4(1).

Dang, D. H., Thompson, K. A., Ma, L. et al. (2021). Toward the Circular Economy of Rare Earth Elements: A Review of Abundance, Extraction, Applications, and Environmental Impacts. Arch Environ Contam Toxicol, 81, 521–530.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organisations. American Sociological Review, 48(2), 147–160.

Donaldson, L. (2001). The contingency theory of organisations. Thousand Oaks: Sage Publications.

Donner, J. (2008). Research approaches to mobile use in the developing world: A review of the literature. The Information Society, 24(3), 140–159.

Donner, J. (2009). Blurring livelihoods and lives: The social uses of mobile phones and socioeconomic development. Innovations: Technology, Governance, Globalisation, 4(1), 91–101.

Donner, J., & Tellez, C. A. (2008). Mobile banking and economic development. The Electronic Journal of Information Systems in Developing Countries, 36(1), 1–18.

Egbunike, P. A., & Okerekeoti, C. U. (2018). Macroeconomic factors and performance of selected quoted firms in Nigeria. African Journal of Accounting, Auditing and Finance, 6(2), 123–138.

Esselaar, S., Gillwald, A., & Stork, C. (2007). Towards an African e-index: ICT access and usage across 16 African countries. The Southern African Journal of Information and Communication, 8, 12–28.

Forti, V. et al. (2020). The Global E-waste Monitor 2020. United Nations University (UNU), ITU & ISWA.

Franco-Santos, M., & Bourne, M. (2005). An examination of the literature relating to issues affecting how companies manage through measures. Production, Planning and Control, 16(2), 114–124.

Frolick, M. N., & Ariyachandra, T. R. (2006). Business Performance Management: One Truth. Information Systems Management, 23(1), 41–48.

Gebreab, F. (2002). Getting connected: Competition and diffusion in African mobile telecommunications markets. World Bank Policy Research Working Paper 2863.

Gillwald, A., & Esselaar, S. (2004). Telecommunications sector performance in Africa. Link Centre, Wits University.

Gillwald, A., & Mothobi, O. (2018). After Access: The State of ICT in Nigeria. Research ICT Africa.

Gillwald, A., & Moyo, M. (2016). Towards Evidence-based ICT Policy and Regulation. Research ICT Africa.

Gregory, J., & Sovacool, B. K. (2019). The financial risks and barriers to electricity infrastructure in Kenya, Tanzania, and Mozambique: A critical and systematic review of the academic literature. Energy Policy, 125, 145–153.

Gupta, A. (2013). Environment & PEST Analysis: An Approach to External Business Environment. International Journal of Modern Social Sciences, 2(1), 34–43.

Hieu, V. M., & Nwachukwu, C. (2019). Exploring Strategic Management Practices: Case Study of 4 Mobile Telecommunication Operators in Nigeria.

Houghton, J. (2010). ICT and the environment in developing countries: Opportunities and developments. Information Technology for Development, 16(1), 25–41.

Ifechukwu, A. (2022). Regulating Fintech in Developing Economies: Examining The Risks, Policies and Nigeria's Path to Financial Prosperity. SSRN. http://dx.doi.org/10.2139/ssrn.4312289

ITU (2020). Measuring Digital Development: Facts and Figures 2020. International Telecommunication Union.

Iwu, C. G., Eze, T. C., & Bello, B. (2016). Business environmental factors: Implications on the survival and growth of small and medium-scale enterprises (SMEs) in Nigeria. International Journal of Economics, Commerce and Management, 4(4), 34–45.

James, J. (2009). Information technology and development: A new paradigm for delivering the Internet to rural areas in developing countries. Technology in Society, 31(2), 121–128.

James, J. (2011). Digital divide complacency: Misconceptions and dangers. The Information Society, 27(3), 169–174.

Johnson, G., Scholes, K., & Whittington, R. (2008). Exploring Corporate Strategy. Pearson.

Johnson, G., Scholes, K., & Whittington, R. (2017). Exploring strategy: Text and cases (11th ed.). Pearson Education.

Kaplan, R. S., & Norton, D. P. (1996). The Balanced Scorecard: Translating Strategy into Action. Harvard Business School Press.

Krishnakumar, T. (2021). Missed Connections? Evaluating the Global Spread and Legality of Mandatory SIM Registration in a Modern National Security Context. Denv. J. Int'l L. & Pol'y, 49, 57.

Kumbhar, V. M. (2011). Performance Measurement System in the Telecom Sector. International Journal of Business and Management Tomorrow, 1(1), 1–8.

Liyanage, L., & Pasqual, L. (2013). A study on the effects of climate change on ICT infrastructure. International Journal of Advanced Computer Science and Applications, 4(5), 200–205.

Maguire, S., & Ojiako, U. (2007). Understanding telecommunications performance in developing economies: a resource-based view. Management Decision, 45(5), 724–738.

Mbarika, V. W., Kah, M., Musa, P. F., & Warren, J. (2003). Predictors of growth of telecommunications networks in developing countries: A longitudinal study of 30 African countries. Journal of Information Technology for Development, 10(2), 133–145.

Mintzberg, H. (1994). The Rise and Fall of Strategic Planning. Free Press.

Mohammed, Y. S., Mustafa, M. W., & Bashir, N. (2013). Status of renewable energy consumption and developmental challenges in Sub-Saharan Africa. Renewable and Sustainable Energy Reviews, 27, 453–463.

Mokhesi, M. (2019). The effects of disruptive innovation on MTN telecommunication strategy in Africa.

Mutula, S. M., & van Brakel, P. (2007). ICT skills readiness for the emerging global digital economy among small businesses in developing countries. Library Hi Tech, 25(2), 231–245.

NCC (2021). Annual Report of the Nigerian Communications Commission. Available at: https://www.ncc.gov.ng

Nene, P. R. (2023). Value-added tax change implementation aftermath: A case of MTN. Open Journal of Business and Management, 11(6), 2966–2987.

Nene, P. R., & Moraka, N. V. (2023). The Strategic Impact of Tax Regulation on the Performance of a Telecommunication Company.

Ogbonna, O. (2017). Laggard Zone: A Perspective on Telecommunications Technology Availability in 'very' Late Adopter Nations Like Nigeria.

Okeakwalam, J. I. (2020). The Impact of Cultural Differences on the Internationalisation of Multinational Enterprises (MNEs): A Case Study of MTN Nigeria (Doctoral dissertation, Dublin, National College of Ireland).

Okoli, I. E., & Irabor, G. E. (2021). Political and legal environments and performance of telecommunications firms in Nigeria. Journal of Management and Strategy, 12(2), 88–98.

Olojede, A. A., Adekunle, A. A., & Samuel, E. A. (2013). Analysis of rural literacy as a panacea for the socio-economic development of Nigeria. International Journal of Sociology and Anthropology, 5(9), 381.

Omungu, F., & Kavale, D. S. (2025). Dynamic Capabilities and Performance of Telecommunication Companies in Kenya. International Journal of Research and Innovation in Social Science, 9(2), 134–149.

Onuoha, B. C. (2012). The environment of business and its influence on the performance of manufacturing firms in Nigeria. International Business and Management, 4(2), 14–20.

Onwuegbuchulam, S. A. (2018). ICT and Democratic Governance in Africa: A Conceptual Review. Africa Journal of Information and Communication, 22(1), 87–103.

Osei, C. D. (2014). Financial Performance Indicators in the Telecommunications Sector: A Comparative Study of Ghana Telecom and MTN Ghana. International Journal of Management Science, 2(1), 10–17.

Osibanjo, O., & Nnorom, I. C. (2007). The challenge of electronic waste (e-waste) management in developing countries. Waste Management & Research, 25(6), 489–501.

Oyedemi, T. D. (2020). Data governance in Africa: Assessing privacy and data protection frameworks. Information Polity, 25(4), 453–466.

Porter, M. E. (2008). The Five Competitive Forces That Shape Strategy. Harvard Business Review.

Pueyo, A. (2018). What constrains renewable energy investment in Sub-Saharan Africa? A comparison of Kenya and Ghana. World Development, 109, 85–100.

Rim, K., & Adesanya, A. (2018). The politics of telecom regulation in Nigeria: The MTN case. Telecommunications Policy, 42(6), 412–421.

Rosnes, O., & Shkaratan, M. (2011). Africa's power infrastructure: investment, integration, efficiency. World Bank Publications.

Samarajiva, R. (2009). ICT infrastructure in emerging Asia. LIRNEasia Working Paper Series.

Shah, M. H., & Khan, F. (2019). Telecommunication Infrastructure Development and FDI into Asian Developing Nations. Journal of Business and Tourism, 5(1), 91–102.

Skosana, S., Mlambo, S., Madiope, T., & Thango, B. (2024). Evaluating Wireless Network Technologies (3G, 4G, 5G) and Their Infrastructure: A Systematic Review. SSRN. http://dx.doi.org/10.2139/ssrn.4992432

Sutherland, E. (2015). MTN: A South African mobile telecommunications group in Africa and Asia. Communicatio, 41(4), 471–505.

Taddesse, M. (2016). Cybersecurity and data protection laws in Africa. The African Journal of Information and Communication, 17, 59–78.

Uchenna, O. A. (2011). An investigation into the rise of Globacom Telecommunications Nigeria as an international company and its emergence as a market multinational (Master's thesis, Universitetet i Nordland).

Wellenius, B., & Neto, I. (2008). Managing the radio spectrum: Framework for reform in developing countries. Info: The journal of policy, regulation and strategy, 10(2), 4–14.

World Bank (2016). Public-Private Partnerships in Developing Countries: A Literature Review. World Bank Group.

Yu, J., Wang, J., & Moon, T. (2022). Influence of Digital Transformation Capability on Operational Performance. Sustainability, 14(13), 7909.

Yusuf, I. O., & Adeniran, A. O. (2019). Telecommunication Service Quality and Customer Satisfaction in Nigeria. Journal of Economics and Business, 2(3), 798–805.

Yükel, İ. (2012). Developing a Multi-Criteria Decision-Making Model for PESTEL Analysis. International Journal of Business and Management, 7(24), 52–66.

APPENDIXES

APPENDIX A: EMPLOYEE QUESTIONNAIRES

Introduction

Dear Participant,

You are invited to participate in a research study titled:

"**Environmental Influence on Business Performance in the Nigerian Telecommunications Industry: A Case Study of MTN Using PESTEL Analysis**."

The purpose of this questionnaire is to collect your valuable input as an employee of MTN to better understand how external environmental factors (Political, Economic, Social, Technological, Environmental, and Legal) affect the company's performance.

The questionnaire takes about 7–10 minutes to complete. All responses will be kept strictly confidential and used only for academic research. Your identity will not be recorded.

Participation is voluntary. By continuing, you agree that you understand the purpose of the study and consent to participate.

Contact Information:

Researcher: Nwobi Uche Stanley

Email:

Supervisor: Dr. Mehdi Safaei

Likert Scale Reference

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

SECTION A: Demographic Information

A1. Gender *(Multiple Choice)*

Male

Female

Other / Prefer not to say

A2. Age Group

Under 25

25–34

35–44

45 and above

A3. Education Level

High School

Bachelor's Degree

Master's Degree

PhD or above

A4. Current Department

Technical/Engineering

Customer Service

Marketing/Sales

Finance/Accounting

HR/Admin

IT/Networks

Other (Short answer)

A5. Current Job Role or Position

A6. Years Working at MTN

Less than 1 year

1–3 years

4–7 years

More than 7 years

A7. Region of Assignment

North Nigeria

South Nigeria

East Nigeria

West Nigeria

A8. Have you previously worked in another telecom company?

Yes

No

A9. How satisfied are you with the tools and systems available for your daily work?

1

2

3

4

5

SECTION B: Political Factors

Changes in government policies affect the way our department operates.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Political instability in Nigeria (e.g., unrest, elections) causes delays or disruptions in our work processes.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Regulatory decisions by government agencies require us to frequently adapt internal operations.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Our collaboration with government entities directly influences project implementation and timelines.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Bureaucratic delays and political interference increase stress and inefficiency in my daily work

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Political issues outside MTN sometimes impact employee morale and service delivery.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, political factors have significantly influenced MTN's internal work environment.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section C: Economic Factors

Inflation and exchange rate volatility have made it more difficult for our team to manage costs or budgets

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Economic hardship among customers affects the demand for MTN’s services and our daily targets.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Economic instability influences internal decision-making and departmental priorities.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Budget cuts or delays due to economic conditions have impacted our project delivery timelines.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN's competitiveness is affected by economic pressure from local and international telecom providers.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

The high cost of doing business in Nigeria limits the resources available to my department.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, economic factors have significantly influenced MTN's internal performance and staff experience.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section D: Social Factors

Increasing customer expectations push us to constantly improve service quality.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Low digital literacy among some customer segments makes service delivery more challenging.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Social perceptions and public image of MTN affect how seriously our team's work is viewed by outsiders

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Changes in social trends (e.g., mobile usage habits) directly influence how we design or deliver services.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Youth population growth has increased demand for innovative services, which impacts our team's workload.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN's social responsibility activities (e.g., community projects) contribute to employee pride and motivation.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, economic factors have significantly influenced MTN's internal performance and staff experience

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section E: Technological Factors

The technologies provided by MTN support me in delivering services more efficiently.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Ongoing innovation at MTN improves how our department performs its tasks.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Digital systems at MTN (e.g., CRM, ERP) are reliable and user-friendly.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Fintech integration (e.g., mobile money) has positively influenced how we serve customers.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

The rollout of 5G and new network technologies has improved our operational capabilities.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I receive adequate training and support to adapt to new technologies in my work.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, technological factors have significantly influenced MTN's internal performance and innovation.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section F: Environmental Factors

Environmental regulations affect the way we operate and manage resources in my department.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN has implemented internal practices that reduce environmental harm (e.g., power saving, recycling).

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I am aware of MTN's compliance with national and international environmental standards.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Environmental initiatives at MTN contribute to a more responsible and sustainable workplace.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN promotes energy efficiency and responsible resource use within internal operations.

Strongly disagree

Disagree

Neutral

Agree

Strongly Agree

Employees are encouraged to participate in environmental responsibility initiatives (e.g., e-waste, sustainability campaigns).

Strongly disagree

Disagree

Neutral

Agree

Stromgly Agree

Overall, environmental factors have significantly influenced MTN's operational strategy and internal policies.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section G: Legal Factors

Licensing and regulatory requirements shape how we plan and execute our work.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN's legal compliance standards are clearly communicated to employees.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Our department frequently updates its practices in response to new legal guidelines.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Penalties or sanctions from regulatory bodies create pressure on teams to perform more cautiously.

Strongly disagree

Disagree

Neutral

Agree

Strongly Agree

Legal risks (e.g., lawsuits, investigations) have operational implications for our department.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Unclear or frequently changing regulations make my work more difficult or uncertain.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, legal factors have significantly influenced MTN's HR practices and internal compliance.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section H: MTN Business Performance

MTN is meeting its financial performance targets based on internal communications and reports.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Strategic goals set by management are clearly communicated and achievable in our work environment.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

The quality of MTN's services is consistently maintained despite external challenges.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Compared to competitors, MTN maintains a strong market position.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Internal feedback and results show that customers are generally satisfied with MTN's services

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, MTN is responding effectively to external environmental changes (e.g., political, economic, legal).

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN supports employees in achieving organizational goals.

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section I: Overall Assessment

Overall, I am satisfied with MTN's response to external environmental challenges

1

2

3

4

5

Which PESTEL factor most significantly influences MTN's business performance? (Select one only)

Political

Economic

Social

Technological

Environmental

Legal

Please explain

APPENDIX B: CUSTOMER QUESTIONNIARE

Dear Participant,

You are invited to take part in an academic research study titled: *"Environmental Influence on Business Performance in the Nigerian Telecommunications Industry: A Case Study of MTN Using PESTEL Analysis."*

The aim of this questionnaire is to collect your valuable feedback as a customer of MTN, to better understand how external factors such as government policy, the economy, technology, and society influence your experience and perception of MTN's services.

Estimated completion time: 5–8 minutes

Your responses are anonymous and confidential.

Participation is voluntary, and you may skip any question you are not comfortable answering.

Contact:

Researcher: Uc Tan | Email:

Supervisor: Dr. Mehdi Safaei

Researcher:

Uc Tan

Email: uctan304@gmail.com, msafaei@gelisim.edu.tr

Supervisor:

Dr. Mehdi Safaei

Thank you for your time and contribution.

Likert Scale Reference

Please respond using the following scale:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

Section A: Demographic Information

Gender *

Male

Female

Other:

Age Range*

Under 25

25–34

35–44 (3)

45 and above

Education Level*

High School

Bachelor’s Degree

Master’s Degree

PhD or above (4)

Location*

Urban

Suburban

Rural

How long have you used MTN services? *

Less than 1 year

1–3 years

4–6 years

More than 6 years

What type of MTN services do you use? (You may tick more than one) *

Voice Calls

SMS

Internet/Data

Mobile Money / Fintech

Other:

Section B: Political Factors

Government policies affect the availability or cost of MTN services. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Political instability sometimes disrupts service availability. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN adjusts its services in response to government regulations. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I feel the government should protect customers more in the telecom sector. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Political environment influences my level of trust in MTN. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Government bodies respond fairly to complaints against telecom providers. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, political factors have significantly influenced my experience with MTN.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section C: Economic Factors

Changes in the economy (e.g., inflation) affect my usage of MTN services.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I find MTN services affordable compared to other telecom providers. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN adjusts its pricing to reflect economic conditions.*

Strongly disagree

Disagree

Neutral

Agree

Strongly Agree

Economic conditions have influenced my decision to reduce MTN usage.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

The cost of MTN services gives value for money during economic hardship.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I consider promotions or discounts from MTN important during economic downturns.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, economic factors have significantly influenced my experience with MTN. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section D: Social Factors

MTN's services meet the communication needs of people from diverse backgrounds.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN promotes equal access to services for all social groups*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN's social initiatives (e.g., CSR, community projects) positively affect my perception of the brand.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Social trends and preferences (e.g., mobile app use) influence my usage of MTN services.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN respects cultural values and norms in its customer service and advertising.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I trust MTN because it shows concern for customers' well-being during crises.*

Strongly disagree

Disagree

Neutral

Agree

Strongly Agree

Overall, social factors have significantly influenced my experience with MTN.*

Strongly disagree

Disagree

Neutral

Agree

Strongly Agree

Section E: Technological Factors

MTN provides up-to-date technology and digital services (e.g., 4G, mobile apps).*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I am satisfied with the quality and reliability of MTN's internet services.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN's technological innovations improve my daily communication experience.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN makes it easy to access and use technology through their services.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I believe MTN keeps up with global trends in telecom technology. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I find MTN's mobile applications user-friendly and efficient. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, technological factors have significantly influenced my experience with MTN.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section F: Environmental Factors

I am aware that MTN takes steps to reduce its environmental impact. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN promotes environmental sustainability in its operations and services.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Eco-friendly practices by MTN (e.g., recycling, green energy) influence my perception positively. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I value companies like MTN that support environmental causes. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN communicates clearly about its environmental responsibilities. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN's support for environmental awareness affects my loyalty to the brand. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, environmental factors have significantly influenced my experience with MTN. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section G: Legal Factors

I believe MTN complies with laws and regulations in the telecom industry.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN clearly communicates terms and conditions to its customers.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN respects customer privacy and data protection laws.*

Strongly disagree

Disagree

Neutral

Agree

Strongly Agree

I feel legally protected when using MTN services.*

Strongly disagree

Disagree

Neutral

Agree

Strongly Agree

MTN handles customer complaints and disputes according to legal standards.*

Strongly disagree

Disagree

Neutral

Agree

Strongly Agree

MTN is transparent about billing, contracts, and service agreements.*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Overall, legal factors have significantly influenced my experience with MTN. *

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Section H: MTN Business Performance

MTN provides high-quality telecom services.*

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

I am satisfied with the value I get for the cost of MTN services.*

- Strongly disagree
- Disagree

Neutral

Agree

Strongly agree

MTN offers reliable network coverage in my area. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN responds quickly to service issues and customer concerns.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

I believe MTN is competitive compared to other telecom providers. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

MTN continuously improves its services to meet customer expectations.*

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Overall, MTN's business performance meets my expectations as a customer. *

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

Section I: Overall Assessment

Overall, I am satisfied with MTN's performance as a telecom provider.*

1

2

3

4

5

Which one of the following external factors (PESTEL) most affects your experience with MTN? (Select one only)*

Political

Economic

Social

Technological

Environmental

Legal

Please explain*

RESUME

Personal Information

Surname : NWOBI Uche Stanley

Nationality : Nigerian

Education

Degree	**Education Unit**	**Graduation Date**
Masters degree	Business Administration	
Bachelor;	Mathematics/Statistics 2016	
High school;	Demonstration secondary school, Omoku, Rivers state 2010	

Work Experience

Year	**Place**	**Title**

Foreign Language

Publications

Hobbies