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Performance of Telecommunication Companies in Zambia: A Case  
Study of Airtel Zambia Limited (2012 – 2021)**



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## Evaluation of the Impact of the Stock Price on the Financial Performance of Telecommunication Companies in Zambia: A Case Study of Airtel Zambia Limited (2012 – 2021)

 Wabei Catherine Mutafu

The University of Zambia, Great East Road Campus, Lusaka, Zambia.

Department of Business Administration and Finance.

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### Abstract

**Purpose:** This paper evaluates the impact of the Lusaka Securities Exchange (LUSE) on the financial performance of telecommunication companies in Zambia: a study of Airtel Zambia Limited (2012 – 2021).

**Methodology:** Using time series quantitative data and a combination of primary and secondary data obtained through structured questionnaires to meet the following specific research objectives: i) to analyse the effect of Airtel Zambia's stock price on the annual net revenue of Airtel Zambia, ii) to determine the correlation between Airtel Zambia's stock price and the annual net revenue of Airtel Zambia, iii) to determine management's level of knowledge of the Securities Exchange Market and how the knowledge is being applied to influence revenue performance, iv) to examine the perception of employees on the effect of stock price on the revenue performance of Airtel Zambia Limited and v) to identify and examine factors that affect revenue performance of Airtel Zambia Limited.

**Findings:** The results of the study show that there exists a statistically significant relationship, there is a low effect of stock prices on Airtel Zambia's revenue and that there is a correlation between the stock price and revenue performance. This study underscores the need for increased participation in the Lusaka Securities Exchange (LUSE), improved branding and reputation management for listed companies, and further scholarly research in this field.

**Unique contribution to theory, policy and practice:** It advocates for strategic initiatives by financial market players to stimulate market participation, and for companies to enhance their shareholder relations to potentially boost share prices and revenue. The study also identifies significant gaps in the literature, highlighting the opportunity for further research in this area.

**Keywords:** *Securities Exchange, Stock Price, Financial Performance, Telecommunications*

## 1 Introduction

The capital markets are a stimulator of economic development. The capital market enables firms to raise capital through a mechanism that allows savings by various economic units to be accessed for investment purposes, which boosts aggregate demand and economic growth (Mo, 2017). Through the capital market, companies raise capital for various expansions projects, it links economics units that want to save to those who want to invest (ACCA, 2012).

The capital market is a system through which various financial assets that include securities, derivatives and various other long-term financial instruments used to raise capital are traded (Wieland et al., 2020). Alternatively, a capital market is an established mechanism through which long-term funds, equities and bonds traded (World Bank, 2020). The financial instrumented are traded at an established institution known as the stock or securities (Kadi, 2016). The capital is divided into a primary market, where new issuances are traded, and a secondary market, where existing equities and bonds are traded (Davis et al., 2018; Darskuviene, 2010). The securities exchange offers an opportunity to companies in various industries to raise capital and expand their productions.

The study aims to investigate the influence of the Lusaka Securities Exchange on the mobile telecommunication sector using the second largest mobile telecommunication service provider Airtel Zambia Limited, the only listed Telecommunication Company, as a proxy for the industry. The study will also seek to establish the impact of the exchange rate, interest rate and inflation rate on the growth of the mobile telecommunication industry in Zambia.

## 2 Literature Review

The underpinning theories are anchored in two primary perspectives, namely the finance-led growth hypothesis and the endogenous growth theory. These frameworks are valuable for the insights they offer regarding how the development of the stock market influences sectoral and economic growth.

The finance-led growth hypothesis posits that the development of the financial sector, particularly the stock market, is instrumental in stimulating growth on both the industrial and economic front. According to this hypothesis, the stock market serves as a conduit through which investors can obtain firm-specific information, which refers to data that is unique to a particular company, and mobilize resources for capital accumulation. Furthermore, it posits that an efficient stock market has the ability to enhance economic efficiency by effectively allocating resources and promoting productivity.

In a complementary manner, the endogenous growth model underscores the role that financial markets, including the stock market, play in propelling industrial and economic growth. This model proposes that financial markets contribute to growth by improving the quality of investment



decisions made and channeling funds towards projects that are innovative in nature. Essentially, the endogenous growth model highlights the significance of financial development as a driver of long-term economic growth through technological innovation and the increase of investments.

In light of recent developments in the financial world, these theories continue to provide valuable insights into the complex dynamics between financial markets and economic growth. As we continue to navigate the impacts of global events such as the COVID-19 pandemic on our economies, the finance-led growth hypothesis and the endogenous growth model serve as important tools for understanding and predicting economic trends.

There are limited studies that examined the impact of stock market on telecommunication industry. Most of the empirical studies have examined the effect of stock market development on economic growth. Since industry production growth is a component of broader economic growth, the first section of the study will explore effect of the of the stock market on industry specified growth. The second section of the study will review various literature on the stock market on economic growth.

There are limited studies that analysis the impact of stock market on the industrial or sectoral growth. In a study on the impact of market capitalization on the confectionary industry in Nigeria, Oluwatoyin & Gbadebo (2009) used stock turnover ratio as growth of industry growth. The independent variables were price index, profit after tax, market capitalization and dividend. The estimation method used is the Ordinary Least Squares (OLS). The study period was 20 years. The results of the empirical analysis showed that there is positive effect between the price index and industrial performance. Besides, there was an analysis that checked the opposite impact of the market capitalization and the performance of a company. This showed that there is a bidirectional relationship between market capitalization and industrial performance.

In another study in Nigeria, Offum & Ihuoma (2018) examined the causal relationship between the stock market and industrial growth. The paper covered the period between 1985 to 2015. They used a Granger Causality test approach. The explanatory variables were market capitalization, total value of shares traded ratio, government expenditure on education and domestic investment in GDP. The explained variable was share of industrial sector in GDP. The causality test results revealed a unidirectional relationship between market capitalization and industrial sector share of GDP.

From Sub-Saharan Africa, Owiti (2012) examined the relationship between stock market development and economic growth in Kenya. Using annual secondary data for the period 1990-2010, the study estimated a linear regression model. This study found that stock market development stimulated economic growth in Kenya. The study further, noted that the causality between the two variables is bi-directional. That is, the relationship runs in both directions.

Carp (2012) examined whether stock market development was crucial to the economic growth prospects of emerging economies of Central and Eastern Europe. The study controlled macroeconomic imbalances and capital flight from these economies. The study found that capital markets such as the stock market are essential in stimulating economic growth. However, in order for economies to reap the growth-enhancing benefits of stock markets, there is need to deal with macroeconomic imbalances that characterize these economies.

In Asia, Nazir et al. (2010) examined the effect of stock markets on economic growth in Pakistan over the period 1986 to 2008. The study used two measures of stock market development: the stock market index and market capitalization. The study confirms the predictions of the finance-led growth hypothesis that economic growth can be stimulated through stock market development. Another study on Pakistan by Rahman and Salahuddin (2012) examined the effect of stock market development on economic growth over the period 1971 to 2006. The study was placed within a broader study on the determinants of economic growth in Pakistan. The study employed econometric techniques such as the ordinary least squares (OLS) technique, the autoregressive distributive lag (ARDL) model, and an error correction model (ECM). The study found that the stock market was an important driver of economic growth in Pakistan. In addition, the study found that the Pakistani economy was also driven by financial stability, inflation, human capital and foreign direct investment (FDI).

FDI inflow into Zambia has seen a large decline. Akinboade, Siebrits and Roussot (2006), states that Zambia has rich natural resources, relatively low cost of doing business, good infrastructure compared to some countries in Africa, a relatively stable political regime and offers some of the highest return on investment, all of which are highly conducive to FDI inflow.

This review has provided important insights into the nature of the relationship between stock market development, and industrial and economic growth. The finance-led hypothesis and the endogenous growth models both predict that the stock market is important in increasing economic efficiency in the allocation of resources and productivity, and hence economic growth.

The review of empirical evidence also revealed that for the majority of studies, stock market development stimulated both industrial production and economic growth. Most importantly, it revealed that this assertion is true across both developed and developing countries. In addition, it was revealed that the conclusion that stock markets stimulate economic growth is not driven by the choice of analytical techniques used. In other words, the assertion is generally true regardless of the estimation methods employed. However, there is hardly any empirical studies that investigate the impact of the stock market on telecommunication industry. There are also seldomly literature on the relationship between the stock market and industrial growth in Zambia. Therefore, this study seeks to fill this knowledge gap in the empirical literature on the subject matter. This is important contribution of the proposed study.

### 3 Research Methodology

This section describes in detail the methodology used in this research. The research employed an experimental research design as it measured the effects of a stock exchange on the performance of a firm. The quantitative data was analyzed using Eviews SPSS and Microsoft excel.

#### 3.1 Data Sampling

A sample population is a subset of the total population that is under study. The sample employed in the study was 53 observations for primary data, covering 53 Airtel employees, and for secondary data the sample used 11 data sets covering the period 2012 (when Airtel Zambia Limited was listed on the Lusaka Securities Exchange) to 2021.

#### 3.2 Research Techniques

This study used two main research techniques, the simple linear regression and the Chi square. The impact of stock market activity on revenue performance of the telecommunication companies was analysed using the bivariate regression model specified below:

$$SP = f(TR)$$

Where SP is the Stock Price and TR is Airtel Zambia's net revenue.

The specified linear regression equation for the model is presented below: The modification was influenced by study in Nigeria.

$$\text{LogTR} = \beta_0 + \beta_1 SP + \mu$$

where:

SP is Airtel Zambia's Stock Price on LuSe

TR revenue of Airtel Zambia Limited

$\mu$  is the random error term;

$\beta_0$  is the intercept term; and

$\beta_1$ , is the coefficients measuring the effect stock price on Airtel Zambia's revenue.

On the other hand, the Chi square distribution was used to analyse the primary data collected through structured questionnaires.

#### 3.3 Data Collection

This study used both secondary and primary data. Secondary data is data collected from already published sources. Secondary data is essential for studies that capture past trend and developments.

The primary data on the other is data collected by the researcher from respondents. In this case, it was collected from Airtel Zambia limited employees. A number of structures questions were electronically sent to respondents and these questions are intended to meet the research objectives.

### **3.4 Data Validation**

This was attained by accomplishing the triangulation technique through the usage of three (3) different methods and these being literature review, secondary data analysis, and primary data collection.

A number of diagnostic tests were carried out to ensure that the primary data analysed through regression are not spurious. The study made use of the Durbin-Watson statistic to check for autocorrelation using SPSS.

### **3.5 Ethical Consideration**

Being both qualitative and quantitative in nature, the study sort ethical clearance before data was collected. The study ensured that all ethical considerations were put in place. Ethical issues in the data collection, analysis and reporting of the study findings: personal information in the questionnaire were limited to general information, the anonymity and confidentiality of the participants were preserved, privacy and confidentiality of the questionnaires was managed carefully, any form of deception or exaggeration about the aims of this study was avoided and integrity upheld, and lastly any type of misleading information, as well as representation of primary data findings in a biased way was strictly avoided.

## **4 Data Analysis**

This section presents the results of the analysed data. It will commence by presenting the descriptive statistics for the two variables.

Table 1 below shows the descriptive statistics of the data set. It shows the mean for Airtel revenue as 14.6 while that of Stock Price is 31.4. The standard on the other hand is 0.246 and 4.96 for Airtel's revenue and stock price respectively.

**Table 1. Descriptive Statistics Source: Author’s Computation**

Descriptive Statistics

	Mean	Std. Deviation	N
Airtel_Revenue	14.5547	.24586	10
Stock_Price	31.3470	4.95599	10

A bivariate linear regression was computed using SPSS software. The purpose was to achieve the objectives below.

**Specific Objective 1: i. To analyse the effect of Airtel Zambia’s stock price on the annual net revenue of Airtel Zambia.**

Table 2 below presents a summary of the linear regression results. According to the results below, the results are statistically significant with a probability value of 0.6 percent which is less than the 5.0 percent mark. The F-statistic is 14.007 whereas the Beta Coefficient for stock price is -4.0 while the standardized Beta is -79.8 percent.

**Table 2 Linear Regression Model Summary: Source: Author’s Compilation**

Hypothesis	Regression Weights	SP Beta Coefficient	Standardized Beta	R <sup>2</sup>	F	p-value	Hypothesis Supported
i	SP → TR	-0.04	-0.798	0.636	14.007	0.006	NO

a. Predictors: (Constant), Stock Price

b. Dependent Variable: Airtel Revenue

**Objective 2: To determine management’s level of knowledge of the stock exchange Market and how the knowledge is being applied to influence revenue performance.**

Table 3 below shows the Pearson Correlation for the dependent and independent variables. According to the results, the correlation coefficient is -79.80% and this is significant at 5.0 percent as the 2 tailed significance is 0.006 percent



**Table 3 Correlation results.**

**Correlations**

		Airtel Revenue	Stock Price
Pearson Correlation	Airtel Revenue	1.000	-.798
	Stock Price	-.798	1.000
Sig. (1-tailed)	Airtel Revenue	.	.003
	Stock Price	.003	.
N	Airtel Revenue	10	10
	Stock Price	10	10

The study further sought to establish the education level of the respondents. The responses to this question are depicted in table 4.0. A majority of N=23 (43.4%) of the respondents reiterated that they had acquired University education, followed by N=19 (35%) who attained college. Only N=11 (20.8 %) of respondents had post-graduate education. This implied that the respondents had attained higher education.

**Table 4 Educational level of the respondent**

Level	Frequency	Percent	Cumulative percent
College	19	35.8	35.8
Postgraduate	11	20.8	56.6
University	23	43.4	100
Total	53	100.0	

The study sought to establish the occupation of the participants so as to ensure there is mix of decision makers and other relevant employees. This is because revenue discourse may fully be appreciated by management staff in the organization. The majority of 54.7 % (29/53) of the respondents indicated that they were managers, 15.1% (8/53) of the respondents indicated that they

were in sales while 9.4% (5/53) said to be in finance. 5.6% (3/53) indicated to be from operations while Only 1.8(1/53) of the respondents indicated to be from human resources.

**Table 5 Distribution of respondents based on position**

Position Name	Frequency	Percent	Valid Percent	Cumulative Percent
Accountant	5	9.4	9.4	9.4
Operations Officer	3	5.6	5.7	15.1
Manager	29	54.7	54.7	69.8
Sales Representative	8	15.1	15.1	84.8
HR Admin	1	1.8	1.9	86.9
Customer service	3	5.6	5.7	92.5
Other	3	5.6	5.7	98.2
Total	53	100.0	100.0	100

**Management’s Stock Exchange Knowledge**

To understand management’s awareness of the stock exchange and effect on revenue and how they apply knowledge while handling day to day business. Table 13 shows the distribution of the sample according to knowledge gained including the current position.

The table shows that more than half (62%) of respondents are well trained and are knowledge about stock exchange compared but do not work towards influencing the stock price at the stock exchange or how the stock price affects revenue compared (30%) who indicated to be trained and that their work impacts the stock price and revenue performance. While (8%) of respondents are not trained yet heard have an idea on LuSe, only (0%) indicated not having any idea with regards stock exchange and its effect on revenue. Further, Managers responded to have received training in related fields but do not practice monitoring of the stock movement in view of impacting revenue and where the majority (N=21/29). Only (N=8) of the Managers were trained and actively monitor the stock exchange movement.

**Table 6 Perceptions and Knowledge level**

<b>Position</b>	<b>No idea at all</b>	<b>Not trained but heard about it</b>	<b>Trained but not practice</b>	<b>Well trained and practice</b>	<b>Total</b>
Accountant	0	0	3	4	7
HR Admin	0	0	1	0	1
Manager	0	0	21	8	29
Other	0	4	2	0	6
Sales Representative	0	0	7	3	10
Total	0	4	33	16	53

**Brand Management in Relation to Stock Price**

Respondents were further asked to indicate whether there is a staff or team tasked to manage brand perception with a view of influencing stock performance and revenue. Research findings highlighted that a majority of 43/53 indicated having a dedicated team to manage the brand compared to 1/53 of the responded to not having a dedicated team while only 1 responded that there is no team. Thus, it can be concluded that the there is a staff or team in place to look at the brand and influence positive perception.

**Relationship of Stock Price and Revenue According to Employees**

From the results where respondents answered yes or no on whether they believe there exists a relationship between stock price and revenue performance, 45/53 responded Yes while 3/53 responded No and the remaining 5/53 were not sure if there’s an effect of not. From the results, it can be concluded that Airtel Employees generally believe there exists a relationship between stock price and revenue performance.

**Extent of Effect of Stock Price on Revenue Performance**

To ascertain the extent to which respondents think stock prices have impacted Airtel Zambia’s revenue risk events that lead to delays in the project road construction, respondents were asked to indicate to what extent projects have deviated from the project plan. Results from the study showed differences in perception on the extent of effect of stock price on revenue performance. 94.3 % responses from the study indicate that the effect is less than 30%, followed by 5.7% who answered

that there's a 21-50%, then 26.4% answered 31-50% deviation and only lastly 3.8% responded with 81-100% deviated from the project plan.

**Table 7 Views on effect of stock price on revenue performance**

**To what extent do you think Stock price has an effect on revenues performance on Airtel?**

	Frequency	Percent	Valid Percent	Cumulative Percent
21 - 30 %	3	5.7	5.7	5.7
31- 80 %	0	0	0	5.7
81 - 100 %	0	0	0	5.7
less than 20%	50	94.3	94.3	100.0
Total	53	100.0	100.0	

**Chi Square Test Results on Perception**

To examine the perception of employee on the effect of stock exchange price on revenue performance of Airtel Zambia, current position, the level knowledge and practice were used as predictive factors, and the Chi-square analysis was performed as shown above in table 13. The chi-square value (.004) is less than the specified value (0.05), and it shows that there is a significant relationship between how employees perceive the effect of stock price on Airtel's revenue performance and the actual effect of the stock exchange.

**Table 8 Chi-Square Tests Result**

				Monte Carlo Sig. (2-sided)		
				Sig.	95% Confidence Interval	
	Value	Df	Asymp. Sig. (2-sided)	Sig.	Lower Bound	Upper Bound
Pearson Chi-Square	30.199 a	12	0.003	.004b	0.003	0.006
N of Valid Cases	53					

**Table 9 Chi-Square Results on Skills Levels**

	Value	Df	Asymp. Sig. (2-sided)	Monte Carlo Sig. (2-sided)		
				Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Pearson Chi-Square	23.986 <sup>a</sup>	12	.020	.020 <sup>b</sup>	.018	.023

**Spread of level of Skill in driving Revenue Performance**

Table 15 below shows the distribution of level of skill in driving revenue performance of the respondents. According to the results, 56% of the respondent stated that they are experts, 28% stated that they are skills whereas 15% and 0.18% stated they are beginners and not skilled respectively. Managers were the most experts as the accounted for 63% of all respondents that selected ‘expert’.

**Table 10 Level of Knowledge and Perception**

<b>How skilled are you in driving revenue streams of AirtelTotal Zambia?</b>					
	<b>Beginner</b>	<b>Expert</b>	<b>Not skilled</b>	<b>Skilled</b>	
Operations Officer	2	1	0	2	5
Sales	0	9	0	1	10
Managers	1	19	0	9	29
Other	5	1	1	1	8
HR Admin	0	0	0	1	1
<b>Total</b>	<b>8</b>	<b>30</b>	<b>1</b>	<b>15</b>	<b>53</b>

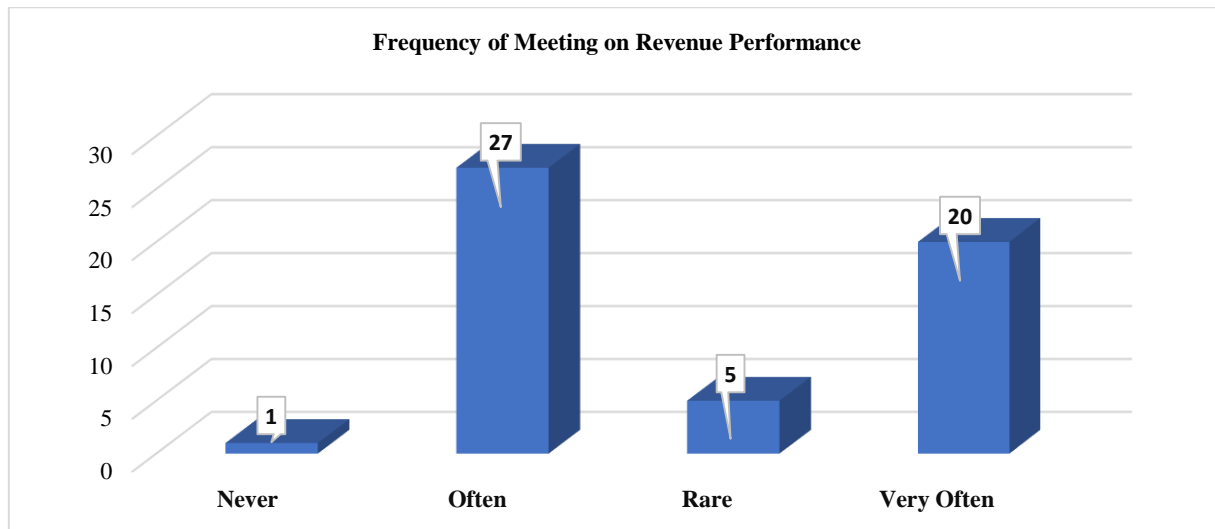
**Chi Square Results Skill in driving Revenue Performance**



To examine the ability of respondents to drive revenue performance, the level of skill and current position were used as predictive factors. A Chi-square analysis was computed and the results are as shown in the table below. The chi-square value (.020) is less than the specified value (0.05), and it shows that there is a significant relationship between level of skill in employees and ability to drive revenue performance.

**Frequency of Revenue Performance Reviews**

In addition, respondents were asked to indicate the frequency of meetings held to look into the revenue performance of airtel. The majority, 27/53 indicated ‘often’ times, followed by those who indicated ‘very often’ 20/53. Only 5/53 indicated ‘rare while 1/53 indicated never. From the results it can thus be concluded that the company does hold regular meetings to deal with revenue performance.



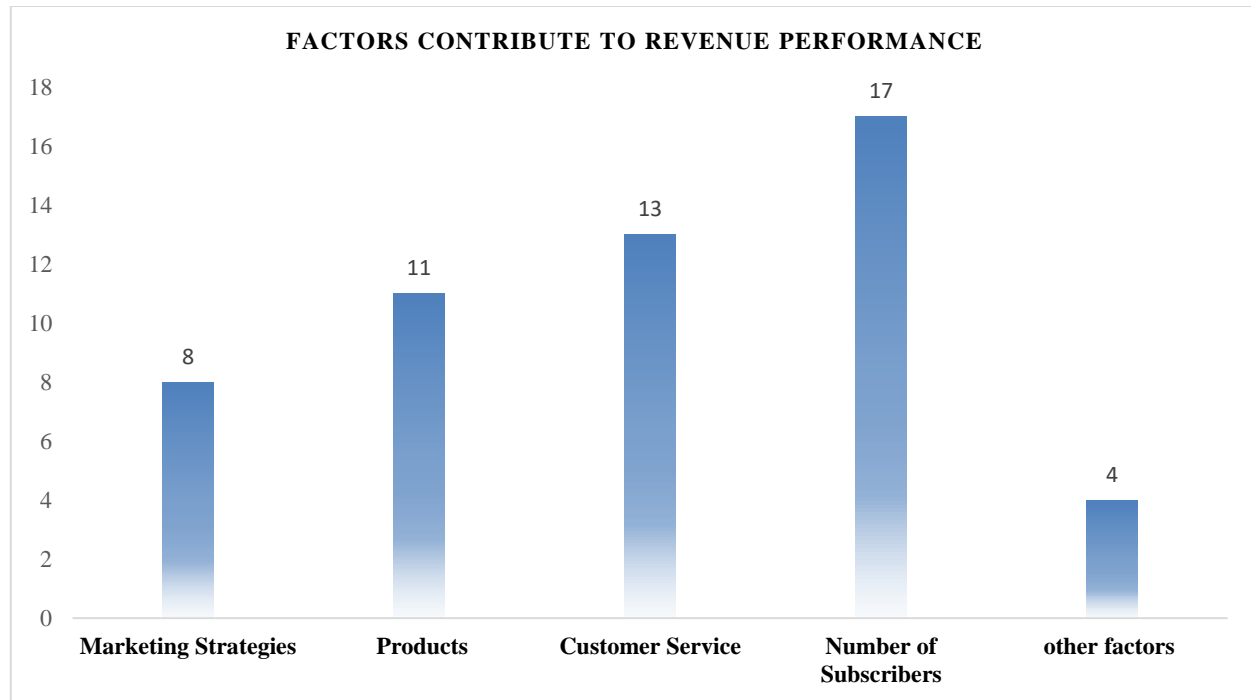
**Figure 1 Frequency of Meeting Results**

To ascertain the risk events that lead to delays in the project road construction, respondents were asked to indicate to what extent projects have deviated from the project plan. Results from the study showed differences in the levels of deviation. 35.8% responses from the study indicate that the project’s deviation from the plan is less than 30%, followed by 34.0 who answered that there’s 51-80% deviation, then 26.4% answered 31-50% deviation and only lastly 3.8% responded with 81-100% deviated from the project plan.

**Factors That Contribute to Revenue Performance**

With regards to Airtel Revenue, respondents were requested to indicate the major factors that they below are impacting on revenue performance. This was aimed at identifying the factors that have an effect on revenue performance besides the stock prices in order of impact according to the

perception of the respondents. Research findings showed that Number of subscribers was ranked first (N=17, 32%), followed by customer service (N=13, 25%) ranked second, then products (N=11, 20%) ranked third, marketing strategies (N=8, 15%) was ranked fourth and other factors which accounted for N=4, 7.5% were fifth. Figure 2 below showcases this distribution.



**Figure 2 Ranking of Factors Affecting Revenue Performance**

## 5 DISCUSION OF RESULTS

According to Table 2 above, the Beta coefficient of Airtel’s stock price is -4. Being a linear to log relation model, this means that a 1 unit change in Airtel Zambia’s stock prices will lead to a -4 percent change in Airtel Zambia’s revenue. This essentially means that there is a negative relationship between the stock price and the net revenue of Airtel Zambia and the effect that stock price is only 4 percent. The  $R^2$  according to Table 2 shows that about 63% of the change in Airtel’s revenue in the model is explained by the change in stock price. A note should be taken here that regression results do not imply causation between the variable but shows the effect between variables based on the dataset. To check for causation, one would need to run a causality tests such as the 1996 endo-granger causality test.

This result is consistent with a prior expectation because the Lusaka Securities Exchange has relatively been performing calmly without significant movements in stock prices over the years and has not been responsive to market shocks. This then means that other factors impacting Airtel Zambia’s revenue have more effect (96%) than the stock price. According to LuSe (2022), as of

October 2022, the Lusaka Securities Exchange only has 24 listed companies, which is a relatively very poor participation rate compared to other stock exchanges such as the London Stock Exchange with over 2,000 listed companies the same period (LSE,2022).

Regarding the second objective, according to Table 3, the correlation coefficient is -79.8. This shows that there is a strong negative correlation between Airtel's stock price and Airtel Zambia's revenue. The data variables show an opposite trend where the revenue of Airtel is increasing year on year but the Stock price is reducing year on year.

One main cause of this is that subscriptions to Airtel shares declined during the transition from Celtel in 2013 as a result of the \$10.7 billion rebranding that officially took place in 2010 between Zain group Nigeria and Airtel Networks. Shareholders were left uncomfortable as there was no clear way forward on the treatment of the share stocks they held. In 2011 Celtel applied to leave LuSe and the company was officially delisted and reapplied to be listed as Airtel Zambia Limited in 2012. This transition saw the stock price drop from highs of 33.5 in 2013 to lows of 18 at end December 2021. The company however has continued to earn significant revenue year on year since 2012 and that could be why the correlation is -79.8.

Regarding the third objective, Research findings indicated that management is well knowledgeable about the stock exchange market and has attained adequate levels of education in that regard. According to the results in table 11 all respondents attained tertiary education at diploma, degree and master's levels. In addition, 62% of the respondents indicated that they were adequately trained on the subject of stock exchange but were just not actively monitoring the movements in relation to revenue performance. It seems Airtel's not currently considering the stock exchange as the main source of revenue or capital. This is despite the organization having a brand management team that promotes the brand of the organization to customers and investors. According to the research results from table 14, 81% of respondents indicated that there is a dedicated team that looks at the brand of the organization.

The study went further to assess the respondent's ability to drive revenue performance. This is in order to ascertain that the respondents are well qualified to comment on the subject at hand and that the results could be relied upon. According to the findings in Figure 4, 27/53 or 50.9% of the respondents indicated that they hold revenue performance review meetings often and 20/53 37.7% indicated they hold revenue review meetings very often. Only 5/53 and 1/53 indicated rare and never respectively which is reasonable considering the diversity of positions help by the respondents. It can therefore be concluded that the respondents were adequately knowledgeable on the subject of revenue and the findings are reliable.

Based on research findings analysed under table 7 in relation to the forth objective, 84% of the respondents indicated that they think there is a relationship between stock price and revenue

performance while the remaining 14% indicated that there is no relationship. This shows that management at Airtel believes the stock price is one of the revenue streams that have an impact on their annual revenue. Further, the chi-square was computed and the results in table 17 with value (.004) which is less than the specified value (0.05), provided a view that there is a significant relationship between how employees perceive the effect of stock price on Airtel's revenue performance and the actual effect of the stock exchange. This is on the assumption that more effort is directed towards areas where there's greater output which is a principle that many managers tend to employ (Hannaway, 1989).

The study went further in assessing management's perception on the degree that this effect has on the revenue performance. According to the results presented in table 16, over 94% of the respondents indicated that they perceive the effect of stock price on airtel's revenue performance to be less than 20% whereas the remaining 5.7% perceived the effect to be in the range of 21 – 30%. Generally, we conclude that the perception on the effect of the stock price on revenue performance of Airtel is low. These findings from the primary data are consistent with the results obtained from the secondary data where it was found that there is a significant relationship between the stock price and revenue performance of Airtel Zambia Limited discussed above.

In meeting the fifth objective, research findings, key factors identified that respondents indicated to have a significant effect on the revenue performance included; Products, Number of Subscribers, Technology Innovation, Government Regulation and Polices, Marketing Strategies, Customer Service, Pricing strategy, and leadership.

Research findings in Figure 3 above showed that Number of Subscribers first (N=17, 32%), followed by Customer Service (N=13, 25%) ranked second, then Products (N=11, 20%) ranked third, Marketing Strategies (N=8, 15%) was ranked fourth and other factors which accounted for N=4, 7.5% were fifth. These results are similar with studies done by Venkatram & Zhu (2012) which also showed that number of subscribers was ranked first in factors that affect revenue performance.

According to Venkatram & Zhu (2012), factors such as "Number of Subscribers", "Technology Innovation" and "Government Regulation and Polices" were found to be the most influential and contributing factors towards the growth of the Telecom industry in China and India. Contrary to the findings of this study were Government regulation and policies was not among the highly ranked factors, the contribution of "Government Regulation and Polices" as a factor, seemed to be more obvious and significant for the Chinese Telecom industry. The results from India showed findings that are similar to the findings of this study

The findings of this study have shown that as things stand, Airtel's stock prices have had a -4.0 percent effect on the net revenue. This empirical information has shown the need for Airtel to better

manage their brand and image towards traders on the stock exchange so that the share price could pick up. The findings have also added information to further motivate authorities from the Securities and Exchange Commission (SEC) and LUSE to come up with way of stimulating participation on the local stock exchange despite being the best performing in 2021. According to Business Insider Africa (2022), the LUSE was rated as the best performing stock market in Africa in 2021 with all share index gain of 93.2%. However, the volumes traded remained low and as this study has shown, might not have huge impacts on the revenues of listed companies.

## 6 CONCLUSION

This research has empirically studied the effect of the Lusaka Securities Exchange on the financial performance of telecommunication companies in Zambia: a study of Airtel Zambia Limited. The study was guided by five specific objectives which were I.) to analyse the effect of Airtel Zambia's stock price on the annual net revenue of Airtel Zambia and ii.) to determine the correlation between Airtel Zambia's stock price and the annual net revenue of Airtel Zambia. The effect has been found to be negative and the study has also found that there is no correlation between the variables.

The study tested two hypotheses whose nulls were i) Airtel Zambia's stock price has no significant effect on Airtel Zambia's annual net profit, ii) there's no correlation between Airtel's stock price and Airtel Zambia Limited's net revenue. The results of the regression model and the Pearson correlation showed that the p-value was significant at the 5% significant level and thus both nulls were rejected and the alternative hypotheses were supported. The scope of the study covered the period between 2012 – 2021 and the data was collected from LUSE and Airtel for the variables, while online sources and books were used for the literature cited.

The study has established that while the analysis showed a significant effect of Airtel's stock prices on Airtel's revenue, this effect is minimal at -4 percent change only. This means that other factors effecting airtel's revenue are accounting for 96%.

## 7 RECOMMENDATIONS

1. It is recommended that more concerted efforts should be made toward stimulating participation on the stock exchange both from the companies' side and the customers side. The central bank and other players such as the Securities and Exchange Commission (SEC) in the financial market should devise strategies aimed encouraging more economic agents to participate in the equities market. Currently, there are very few players who are currently participating on the Lusaka Securities Exchange (LUSE). For example, there are only 24 (twenty-four) companies that are registered on LUSE while the volume of trade still remains very low.

2. A recommendation is done to companies listed on the LUSE to improve their branding and reputation with shareholders in order to increase share prices. It has been seen from literature and this study that if share prices were to increase, it may have a contribution to the company's revenue.



3. Due to the limited availability of studies on this subject, a recommendation is made to scholars to increase studies on this or similar studies. This study had identified significant gaps in the literature which presents an opportunity for research.

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