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Investigating the Effectiveness of Market Segmentation Strategies on Company Operations in the Telecommunication Industry: A Case Study of MTN Head Office Lusaka

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Abstract

The rapidly growing telecommunications sector in Zambia, characterized by a mobile penetration exceeding 100%, struggles to meet the diverse needs of its customer base, resulting in reported customer dissatisfaction. This study investigates the effectiveness of market segmentation strategies on the operational performance of telecommunications companies in Zambia, focusing on MTN Lusaka Head Office as a case study, to assess how segmentation can be optimized to improve service delivery and customer satisfaction. The study is anchored in Kotler's Theory of Effective Market Segmentation, which posits that segmentation must be measurable, accessible, substantial, differentiable, and actionable to be practically impactful. A quantitative research design was employed, collecting primary data from a survey of 50 respondents within the MTN Lusaka Head Office. Data was analyzed using Microsoft Excel and the Statistical Package for the Social Sciences (SPSS) software. The results affirm that a refined market segmentation approach is critical for operational success. Geographic segmentation was identified as the strategy with the greatest overall impact on company

performance (34.0% of respondents). In differentiating product offerings, Frequency of service usage was the most influential factor considered by MTN (32.0%). Segmentation was found to significantly enhance operational efficiency, particularly in improving Targeted Population marketing and resource allocation. Furthermore, a strong consensus was found regarding its financial influence, with 78% of participants agreeing that segmentation contributes to a high or moderate extent to MTN's profitability. Key limitations faced in implementation included the need to increase the research budget (28%) and train staff in market analysis (26%). The investigation concludes that market segmentation is a fundamental and highly effective business strategy for MTN Lusaka. By moving beyond basic demographics and using data to tailor products (e.g., for data-hungry youth and high-value corporate clients), the company successfully enhances operational efficiency, strengthens customer relationships, and secures a competitive advantage, making it a prerequisite for sustained growth in the Zambian telecommunications market.

Keywords: Market Segmentation, Operational Performance, Telecommunication Industry, MTN Lusaka, Service Delivery, Customer Satisfaction, Geographic Segmentation

1. Introduction

Market segmentation had become a critical component of strategic marketing in modern business, particularly within industries that served diverse customer bases such as telecommunications. The concept referred to the classification of a market into distinct groups of consumers with similar characteristics, needs, or behaviors to allow firms to tailor their marketing mix more precisely (Kotler *et al.*, 2019) [24]. These segments were commonly based on demographic, geographic, psychographic, and behavioral factors. Over time, the effectiveness of segmentation had been linked to increased customer satisfaction, improved targeting efficiency, and better use of company resources (Ferrell and Hartline, 2017) [15].

The telecommunication industry, particularly in developing countries like Zambia, has undergone significant transformation due to rapid technological advancements and increasing consumer demand for mobile and internet services. According to the Zambia Information and Communications Technology Authority (ZICTA, 2021), mobile subscriptions in Zambia exceeded 17 million by 2020, reflecting a highly competitive market landscape. To remain viable and meet diverse consumer needs,

telecom companies have adopted segmentation strategies that allow them to tailor services based on factors such as demographics, geography, usage behavior, and lifestyle.

MTN Zambia, a leading telecom provider in the country, has implemented various segmentation strategies to deliver targeted services such as youth-focused bundles, SME packages, and rural network solutions. These strategies are essential for aligning product offerings with customer preferences. As noted by Ferrell and Hartline (2017) [15], "when companies tailor their strategies to meet the needs of different segments, they are more likely to achieve customer satisfaction and loyalty" (p. 118). MTN's segmentation efforts are especially visible at its Lusaka Head Office, which serves as the central hub for decision-making related to marketing and operations.

Telecommunication plays a key part in any given country's economic development hence growth in telecommunications sector cause positive effect in other sectors of the economy. The deregulation of the telecommunication sector has led to an urgency to deliver high quality products and services that leads to superior performance. There is need for firms to put more effort in order to be at similar level with the changing environment, achieve a competitive advantage as well as improve performance relative to competition (Monday *et al.*, 2015). On the global perspective, as the telecommunication industry continues to evolve, firms are experiencing different performance challenges due to competition and changing customer demands (Singhal *et al.*, 2015).

Globally, the telecommunications industry had undergone significant transformation, largely driven by advances in mobile technology, growing demand for internet access, and regulatory reforms aimed at liberalizing markets. This shift necessitated the adoption of more sophisticated strategies to attract and retain customers in an increasingly competitive environment. Market segmentation provided a foundation for these strategies, enabling firms to develop tailored value propositions, pricing models, and promotional techniques for different customer groups (Wedel and Kamakura, 2016). For example, telecom giants like Vodafone and Orange had segmented markets based on customer value, usage frequency, and digital literacy to deliver more customized services, leading to operational efficiency and increased revenues.

In Africa, firms in telecommunication sector are facing intense competition due to entry of additional players both foreign and domestic, thus affecting the profitability of firms in the sector. According to Yeboah-Asimah, *et al.*, (2018) rapid growth pace coupled with increased competition and saturation of markets has resulted to telecommunication firms facing declining profitability, poor customer retention due to high customer churn and costs incurred from loss of revenue. According to Letangule and Letting, (2012), telecommunication firms in Kenya operate in an increasingly competitive market thus they must develop strategies that can be adopted to anticipate, create and respond effectively to change arising in the internal and external environments. Kipkirong and Robach, (2013) affirms this argument by acknowledging that firms require to be proactive and as well as formulate strategies that will successfully respond to actual changes as well as expected

changes within the environment.

1.1 Objectives

1.1.1 General Objective

To investigate the effectiveness of market segmentation strategies on the operational performance of telecommunications companies in Zambia.

1.1.2 Specific Objectives

1. To analyze the types of market segmentation strategies employed by telecommunications companies in Zambia.
2. To assess the effectiveness of market segmentation strategies on service delivery.
3. To examine the limitations faced by telecom companies in implementing effective market segmentation in Zambia.

1.2 Theoretical Framework

This study is anchored in Philip Kotler's Theory of Effective Market Segmentation, which emphasizes that for market segmentation to be practically useful and impactful, it must meet specific criteria: measurability, accessibility, substantiality, differentiability, and action ability (Kotler and Keller, 2016) [25]. Kotler argues that companies can only benefit from segmentation when they are able to clearly identify and measure the characteristics of different market segments (measurability), effectively reach them with tailored marketing strategies (accessibility), ensure the segment is large or profitable enough (substantiality), confirm that the segment responds differently to different offerings (differentiability), and ensure the company has the capacity to serve that segment (action ability).

In the context of Zambia's telecommunications industry, where consumers vary widely in terms of income, location, lifestyle, and service needs, Kotler's framework offers a structured lens for evaluating how segmentation can enhance operational performance. Most Zambian telecom companies, such as MTN, Airtel, and Zamtel, target diverse customer bases that include rural communities, urban professionals, small businesses, students, and corporate clients. Applying Kotler's segmentation criteria enables a clearer understanding of whether these strategies are well-targeted and practically feasible within the local context. For example, segments like students or rural users may be measurable and substantial but could present challenges in accessibility due to network limitations or affordability concerns.

By focusing on Kotler's Theory of Effective Market Segmentation, this study is able to critically analyze how well segmentation strategies in Zambia's telecom sector align with established principles and whether they deliver meaningful value to both customers and operators. The theory provides a robust foundation for assessing the link between segmentation and operational effectiveness, including improvements in service delivery, customer satisfaction, and resource utilization. Ultimately, Kotler's model guides the investigation into not only the design but also the implementation and impact of segmentation strategies in a competitive and evolving market like Zambia's telecommunications sector.

2. Literature Review

2.1 Market Segmentation Strategies Used in the Telecommunications Industry

Kotler and Keller (2016) [25], defined market segmentation as “the act of dividing a market into distinct groups of buyers who might require separate products or marketing mixes.” The goal of segmentation is to identify opportunities for focused marketing that can lead to higher efficiency in operations, improved customer satisfaction, and increased profitability.

Globally, market segmentation plays a central role in shaping business strategies across industries, particularly in service-based sectors like telecommunications. In highly competitive and saturated markets, companies rely on segmentation to target high-value customers, increase market penetration, and maintain customer loyalty. For example, global telecom providers such as AT&T, Vodafone, and Orange employ sophisticated segmentation techniques using big data analytics and artificial intelligence to understand behavioral patterns, purchasing histories, and service preferences (Chen & Liu, 2020) [8].

Segmentation contributes significantly to marketing strategy by enhancing the efficiency of resource allocation. Armstrong *et al.* (2019) [3] argued that, “segmentation improves the effectiveness of the marketing mix product, price, promotion, and place by ensuring that each element is aligned with the expectations of the target group”. This not only reduces marketing waste but also creates a stronger brand connection with customers.

In the Zambian context, market segmentation is increasingly recognized as a strategic tool among leading telecommunications companies such as MTN, Airtel, and Zamtel. These firms operate in a diverse market that includes urban and rural populations, high- and low-income consumers, and varying levels of digital literacy. For example, MTN Zambia has introduced student data bundles that provide affordable internet access to tertiary students, while also offering customized voice and SMS packages for rural users with limited access to smartphones (ZICTA, 2021).

However, the role of segmentation in Zambia’s marketing strategy is still evolving. While demographic and geographic segmentation are commonly applied, there is limited use of more advanced segmentation techniques such as psychographic and behavioral segmentation. This is due in part to resource constraints, limited access to real-time customer data, and a shortage of skilled personnel capable of interpreting complex data sets (Kalumba, 2021).

According to Sigayan & Cahyono, (2021), indicators or dimensions contained in segmenting are: 1) Demographics: A market breakdown based on factors such as age, gender, education, occupation, and income; 2) Geographic: Grouping based on place, such as country, region, city, or even neighborhood; 3) Psychographics: Classifies customers based on their lifestyle, values, personality, and interests; and 4) Behavioral: Concentrate on consumer purchasing habits, such as purchase frequency, brand loyalty, benefits sought, and usage levels.

2.1.1 Types of Market Segmentation Strategies in the Telecommunication Industry

Market segmentation is a crucial strategic approach employed by telecommunication companies worldwide to understand their customers better and to tailor services accordingly. This segmentation enables telecom providers to

allocate resources efficiently, optimize marketing strategies, and improve customer satisfaction and profitability.

Demographic Segmentation

Demographic segmentation is one of the most traditional and widely adopted methods in the telecom sector. It categorizes customers based on variables such as age, gender, income, education, and occupation. MTN and Airtel in Zambia for example, apply demographic segmentation to create targeted offerings like “MTN Yanga” and “Airtel Student Bundles,” which are affordable and appeal to the youth segment, particularly students.

Geographic Segmentation

Geographic segmentation involves dividing the market based on location—by country, region, city, or rural/urban status. In Zambia, geographic segmentation is evident in how telecom firms distribute infrastructure. MTN and Airtel prioritize LTE and fiber network expansion in densely populated provinces like Lusaka and Copperbelt, while rural provinces such as Muchinga and Luapula are primarily serviced through basic mobile voice and SMS.

Psychographic Segmentation

Psychographic segmentation considers lifestyle, social class, values, and personality traits. This strategy is more sophisticated and aims to build emotional connections between brands and consumers. Although less advanced in Zambia, psychographic segmentation is gradually being adopted. MTN has introduced lifestyle-driven bundles tailored to heavy social media users, offering platforms like TikTok and WhatsApp with unlimited access at low cost.

Behavioral Segmentation

Behavioral segmentation is based on customer behavior patterns, including usage rate, brand loyalty, benefits sought, and readiness to purchase. MTN uses behavioral data to power its “Just4U” product line, where customers receive individualized voice or data packages based on their recharge frequency and usage habits. Mwansa (2022) [33] reports that this personalization strategy led to a 10% improvement in daily bundle renewal rates.

Technographic Segmentation

Technographic segmentation focuses on how customers interact with technology, including device usage, digital literacy, and preferred digital platforms. In the Zambian context, as smartphone penetration increases, telecom providers have begun deploying technographic strategies. MTN’s “My MTN” and Airtel’s “My Airtel” mobile apps offer self-service portals, allowing tech-savvy users to manage accounts, buy bundles, and access customer support digitally.

2.1.2 Adoption of Segmentation Strategies in Africa

The adoption of market segmentation strategies across Africa has significantly evolved in response to the continent's growing telecommunications sector, increased mobile penetration, and shifting consumer dynamics. Companies such as MTN Nigeria have successfully applied demographic segmentation by launching services like MTN Pulse, which targets the youth market with tailored features such as low-cost data and entertainment bundles.

In Kenya, Safaricom has embraced more advanced forms of segmentation, including behavioral analysis, which allows

the company to group customers based on transaction behavior, frequency of usage, and digital preferences. In Ghana, MTN has used psychographic segmentation to target customers based on their values, lifestyles, and interests, creating customized bundles that appeal to specific groups such as music lovers and sports fans.

In Zambia, segmentation practices are advancing but remain less developed compared to leading markets like Kenya or South Africa. MTN Zambia and Airtel Zambia have adopted some segmentation models, particularly in offering customized call and data packages to different income groups and regions. However, many operators in Zambia still face limitations in adopting more advanced segmentation methods due to factors like low digital literacy, uneven smartphone penetration, and limited real-time customer data.

Despite these advancements, the full potential of market segmentation in African telecommunications is yet to be realized. Most countries still face challenges including poor data infrastructure, inconsistent regulatory frameworks on data usage, and high levels of informal economic activity, which hinder the precise profiling of customers.

2.2 Effectiveness of Segmentation Strategies on the Operations of Telecom Companies

2.2.1 The Role of Market Segmentation in Operational Efficiency

Camilleri, (2018) outlines the benefit of segmentation to business saying that by dividing the market into segments, marketing managers can acquire a better understanding of the needs and wants of customers. This enables them to customize or to 'tailor' the company's marketing activities more accurately.

Zambia presents a complex and heterogeneous telecommunications market. The population is split between urban and rural areas, with significant disparities in income levels, education, and technological access. This has necessitated differentiated strategies to serve various consumer groups. MTN Zambia, for instance, has developed customer segments such as "Pulse" for the youth market and "Y'ello Biz" for small and medium enterprises (SMEs).

From an operational standpoint, segmentation allows Zambian telecom firms to manage their limited resources more effectively. By identifying profitable and underserved segments, companies can allocate marketing budgets, technical resources, and customer service efforts more precisely. Airtel Zambia, in one of its reports, noted that segment-specific data bundles introduced in 2022 led to a 15% increase in subscriber growth in underserved provinces.

Operational Key Performance Indicators (KPIs) such as customer satisfaction, service quality, and cost efficiency are strongly influenced by segmentation strategies. A 2021 study by the Zambia Information and Communications Technology Authority (ZICTA) found that customer satisfaction was significantly higher among consumers who used tailored services compared to those using standard packages.

Another aspect of operational efficiency improved through segmentation is infrastructure planning. By understanding which segments are likely to adopt high-data-use services, telecom operators can plan infrastructure investments more efficiently. For instance, MTN's deployment of 4G towers in densely populated areas such as Lusaka and Kitwe were

partly informed by segmentation analysis that showed high data consumption among urban youth and young professionals.

A study by Vodafone Group (2019) found that applying behavioral and geographic segmentation in its Indian and African markets led to a 20% reduction in customer churn and a 15% increase in data usage efficiency. Similarly, AT&T in the United States has relied on behavioral segmentation to streamline call center operations and personalize service delivery. A study by McKinsey & Company (2021) ^[28] found that after implementing a predictive segmentation model, AT&T reduced average call handling time by 18%.

2.2.2 Segmentation and Product/Service Design

In Zambia, market segmentation is a pivotal strategy that enables organizations to tailor their products and services to meet the specific needs of diverse customer groups. Zambian companies are increasingly leveraging market segmentation to foster innovation and customize services. For instance, Zamtel, one of the leading telecommunications providers in Zambia, has implemented strategies to cater to various customer segments. By analyzing customer data, Zamtel has been able to develop products and services that meet the specific needs of different market segments.

Bundling and pricing strategies in Zambia are often informed by market segmentation to cater to the varying purchasing power and preferences of different customer groups. Telecommunication companies, for example, offer bundled services that combine voice, data, and SMS packages tailored to specific segments.

The link between market segmentation and product/service design is well documented in marketing literature. According to Kotler *et al.* (2017), segmentation is "the process of dividing a market into distinct groups of buyers who have different needs, characteristics, or behaviours and who might require separate products or marketing mixes." This theoretical foundation emphasizes the value of understanding consumer diversity to create offerings that are more relevant, appealing, and competitive.

Market segmentation has become an essential strategic tool for fostering innovation and customizing services in the telecommunication industry. Innovation in telecommunications arises when companies recognize the distinct preferences of their user base. Segmenting the market reveals patterns and gaps that may not be visible through general analysis.

Service customization similarly depends on precise segmentation. Customers increasingly expect services tailored to their lifestyles, occupations, and technological capabilities. The rise of digital analytics has transformed segmentation into a more dynamic and behavior-driven process. Traditional variables like age and income are now combined with behavioral data, such as app usage, transaction history, and online activity.

Market segmentation enables firms to group customers based on characteristics such as usage patterns, demographic attributes, geographic location, and psychographic traits. This process lays the groundwork for designing pricing and bundling strategies that resonate with each segment's expectations. A study by McDonald and Dunbar (2016) found that segmentation "allows companies to structure their pricing models in ways that reflect perceived value among different consumer groups, rather than cost-based pricing alone."

Bundling involves offering a combination of services—such as voice, text, internet, and entertainment content at a unified price point. Telecom firms leverage bundling to create perceived value, reduce customer churn, and stimulate cross-service usage. In developed markets, tiered pricing models reflect differences in usage and service quality. Operators in North America, such as AT&T and Verizon, offer basic, standard, and premium plans that vary by speed, data cap, and customer support features.

2.2.3 Segmentation and Customer Experience Management

In Zambia's telecommunication sector, market segmentation has increasingly played a vital role in shaping how service providers deliver customer service, respond to support needs, and foster customer retention. The Zambian market presents a diverse customer base, from rural consumers with low mobile usage to urban professionals with high data demands. Segmentation strategies help firms tailor service delivery mechanisms to these unique market profiles.

Support responsiveness in Zambia's telecoms is another area where segmentation has shown measurable impact. MTN Zambia, for example, introduced tiered customer service based on value segmentation. A study by Phiri (2021) stated that "premium customers with higher monthly spending received quicker resolution times and direct access to support agents, while mass-market users were directed to automated systems."

Customer retention in Zambia's telecom industry has also been significantly influenced by segmentation-driven strategies. Telecom firms are now able to develop loyalty and retention programs tailored to different demographic and behavioral profiles. A study by Mumba (2020) observed that "customer churn in MTN Zambia decreased by 18% after the company introduced segmentation-specific loyalty programs targeting youth and rural users."

Across global telecommunication markets, market segmentation has been widely recognized as a strategic instrument that enhances the efficiency and precision of service delivery, elevates customer support responsiveness, and strengthens subscriber retention. A study by Kotler and Keller (2016) ^[25] highlighted that "segmentation provides a foundation for differentiated service systems, ensuring that customer needs are met more accurately and cost-effectively".

Support responsiveness has benefited significantly from market segmentation, particularly with the adoption of digital-first support models tailored to specific customer types. A study by Deloitte (2019) reported that "companies with customer journey maps segmented by behavioral personas automated over 60% of support tasks, improving first-response times by 45%."

Retention is another critical domain where segmentation has had a demonstrable effect. A global survey by McKinsey & Company (2020) found that "telecom operators who used segmentation to align loyalty programs to customer motivations achieved a 30% reduction in churn rates."

Customer Relationship Management (CRM) systems have steadily gained relevance within Zambia's telecommunication sector as firms strive to enhance operational efficiency and customer experience. The growing need to personalize services, improve responsiveness, and reduce churn has pushed major telecom operators in Zambia to adopt CRM systems linked with customer segmentation strategies.

In the Zambian context, segmentation data is typically derived from variables such as usage patterns, location, age, income bracket, and language preference. A study by Mwale (2019) observed that "MTN Zambia segments its customers into prepaid, postpaid, SME, and corporate groups to better align services and sales efforts," indicating how basic demographic and service usage profiles form the foundation of CRM deployment.

Another critical role of CRM in Zambia is in retention management. With SIM card portability and customer switching becoming easier due to regulatory changes, telecoms are under pressure to prevent churn. According to a study by Mumba (2021) ^[31], "CRM tools at Airtel Zambia automatically trigger retention alerts when a high-value customer exhibits reduced usage, prompting an agent to offer customized retention packages."

2.2.4 Implementation of Market Segmentation Strategy Insights by Functional Teams

In Zambia's telecommunication sector, market segmentation has evolved into a critical tool for informing the strategies and day-to-day operations of various functional teams, including marketing, sales, customer care, and technical support. The increasing reliance on segmented customer data allows these departments to customize their activities and align service offerings with the specific needs of different customer groups.

Within marketing departments, segmentation insights are primarily used to drive personalized and targeted advertising. MTN Zambia, for instance, classifies its consumer base into usage-based segments such as high-data users, voice-centric customers, and hybrid users. A study by Phiri and Chanda (2021) noted that "MTN Zambia develops different advertising content for each segment, with high-data users receiving promotions for unlimited bundles, while voice customers get talk-time-based offers."

Sales teams in Zambia's telecom industry utilize segmentation strategies to prioritize and allocate their efforts. Segmentation enables sales representatives to tailor their pitches to specific market segments such as Small and Medium Enterprises (SMEs), students, and corporate clients. According to a study by Banda (2020), "sales teams in Airtel Zambia are trained to use customer segment profiles to emphasize solutions that align with the operational needs of that segment."

Customer care teams also integrate market segmentation insights to improve service delivery and responsiveness. At MTN Zambia, the customer service platform includes CRM tools that flag the customer's segment as soon as they call. A study by Lungu and Mwansa (2022) revealed that "VIP or postpaid customers are routed to experienced agents and receive faster response times, while mass-market customers are guided through interactive voice response systems with segment-relevant self-service options."

The technical teams play a more indirect but equally vital role in executing segmentation strategies, particularly in network optimization and product development. Based on insights from marketing and customer care, technical departments at Airtel and Zamtel focus their infrastructure development on areas with high concentrations of priority segments. A study by Tembo (2021) emphasized that "network upgrades in Lusaka and Kitwe are prioritized for high-data usage segments, while rural coverage expansion targets segments that respond to voice and SMS packages."

Across the global telecommunications industry, the implementation of market segmentation strategies by functional departments marketing, sales, customer care, and technical teams—has emerged as a critical success factor. Marketing departments globally have been at the forefront of deploying segmentation insights to design personalized communication and promotional strategies.

Sales teams also play a significant role in applying segmentation insights to customer acquisition and relationship management. In the United States, Verizon Wireless has implemented sales strategies that align with customer value segmentation, focusing more resources on acquiring and retaining high-value enterprise clients.

Customer care teams globally have transformed their service delivery based on segmented customer profiles, often through CRM platforms integrated with AI. A study by Singh and Wassenhove (2021) on telecom operators in India and the UAE observed that “customer support interactions are increasingly routed based on segment priority, with premium or postpaid customers receiving access to live agents and tiered service resolution models.”

Technical teams apply segmentation insights primarily to network planning, infrastructure development, and service customization. Segmented usage data informs decisions about where to deploy bandwidth, when to upgrade to 5G, and which regions require additional coverage or redundancy. According to a study by Mehta and Xu (2018), “telecom companies in East Asia use geo-segmentation combined with data usage patterns to determine which urban zones need enhanced network capacity.”

2.3 Examining the Limitations Faced by Telecom Companies in Implementing Effective Market Segmentation

2.3.1 Limited Data Availability and Reliability

Telecommunication companies in Zambia face considerable difficulties in implementing market segmentation strategies effectively due to the limited availability and reliability of customer data. The foundation of any successful segmentation approach lies in access to comprehensive, accurate, and timely data about consumer demographics, behavior, preferences, and usage patterns. In Zambia, however, this remains a persistent challenge. A study by Chanda (2018) observed that “the absence of integrated customer data systems among major telecom providers in Zambia has led to fragmented customer profiles, limiting the ability to conduct meaningful segmentation.”

Data collection practices within the Zambian telecom sector often rely heavily on SIM registration records and call data records (CDRs), which provide basic demographic and usage information but lack depth on customer motivations, attitudes, and satisfaction levels. According to Phiri and Mbewe (2020), most telecom companies “do not have the infrastructure to gather real-time behavioural data or detailed socio-economic insights, resulting in generic segments that fail to reflect the complexity of the Zambian market.”

The problem is worsened by a lack of centralized and harmonized databases. Customer data is often siloed within different departments such as sales, customer service, and technical support, creating inconsistencies and duplication. Banda (2019) reported that “internal inefficiencies and poor data integration among telecom firms result in conflicting customer records, which undermine trust in segmentation

outputs.”

Another key issue is the low uptake of digital platforms by certain customer segments. A significant portion of Zambian telecom customers, especially in rural areas, operate feature phones and do not engage with digital channels such as apps or websites where more granular behavioural data could be collected. According to ZICTA (2022), over 60% of mobile users in Zambia do not regularly use data services, which restricts the scope of digital data analytics.

Globally, the success of market segmentation strategies in the telecommunications industry is heavily dependent on the quality, availability, and reliability of customer data. Despite advancements in data analytics and artificial intelligence, many telecom firms across developing and developed economies continue to face data-related limitations that hinder effective segmentation. A study by Kumar and Reinartz (2016) found that “while telecom companies have access to large volumes of customer data....

2.4 Literature gap

Although market segmentation has been acknowledged as an important marketing strategy by major telecom operators in Zambia, existing studies reveal only a limited and basic application of segmentation practices. For example, Phiri and Kalaba (2019) found that companies such as MTN, Airtel, and Zamtel primarily rely on broad demographic segmentation such as age, location, and income levels mainly for pricing and promotion purposes. Similarly, Chikonde (2021) observed that segmentation strategies in Zambia are often confined to marketing departments, with minimal coordination across sales, technical, and customer care teams. This indicates a lack of integrated implementation, which undermines the full operational value of segmentation. Furthermore, ZICTA (2022) and Banda (2021) ^[5] reported that telecom firms face challenges such as low data reliability, poor CRM usage, and insufficient analytical skills factors that limit the use of behavioral or psychographic segmentation. Despite these findings, there is a notable absence of empirical studies that connect segmentation practices to measurable operational outcomes like efficiency, customer satisfaction, or retention. This gap between the current basic segmentation uses and the potential strategic impact underscores the need for research that investigates how effective segmentation could enhance operational efficiency across departments in Zambia’s telecommunications sector.

3. Research Methods

This study uses a descriptive research design, which allows the researcher to systematically assess the current practices, challenges, and operational impact of market segmentation strategies within telecom companies. This design is suitable for collecting data that reflects existing conditions and stakeholder perceptions without manipulating the environment.

3.1 Sampling Design and Size

The study applies a purposive sampling technique, selecting respondents who are directly involved in segmentation, marketing, customer service, or operational planning. These respondents are chosen because of their relevance and experience with segmentation strategies. The sample consists of 50 participants of MTN employees.

3.2 Target Population

The target population comprises marketing managers, sales officers, technical staff, and customer service personnel from Zambia's three major telecommunications providers. The study also includes regulatory professionals from the Zambia Information and Communications Technology Authority (ZICTA), who provide oversight on industry practices.

3.3 Data Collection Methods

The study gathers primary data through both quantitative and qualitative approaches. Quantitative data is collected via questionnaires to obtain measurable responses on segmentation usage and outcomes. Qualitative data is collected through semi-structured interviews to explore deeper insights into strategic implementation and institutional challenges.

3.4 Data Collection Tools

Two key tools are used for data collection: Structured questionnaires: These include both closed and Likert-scale questions aimed at quantifying respondents' experiences with segmentation strategies and Interview guides: These guide the semi-structured interviews and allow participants to express detailed perspectives that may not emerge in the questionnaire responses.

3.5 Triangulation

The study employs methodological triangulation to improve data credibility. By collecting data through both questionnaires and interviews and analyzing them together, the study cross-validates findings and enhances the richness of the results. Triangulation also helps minimize bias that may result from relying on a single data source.

3.6 Data Analysis

Quantitative data is analyzed using descriptive statistics (frequencies, percentages, and charts) with software tools such as Microsoft Excel and SPSS. Qualitative data from interviews is subjected to thematic analysis, where transcripts are coded and grouped based on emerging themes aligned with the study objectives. Chen, Y. and Liu, S. (2020) [8].

3.7 Ethical Considerations

The study ensures that all participants provide informed consent before taking part. Respondents are informed about the study's purpose, their rights, and the confidentiality of their responses. Data is anonymized, and ethical clearance is obtained from relevant academic authorities and, where necessary, from participating organizations Deloitte (2020) [12].

3.8 Limitations of the Study

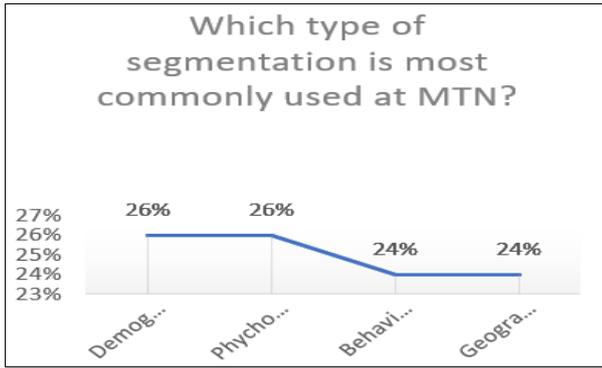
The study is limited by the sample size and scope, which focuses only on three telecom companies and selected individuals. This may not fully capture the diversity of segmentation practices across the broader Zambian telecommunications sector. Additionally, some participants may withhold sensitive information due to organizational policies, which could affect the depth of the qualitative findings.

4. Findings and Results

4.1 Background to the Respondent

This comprehensive analysis examines the gender distribution of the 50 participants, a dataset characterized by its balanced yet distinct composition. The findings reveal a sample with a notable skew towards male representation. Specifically, the data shows that 58.0% of the participants were male, a figure corresponding to 29 individuals. This establishes males as the majority group within the study. Conversely, the female demographic comprised 42.0% of the total participants, with a count of 21. The disparity between the two groups is a key finding, highlighting that male participants outnumbered female participants by 16%. This detailed breakdown provides a clear and professional overview of the gender makeup of the sample, offering essential context for any further statistical or qualitative analysis. The analysis of the 50 data points reveals a clear distribution across five distinct age categories. The largest concentration of participants falls within the 35-44 years age group, which accounts for 17 individuals, or a significant 34% of the total sample. The second most common age group is 25-34 years, comprising 13 participants, which represents 26% of the sample. These two age brackets combined represent exactly 60% of the total participants, highlighting a strong concentration within the middle age range. The older demographic, 45 years and above, is also well-represented with 11 participants (22%). Conversely, the younger and a specific middle-age category show lower frequencies. The Below 25 years group includes 8 individuals (16%), while the 25-35 Years category is the least represented, with only 1 participant (2%). This data suggests a sample population primarily consisting of individuals between 25 and 44 years of age, with relatively fewer participants in the younger and older cohorts. The two most common highest levels of education are Secondary and Tertiary, both of which were completed by 23 participants. This means that an equal number of individuals—46.0% for each group—completed their education at these two levels. Together, these two groups represent a dominant 92.0% of the entire sample, demonstrating a strong preference for education beyond the primary level. In contrast, only 4 participants (8.0%) had a primary education as their highest level of schooling. The findings reveal that the Customer Care department has the highest representation, with 20 individuals, accounting for 40.0% of the total sample. This group constitutes the largest single category among all departments. The second most represented department is Sales, which includes 12 participants and makes up 24.0% of the sample. Following this is the "Other" category, which comprises 11 individuals and accounts for 22.0% of the total. Finally, the Marketing department has the lowest representation, with only 7 participants, which is 14.0% of the sample. The analysis reveals that the largest group of participants, consisting of 19 individuals, falls within the 1-3 years of service category. This group represents a significant 38.0% of the total sample, indicating a strong concentration of early-career employees. Following this is the 4-6 years of service group, which accounts for 14 participants, or 28.0% of the total. The next largest group is those with Less than 1 year of service, comprising 9 individuals (18.0%). Lastly, employees with More than 6 years of service represent the smallest group, with 8 individuals, or 16.0% of the sample.

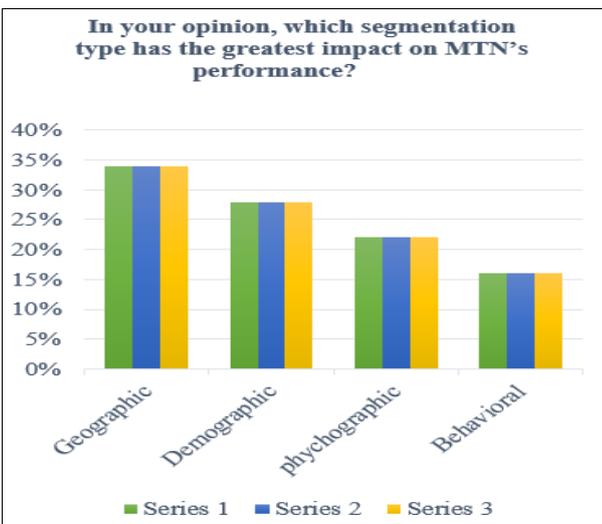
4.2 T4.3 Types of Market Segmentation Strategies employed by the telecom companies in Zambia



Source: Primary Data

Fig 1.1: Which type of segmentation is most commonly used at MTN

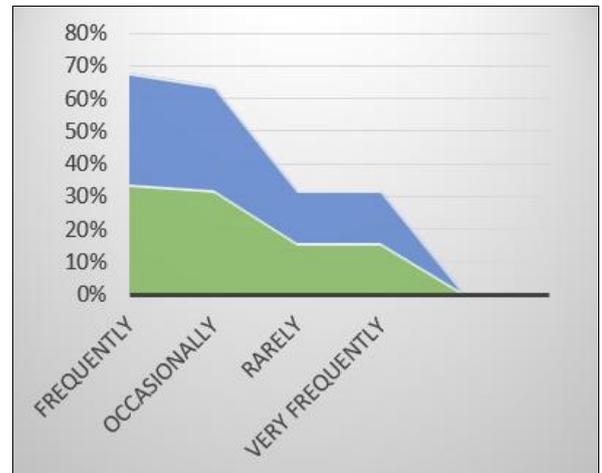
The data indicates that there is no single dominant strategy. Instead, two primary methods, Demographic and Psychographic segmentation, are tied as the most frequently used. Each of these strategies was selected by 13 participants, representing an equal 26.0% of the total sample. Similarly, the two remaining strategies, Geographic and Behavioral segmentation, also share an equal level of adoption. Both were chosen by 12 participants each, accounting for 24.0% of the sample.



Source: Primary Data

Fig 1.2: In your opinion, which segmentation type is has the greatest impact on MTNs performance

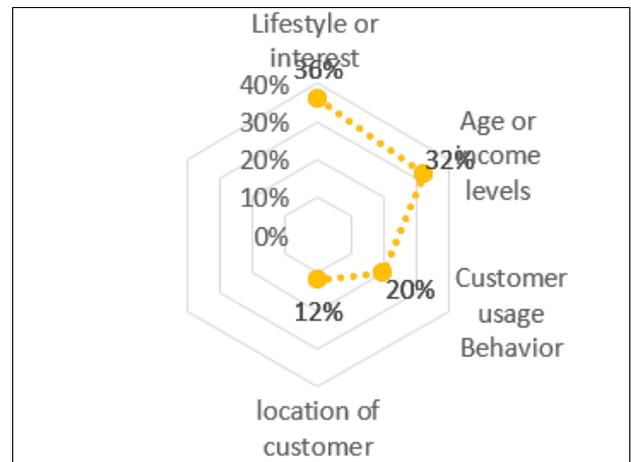
The analysis shows that Geographic segmentation is considered to have the greatest impact, with 17 respondents (34.0%) selecting it. This suggests that factors related to location, such as urban versus rural markets, are viewed as the most critical in driving company performance. Following this, Demographic segmentation was identified as the second most impactful strategy, chosen by 14 respondents and accounting for 28.0% of the sample. The third most selected option was Psychographic segmentation, with 11 respondents (22.0%), while Behavioral segmentation was considered to have the least impact, with only 8 respondents (16.0%) selecting it.



Source: Primary Data

Fig 1.3: To what extent do you think MTN uses multiple segmentation strategies simultaneously

The data reveals that the majority of respondents believe MTN frequently or occasionally employs a multi-faceted approach to segmentation. The largest group, 34.0% (17 respondents), indicated that MTN "Frequently" uses multiple strategies simultaneously, while 32.0% (16 respondents) chose "Occasionally". A smaller but still notable percentage of respondents believe MTN uses multiple segmentation strategies less often. The options "Very Frequently" and "Rarely" each received an identical response rate of 16.0%, with 8 respondents for each.

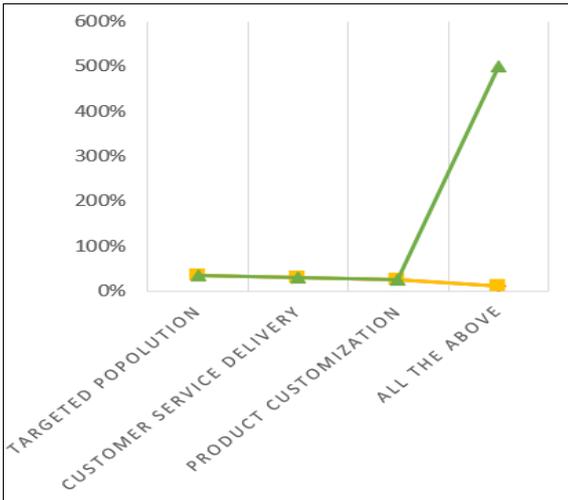


Source: Primary Data

Fig 1.4: Commercial banks charge low interest rates on the money the lend

Based on the survey results, the most important characteristic MTN is perceived to consider when dividing the market is the customer's "Lifestyle or Interests," which was chosen by 36.0% (18) of respondents. This is followed closely by "Age or income levels," which was selected by 32.0% (16) of respondents. A smaller proportion of respondents believe other characteristics are more heavily considered. "Customer usage behavior" was chosen by 20.0% (10) of respondents, while "Location of customers" was the least selected characteristic, with only 12.0% (6) of respondents choosing it.

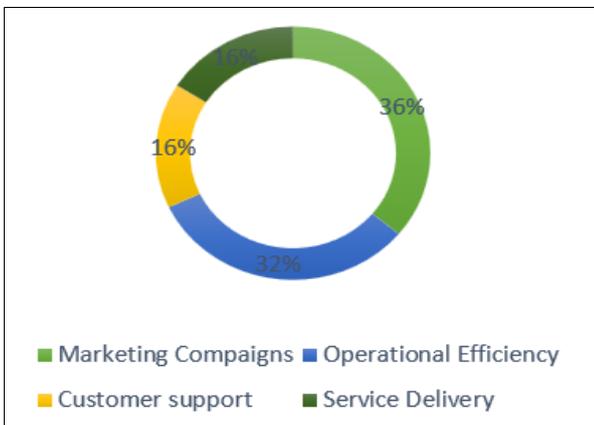
4.3 Effectiveness of Market Segmentation on Service Delivery & Operational Efficiency



Source: Primary Data

Fig 1.5: Which of the following has improved due to Market segmentation at MTN

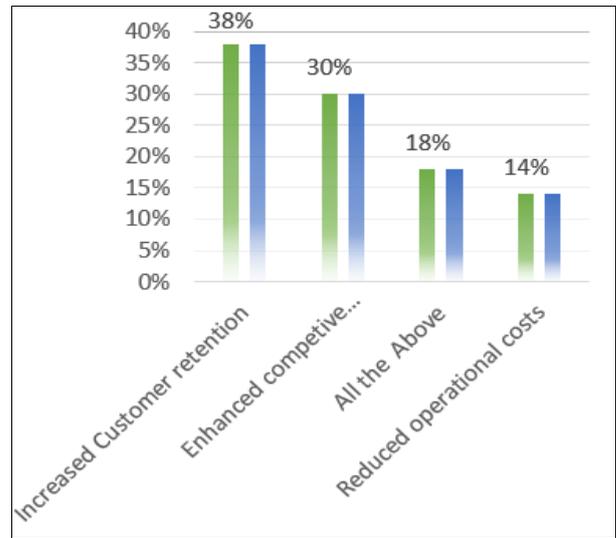
This finding suggests that a key benefit of market segmentation for MTN is its ability to more precisely define and reach specific customer groups. Following closely, "Customer service delivery" was chosen by 30% of the respondents, indicating that tailored services resulting from segmentation are perceived as a major improvement. "Product customization" was selected by 24% of the respondents, while "All the above" accounted for 12% of the total responses.



Source: Primary Data

Fig 1.6: Which area has benefited the most from segmentation

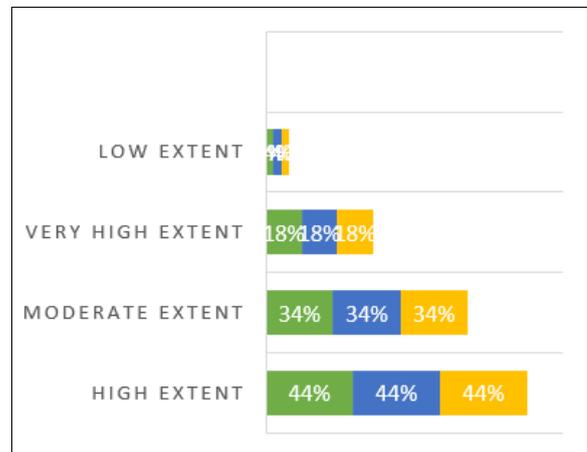
Out of 50 respondents, the most significant benefit was identified in "Marketing Campaigns," with 36% of the participants selecting this option. This finding indicates that market segmentation is perceived as a highly effective strategy for improving MTN's promotional efforts. "Operational efficiency" was the second-most chosen option with 32%, suggesting that segmentation also has a strong positive impact on internal processes. Both "Service delivery" and "Customer support" received 16% of the responses, highlighting that while improvements in these areas are noted, they are not seen as the primary benefits when compared to marketing and operational aspects.



Source: Primary Data

Fig 1.7: Which of the following is as a result of Segmentation by MTN

The data indicates that "Increased customer retention" is the most significant outcome, with 36% of participants selecting this option. This suggests that the primary benefit of segmentation is its ability to build stronger customer loyalty and reduce churn. "Enhanced competitive advantage" was also a strong result, chosen by 30% of respondents, highlighting the strategic value of segmentation in the highly competitive telecommunications market. All the above" was selected by 18% of the participants, which, when combined with the individual benefits, shows a broad recognition of segmentation's positive impact. Finally, "Reduced operational costs" was the least chosen option at 14%.

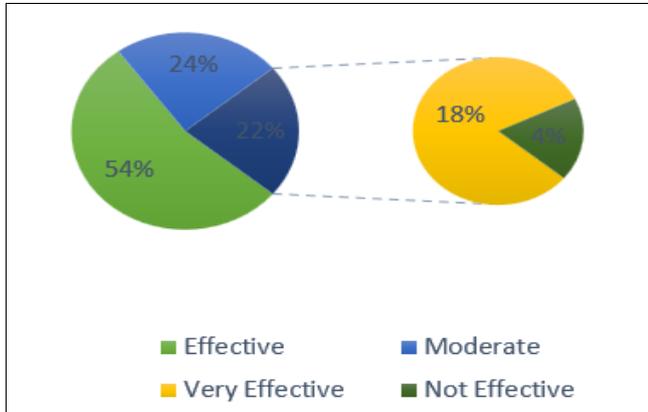


Source: Primary Data

Fig 1.8: To what extent has segmentation influenced MTN's profitability

The data reveals a strong consensus that segmentation has positively influenced the company's financial success. "High extent" was the most frequently chosen option, selected by 44% of participants. This indicates that a significant majority of respondents believe segmentation has been a key driver of MTN's profitability. The combined responses of "High extent" (44%) and "Moderate extent" (34%) account for 78% of the participants, underscoring the widespread

recognition of segmentation's positive financial impact. "Very high extent" was selected by a notable 18% of respondents, further reinforcing the perception that segmentation is a powerful tool for profitability. Only a small fraction of respondents (4%) believed the impact was to a "Low extent," suggesting that the strategy is not only effective but also widely perceived as a successful business practice.

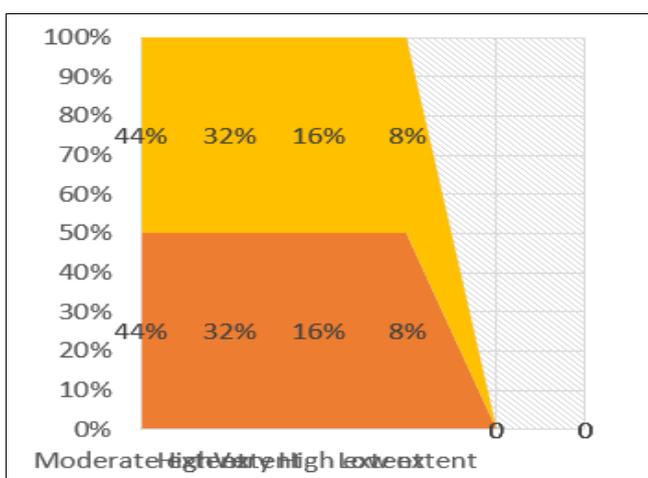


Source: Primary Data

Fig 1.9: How do you rate the overall effectiveness of the market segmentation on service delivery & operational efficiency of your company

Shows a combined 72% of respondents rated the effectiveness as either "Effective" (54%) or "Very effective" (18%). This demonstrates a widespread belief that MTN's efforts to segment its customer base have translated into tangible improvements in how services are delivered and how the company operates. Only a small fraction of respondents (4%) found the strategy to be "Not effective," reinforcing the notion that this is a successful and well-received business practice.

4.4 Limitations Faced by Telecom Companies in Implementing Effective Market Segmentation in Zambia



Source: Primary Data

Fig 1.1: To what extent does limited technology affect segmentation at MTN

The data reveals that limited technology is a notable challenge for MTN's segmentation efforts. The largest group of respondents (44%) believes the impact is moderate, while a substantial portion (32%) views the impact as high. This

suggests that the issue is not a complete barrier but a significant impediment that slows down progress and limits the effectiveness of segmentation strategies.

5. Discussion of Findings

The findings in section suggest that MTN Zambia employs a multi-faceted approach to market segmentation, indicating a sophisticated understanding of the diverse consumer base within the Zambian telecommunications sector. The data reveals no single dominant segmentation strategy. Instead, Demographic and Psychographic segmentation are the most frequently used, each selected by 26.0% of respondents. Geographic and Behavioral segmentation follow closely, both selected by 24.0% of respondents. This relatively even distribution across all four major segmentation types highlights the company's efforts to tailor its voice, data, and digital services by dividing the market based on multiple variables, not just one. The strong reliance on Psychographic segmentation is further supported by the finding that the most important characteristic MTN is perceived to consider when dividing the market is the customer's "Lifestyle or Interests" (36.0%). This suggests that MTN's segmentation is moving beyond simple, observable demographic factors (like age or income) to focus on the underlying needs, values, and usage patterns of its customers. This aligns with modern marketing theory, which advocates for a deep understanding of customer motivations to create highly relevant service offerings.

Discussion on the Perceived Impact of Strategies Related to Objective 2 While Demographic and Psychographic segmentation are the most used, the findings indicate a different strategy is perceived to have the greatest impact on company performance. Critical Role of Geographic Factors: Geographic segmentation was identified by the highest number of respondents (34.0%) as having the greatest impact on MTN's performance. This is a significant finding because geographic factors—such as urban versus rural markets—are viewed as the most critical drivers of company performance in the Zambian context. This is likely due to the unique operational challenges in the telecommunications industry in Zambia, including variations in network coverage, infrastructure costs, and different consumption patterns between metropolitan and remote areas. The need to address these regional disparities, perhaps through localized pricing or service bundles, makes geographic-based targeting highly impactful.

Discussion of Implementation Limitations Objective 3 the third objective focused on the limitations faced by the company in implementing effective market segmentation. The findings highlight key internal challenges. Two Primary Internal Limitations: The analysis reveals that the two most significant internal limitations facing MTN's segmentation implementation are Limited financial resources (42.0%) and inadequate research capacity (40.0%). The near-equal weighting of these two factors is critical. A lack of limited financial resources (42.0%) points to a fundamental need for capital investment in segmentation programs, potentially for technology or advertising. The high percentage citing inadequate research capacity (40.0%) is particularly problematic for effective segmentation, which relies heavily on accurate data collection and analysis [snippet from back]. This suggests a gap in the internal skills and analytical tools needed to execute, monitor, and refine the multi-faceted segmentation strategies the company attempts to employ.

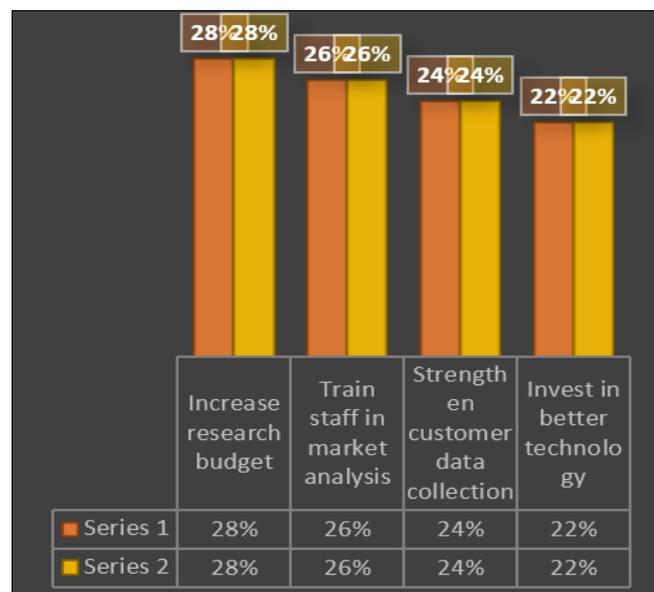
This is further supported by the most frequently selected option for improving segmentation being to "Increase research budget" (28%).

Table 1.1: What is the greatest internal limitation MTN faces in segmentation implementation

	Frequency	Percent	Valid Percent	Cumulative Percent
Insufficient training of staff	4	8.0	8.0	8.0
Limited financial resources	1	2.0	2.0	10.0
Limited financial resources	21	42.0	42.0	52.0
Inadequate research capacity	20	40.0	40.0	92.0
Lack of management support	4	8.0	8.0	100.0
Total	50	100.0	100.0	

Source: Primary Data

This report analyzes the results of a survey on the greatest internal limitations facing MTN's segmentation implementation. Based on the provided data from 50 respondents, the most significant internal challenges identified are a lack of financial resources and inadequate research capacity. These findings suggest that addressing a core need for capital and analytical tools is essential for improving segmentation effectiveness.



Source: Primary Data

Fig 1.4: Which strategy would best overcome segmentation challenges at MTN

The results shows Increase research budget is the most frequently selected option, with (28%). This indicates that a significant portion of the respondents prioritize allocating more resources to research. Train staff in market analysis is a close second, with (26%). This suggests that improving internal skills and knowledge is a high priority for many. Strengthen customer data collection" (Option D) and "Invest in better technology are ranked third and fourth, respectively, with (24%) and (22%) responses. The difference in count between all four options is very small,

indicating a relatively even distribution of priorities.

5.1 Conclusion

The investigation into the operations of MTN Lusaka Head Office provides a clear and robust conclusion: market segmentation is a cornerstone of effective business strategy and a key driver of success in the highly competitive telecommunications industry. The findings demonstrate that MTN's strategic approach of dividing its diverse customer base into distinct, homogeneous groups has a direct and positive impact on its operations and market standing. By understanding the unique needs and behaviors of different customer segments from high-value business clients to data-focused youth—MTN Lusaka can tailor its products, services, and communication. This personalized approach fosters a stronger connection with customers, leading to increased satisfaction and loyalty, which are crucial for reducing churn in a saturated market. Market segmentation allows MTN to move away from a one-size-fits-all approach, enabling a more precise and effective allocation of resources. Targeted marketing campaigns, product development, and service delivery to specific segments reduce wasted expenditure and improve the return on investment. In the dynamic Zambian telecom landscape, MTN's ability to identify and cater to specific market niches, such as mobile money users or enterprise clients, provides a significant competitive edge over its rivals. This strategic focus enables the company to differentiate its offerings and maintain its market leadership.

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