

Price Wars and Revenue Performance in African Telecom Markets: Evidence from Zambia

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Abstract

This study examines the effect of price-war practices on firm revenue performance in Zambia's telecommunications sector, with a focus on MTN and Airtel. Drawing on Bertrand competition theory and strategic competition theory, the study investigates whether aggressive pricing strategies directly enhance revenue or operate through intermediary market dynamics. A positivist research philosophy and explanatory research design were adopted. Primary data were collected from 250 employees using structured questionnaires, while secondary data were obtained from company annual reports and regulatory publications covering the period 2020–2024. Quantitative analysis was conducted using correlation and regression techniques. The findings reveal that price-war practices are strongly associated with improved market share performance ($r = 0.705$, $p < 0.01$), while market share performance significantly predicts revenue outcomes ($\beta = 0.693$, $p < 0.001$). However, price-war practices do not have a statistically significant direct effect on revenue performance ($\beta = 0.009$, $p = 0.887$). These results indicate that the relationship between price wars and revenue is indirect, operating through market share expansion. The study contributes to the literature by providing firm-level evidence from a developing economy and demonstrating the mediating role of market share in the price–revenue relationship. It highlights the strategic trade-off between competitive pricing and revenue optimisation in telecommunications markets.

1. Introduction

Price wars are sustained periods of aggressive price reductions undertaken by competing firms in response to rivalry, competitive threats, or the desire to defend market position (Heil and Helsen, 2001; Gao, 2021; Mutemba and Malama, 2024). In competitive industries, price often becomes one of the most visible and immediate strategic tools through which firms seek to attract customers and respond to rival actions (Porter, 2008; Rao, Bergen and Davis, 2000; Varian, 2019). In telecommunications markets, this is particularly evident because core services such as voice and data are often perceived as broadly similar across operators, making tariff reductions, discounted bundles, and promotional campaigns central to competitive rivalry (Možný, 2017; Sun, Li and Zhou, 2017; GSMA, 2025).

The Zambian telecommunications sector offers a useful context for examining this issue because competition among operators has become more pronounced over time (World Bank, 2020; ZICTA, 2024; Mwachikoka and Muteto, 2024). MTN and Airtel, as dominant operators, compete continuously for subscribers in a market characterised by visible pricing responses, promotional rivalry, and growing digital service usage (Mutemba and Malama, 2024; Robb and Paelo, 2020; Bank of Zambia, 2020). Against this background, the article examines how price-war practices relate to revenue performance, while also recognising the role of market share in shaping firm outcomes (Heil and Helsen, 2001; ZICTA, 2019; Mothobi, 2019).

1.1 Background

Global telecommunications markets have become increasingly competitive as a result of liberalisation, technological change, and the expansion of mobile connectivity (World Bank, 2020; GSMA, 2023; Zimba et al., 2021). Operators now compete not only through network coverage and service innovation, but also through tariff reductions, discounted bundles, promotional campaigns, and customer retention initiatives (GSMA, 2022; Možný, 2017; Mutemba and Malama, 2024). In such markets, pricing remains one of the quickest and most visible responses to rival behaviour, particularly where customers can easily compare competing offers (Sun, Li and Zhou, 2017; Rao, Bergen and Davis, 2000; Robb and Paelo, 2020).

In Zambia, the sector has evolved into a more contested market following liberalisation and regulatory reform (World Bank, 2020; ZICTA, 2024; Zimba et al., 2021). MTN and Airtel account for the largest share of subscriber activity, creating strong incentives for firms to defend market position and attract new subscribers through visible competitive strategies (ZICTA, 2024; Mwachikoka and Muteto, 2024; Mutemba and Malama, 2024). The sector has also become more commercially significant because of increased use of mobile-enabled financial and payment services, which means that pricing decisions may influence not only subscriber numbers but also broader firm performance (Bank of Zambia, 2020; World Bank, 2020; Robb and Paelo, 2020).

1.2 Problem Statement

Although price-based competition is increasingly visible in Zambia's telecommunications sector, firm-level empirical evidence on how sustained price-war practices affect revenue performance remains limited (Mothobi, 2019; ZICTA, 2019; ZICTA, 2024). Existing studies and regulatory reports largely document tariff reductions, discounted bundles, and affordability outcomes, but they do not adequately establish whether such practices improve firm revenue through subscriber expansion or weaken it through tariff erosion and reduced earnings per subscriber (Sun, Li and Zhou, 2017; Van Heerde, Gijbrecchts and Pauwels, 2008; Robb and Paelo, 2020). This creates an important gap in understanding the financial consequences of price wars among dominant operators such as MTN and Airtel in Zambia (Mutemba and Malama, 2024; Mwachikoka and Muteto, 2024; Otieno and Mwale, 2025).

2 Literature Review

2.1 Empirical Review

The literature shows that price wars are a common feature of competitive markets, especially where firms offer similar products and can respond quickly to rival actions. In telecommunications, this is even more pronounced because operators compete through highly visible tools such as tariffs, bundles, and promotions (Heil and Helsen, 2001; ITU, 2014; GSMA, 2022). This suggests that price reductions in telecom markets are part of broader competitive rivalry rather than isolated actions. However, this literature is largely conceptual and sector-wide, and does not sufficiently explain how these general pricing dynamics translate into firm-level outcomes in specific developing market contexts such as Zambia.

A consistent pattern in the literature is that aggressive pricing can influence market share performance by attracting customers, stimulating usage, and encouraging switching behaviour. Antwi (2011) found that price competition influenced consumer usage and spending behaviour, while Sun, Li and Zhou (2017) showed that lower prices and discounted bundles can stimulate service uptake in telecom markets. Similarly, Možný (2017) observed that pricing remains one of the most visible tools affecting subscriber decisions in highly competitive telecommunications markets. However, although these studies show that pricing affects customer behaviour, they do not adequately establish whether such effects translate into sustained market share performance at the firm level, particularly in Zambia's telecommunications sector.

The literature also indicates that the effect of price wars on revenue performance is less direct. While lower prices may increase uptake and service usage, they may also place pressure on financial returns if reduced tariffs are not matched by sufficient growth in customer volumes. Heil and Helsen (2001) argue that repeated price cuts can weaken financial outcomes, while GSMA (2022) highlights the continued pressure that pricing places on operators in liberalised telecom markets. In the African context, Otieno and Mwale (2025) also show that price wars affect affordability and service continuity while remaining relevant to revenue performance. However, this body of literature does not clearly demonstrate how revenue performance is affected at operator level, nor does it adequately separate the direct effect of price-war practices from the possible influence of other factors such as market share.

Within Zambia, available studies confirm that aggressive pricing remains a visible part of competition in the telecommunications sector. Mothobi (2019) showed that the threat of new market entry triggered significant reductions in mobile data prices, while ZICTA (2019; 2024) documents continued tariff adjustments and promotional rivalry among operators. These studies are important because they confirm that price-based competition is active in the Zambian market. However, the existing Zambian evidence is mainly descriptive and regulatory in nature, focusing more on pricing behaviour and market conditions than on the relationship between price-war practices, market share performance, and revenue performance among dominant operators such as MTN and Airtel.

The present study addresses this gap by examining the effect of price-war practices on firm revenue performance while also incorporating market share performance into the analysis. In doing so, it contributes firm-level evidence from Zambia's telecommunications sector and extends understanding of how aggressive pricing, market position, and revenue outcomes relate within dominant operators (Mothobi, 2019; ZICTA, 2024; Mutemba and Malama, 2024).

2.2 Theoretical Framework

This study is anchored on Bertrand Competition Theory and Strategic Competition Theory. Bertrand Competition Theory explains competition in markets where firms sell similar or closely substitutable products and therefore compete largely on price (Pindyck and Rubinfeld, 2018). The theory assumes that consumers are likely to choose the lower-priced option where differences in quality are minimal (Varian, 2019). In telecommunications, the theory is relevant because operators often offer similar core services, and tariff changes are commonly used to attract customers and respond to competitors (Sun, Li and Zhou, 2017). In the Zambian context, visible tariff adjustments and promotional campaigns support the relevance of this theory to the sector (ZICTA, 2019).

Strategic Competition Theory complements this perspective by explaining how firms observe rival actions and adjust their own strategies in response (Porter, 2008). The theory suggests that firms do not compete in isolation, but continuously react to competitor behaviour in order to defend or improve market position (Rao, Bergen and Davis, 2000). This is particularly relevant in telecommunications, where pricing decisions, promotions, and bundle redesign often reflect ongoing strategic interaction between operators (Robb and Paelo, 2020). Together, these theories help explain why price-war practices emerge and how they may influence market share and revenue performance in Zambia's telecommunications sector (Heil and Helsen, 2001).

2.3 Conceptual Framework

This study examines the relationship between price-war practices and revenue performance, with market share performance introduced as a mediating variable. The framework is grounded in Bertrand Competition Theory and Strategic Competition Theory, which explain how firms compete through pricing and strategic responses in competitive markets.

Price-war practices—operationalized through tariff reductions, discounted bundles, promotional campaigns, and bonus offers—are expected to influence market share performance by attracting new customers, stimulating usage, and encouraging switching behaviour. Market share performance, measured through subscriber growth, customer retention, and competitive positioning, in turn influences revenue performance, reflected in firm-level revenue

outcomes.

The framework posits that price-war practices do not directly influence revenue performance, but instead exert an indirect effect through market share performance. This mediating relationship reflects the reality that aggressive pricing strategies primarily function as mechanisms for expanding the customer base, rather than as direct drivers of financial performance.

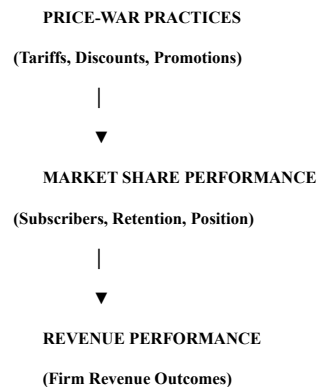


Figure 1: Conceptual Framework

Market share performance is conceptualized as a mediating variable in the relationship between price-war practices and revenue performance. This implies that price-war practices influence revenue outcomes indirectly by first affecting the firm's market share position.

In mediation terms:

- Path A: Price-war practices → Market share performance
- Path B: Market share performance → Revenue performance
- Path C (Direct effect): Price-war practices → Revenue performance

The study's empirical findings confirm that while price-war practices significantly influence market share performance, and market share performance significantly influences revenue performance, the direct effect of price-war practices on revenue performance is not statistically significant. This indicates full mediation, where market share performance fully explains the relationship between price-war practices and revenue outcomes.

This mediation perspective provides a more nuanced understanding of competitive pricing strategies in telecommunications markets. It suggests that firms do not improve revenue simply through price reductions, but through their ability to convert pricing strategies into sustained customer acquisition, retention, and competitive advantage.

3 Methodology

This study adopted a positivist research philosophy because it sought to examine measurable relationships among price-war practices, market share performance, and revenue performance (Creswell and Creswell, 2018). A quantitative explanatory design was used to determine how the independent variables relate to the dependent variable (Saunders, Lewis and Thornhill, 2019). This design was appropriate because the study focused on testing relationships using statistical analysis (Kothari, 2004).

Primary data were collected from 250 employees of MTN and Airtel using structured questionnaires. The questionnaire used closed-ended Likert-scale items to capture responses on price-war practices, market share performance, and revenue performance. Secondary data were obtained from annual reports, financial statements, and regulatory publications covering the period 2020 to 2024.

4 Findings

The study confirmed that price-war practices are prevalent in Zambia's telecommunications sector. Respondents generally agreed that tariff reductions, discounted bundles, bonus offers, and promotional campaigns are common features of competition among MTN and Airtel, as reflected in the high mean score for price-war practices ($M = 3.94$, $SD = 0.43$) (Mutemba and Malama, 2024). This supports the view that pricing remains one of the most visible competitive tools in telecommunications markets (Možný, 2017). It also reflects the competitive dynamics described in the Zambian market, where operators respond actively to rival pricing actions (ZICTA, 2024).

The findings further showed a strong positive relationship between price-war practices and market share performance, with correlation analysis yielding $r = 0.705$, $p < 0.01$. This suggests that aggressive pricing contributes to customer attraction, subscriber growth, and competitive position (Antwi, 2011). The result is consistent with the argument that lower prices and promotional offers can stimulate service uptake in highly competitive telecommunications markets (Sun, Li and Zhou, 2017). However, while this confirms the relevance of price-war practices to market share performance, earlier literature had not adequately shown whether this relationship would hold clearly at firm level in Zambia's telecommunications sector (Mothobi, 2019).

The study also found a strong positive relationship between market share performance and revenue performance, with a correlation coefficient of $r = 0.695$, $p < 0.01$. This indicates that stronger market position is associated with better revenue outcomes (Otieno and Mwale, 2025). The result suggests that subscriber growth, customer retention, and competitive strength matter significantly in shaping financial performance (Robb and Paelo, 2020). This is important because it highlights market share as an important independent variable in understanding firm revenue performance in the sector (ZICTA, 2024).

Although price-war practices were positively associated with revenue performance at the correlation level, with $r = 0.498$, $p < 0.01$, the findings showed that they do not have a statistically significant direct effect on revenue performance when tested alongside market share performance. Regression analysis showed that price-war practices had a negligible coefficient of $\beta = 0.009$ and were not statistically significant at $p = 0.887$ (Field, 2018). This means that although aggressive pricing may help firms improve market position, it does not automatically lead to direct revenue growth (Heil and Helsens, 2001). The results therefore show that, within the model, price-war practices are not a significant direct predictor of revenue performance (Sun, Li and Zhou, 2017).

By contrast, market share performance remained the primary and statistically significant predictor of revenue performance in the regression model, with $\beta = 0.693$, $p < 0.001$. This shows that market share performance has a much stronger direct effect on revenue outcomes than price-war practices on their own. In practical terms, the findings indicate that gains in subscriber base, customer retention, and competitive position are more important in driving revenue performance than aggressive pricing alone (Robb and Paolo, 2020). This reinforces the conclusion that market share, as an independent variable, plays a major role in explaining revenue performance in Zambia’s telecommunications sector (ZICTA, 2024).

Secondary data supported this interpretation by showing that subscriber growth trends were more closely aligned to revenue expansion than pricing behaviour alone (ZICTA, 2024). Airtel’s stronger subscriber growth was associated with stronger market expansion, while MTN’s decline in subscriber numbers constrained revenue sustainability over time (Mothobi, 2019). This reinforces the conclusion that price-war practices are strategically important mainly because they help firms strengthen market share, while market share itself remains an important independent predictor of revenue performance (Mutemba and Malama, 2024).

Table 1: Airtel Annual Report: Subscribers, Revenue & YoY growth

Airtel Zambia Customer and Revenue Performance (2020–2024)				
Year	Customers (Millions)	YoY Customer Growth	Revenue (ZMW Millions)	YoY Revenue Growth
2020	8.5	-	2,598	-
2021	9	6%	3,580	38%
2022	9.8	9%	4,450	24%
2023	10.2	4%	5,716	28%
2024	11.1	9%	7,123	25%

*Source: Airtel Annual Reports, 2020-2024

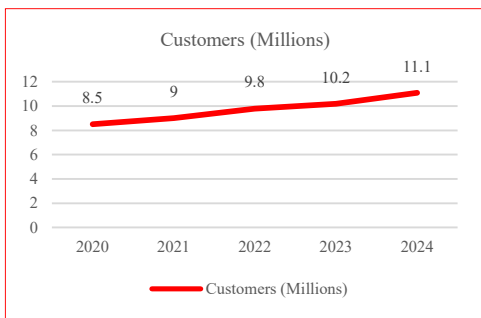


Figure 2: Airtel Subscribers Trend Analysis

*Source: Airtel Annual Reports, 2020-2024

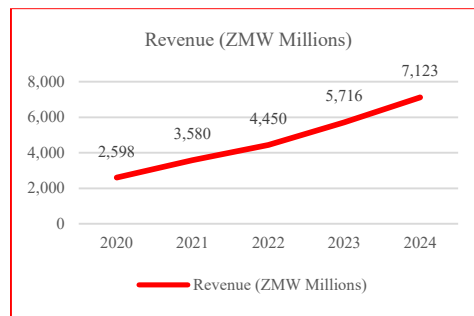


Figure 3: Airtel Revenue Trend Analysis

Table 2: MTN Annual Report: Subscribers, Revenue & YoY growth

MTN Zambia Subscribers and Revenue Performance (2020-2024)				
Year	Subscribers (Millions)	YoY Subscriber Change	Revenue (Bn Rands)	YoY Revenue Growth
2020	8.203	-	2.576	-
2021	8.056	-1.79%	2.429	-5.71%
2022	7.112	-11.70%	3.316	36.50%
2023	6.886	-3.20%	3.938	18.80%
2024	6.452	-6.30%	3.609	-8.40%

*Source: MTN Group Financial Statements Data Sheets (2020, 2022, 2024)

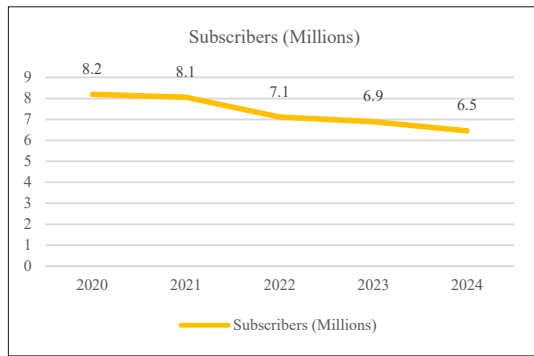


Figure 4: MTN Subscribers Trend Analysis

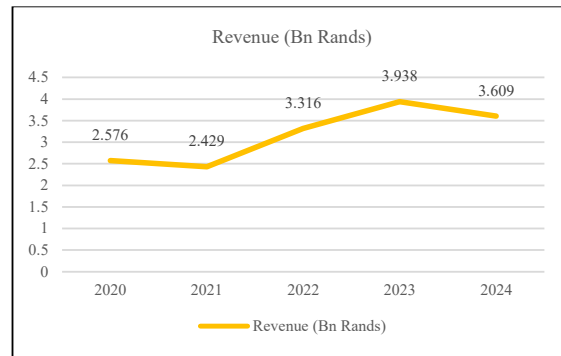


Figure 5: MTN Revenue Trend Analysis

5 Conclusion

This study set out to determine whether price wars improve firm revenue performance in Zambia's telecommunications sector. The evidence shows that they do, but not directly.

Price-war practices remain a central feature of competition among MTN and Airtel, and they clearly matter in shaping market outcomes. The findings show that aggressive pricing strengthens market share performance through subscriber growth, customer retention, and competitive position. In turn, stronger market share performance is associated with stronger revenue performance.

The critical finding, however, is that price-war practices do not directly drive revenue performance when market share performance is taken into account. Market share performance emerged as the stronger predictor of revenue outcomes. This means that the real value of aggressive pricing lies not in price cuts themselves, but in the firm's ability to convert those price cuts into a larger and stronger customer base.

The study therefore concludes that, in Zambia's telecommunications sector, price wars are not revenue strategies in themselves. They are market-share strategies. Firms do not grow revenue simply by reducing prices. They grow revenue by turning competitive pricing into subscriber growth, retention, and stronger market position. That is where the real financial payoff lies.

Declaration of Competing Interests

The authors declare that they not aware of any competing financial interests or personal relationships that may have influenced the work described in this document.

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Ethical considerations

The article followed all ethical standards appropriate for this kind of research.

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