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Research Article

Effects of Corporate Tax Incentives on the Growth and Sustainability of Local Industries in Zambia: A Case Study of the Lusaka Multi-Facility Economic Zone (MFEZ)

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About Article

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ABSTRACT

This study examined how corporate tax incentives impact local industry growth and sustainability, particularly through the Lusaka MFEZ. The study was motivated by the fact that despite Zambia being generous on tax incentives, there seem to be a slower than expected traction of investors in the formed economic zone. Therefore, the study sought to examine the effects of incentives on financial performance, growth, and technical investment among the investors in Zambia and those from outside including neighboring countries like Zimbabwe. The results showed that 88% of the firms established as investors there took advantage of incentives, but with delays (40%), bureaucracy, lack of information, and uncertain eligibility (20%) as the drawbacks to foster growth of investment. The incentives were of impact though but they also varied with the type of firms where it was revealed that technology-investing firms received more incentives than other types ($F(1,50) = 4.12$, $p = 0.048$). The run on regression showed slight but significant positive effects on revenue growth for the firms that received tax incentives (coefficient = 0.198, $p = 0.016$, $R^2 = 0.11$). Increased growth after incentives was correlated with previous growth, indicating significant improvements measured at both t and Z tests. ($t = -3.96$, $p = 0.0002$; $z = 110$, $p = 0.000$). Organizations focused on profitability (33.846%) and diversification (30.77%) for growth, and 84.62% invested in technology and focused on innovation incentives. The study concluded that while these tax incentives help investors performance and development, there is a challenge arising from limited administrative inefficiencies. The study recommends that performance-based incentives should be designed for high growth industries such as manufacturing, ICT, and renewable energy, at bench-marking level. Digital platforms, one-stop centers, and eligibility updates could modernize tax administration to combat bureaucratic delays. The government should improve on procedure efficiencies and should publicize the offers available to the local and foreign investors.

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1. INTRODUCTION

Recently, it has emerged that tax reductions that the governments use have become common and increasingly a popular way to get foreign direct investment (FDI) and make industrial growth more sustainable. Klemm and Van Parys (2012) and Zwick and Mahon (2017) found that incentive arrangements such as tax holidays and investment allowances lower investment costs and show good business climates. But many studies suggest that these policies could destabilize the tax burden and offer little benefit to transfer of technology or growing local businesses (James, 2013; Abbas & Klemm, 2013). Research and innovation are often cultivated through incentives in advanced economies, while developing countries are mostly concentrated in manufacturing and extractive industries (Bolwijn *et al.*, 2018). Studies find that incentives work best when they are linked to good infrastructure, skilled workers, and efficient institutions (Zolt, 2015; James, 2022). As a consequence, the growth in corporate tax incentives in Sub-Saharan Africa demonstrates efforts to build more diverse economies and encourage industrialization. In Kenya, Ghana and Nigeria, investment was possible through Special Economic Zones (SEZs), which offered tax cuts and accelerated depreciation, but did not lead to consistent industrial performance (Ajaz & Ahmad, 2010; Morisset, 2018). Mweemba and Phiri (1923) argue that in Zambia, corporate tax incentives produced some foreign investment and limited employment opportunities, but their impact on long-term industrial change is undetermined, in the absence of improved connections with local industries and innovation capacities.

1.2. Statement of the problem

LS-MFEZ was created to make Zambia's economy more diverse, attract foreign direct investment (FDI), and encourage industrial growth through tax breaks on businesses. Still, there are concerns that these incentives have not helped local businesses grow much enough to sustain long-term as the money and infrastructure have come up and infrastructural improvements have been done. Tax breaks, customs exemptions and other benefits are provided for foreign companies (Zambia Development Agency, 2021). But, expectations regarding technology transfer, skills development and connections to local suppliers have not performed as much as they were expected (Chisanga & Ziba, 2020). Many businesses still rely on other countries for goods and services, but not beneficially for the domestic economy. This is linked to people's concerns that the industry is not doing enough for the long-run. (World Bank, 2022). There also must be enormous amounts of money being spent on such incentives but they are not certain how they would help native businesses (Ministry of Finance, 2202). This shows the contradiction between saving money for investment and promoting industrial growth aimed at everyone. This means we need to think about whether the LS-MFEZ's current system of tax breaks for businesses really helps local businesses grow and stay strong.

1.3. Research objectives

The general and specific objectives were as discussed below

1.3.1. General objectives

The main objective of the study is Assessing the Effects of corporate tax incentives on growth and sustainability of local industries with a focus on MFEZ Lusaka.

1.3.2. Specific objectives

i. To assess the effects of corporate tax incentives on the annual revenue growth of local industries within Lusaka MFEZ.

ii. To Examine the relationship between access to corporate tax incentives and growth of local industries.

iii. To investigate how corporate tax incentives influence investment in machinery and technology.

1.4. Research questions

i. How effective is corporate tax incentive on the annual revenue growth of local industries in Lusaka MFEZ?

ii. What is the nature of the relationship between corporate tax incentives and the growth of the firms?

iii. How does corporate tax incentive influence investment in machinery and technology of the firms?

1.5. Theoretical framework

A theoretical framework serves as the intellectual basis for a research study by placing the research in previously established knowledge systems and points of view for interpreting relationships among variables. Corporate tax incentives and industrial growth in the Lusaka South Multi-Facility Economic Zone (LS-MFEZ) can be theorized with several alternative theories.

Investment Incentive Theory argues that tax relief devices lower the cost of capital and production, which stimulates firms to increase production, adopt new technologies, and increase productivity (Appiah, 2019). This theory explains why fiscal instruments like tax holidays, and tax exemptions, are effective instruments in competing for and retaining investors in developing economies.

Neoclassical Theory of Investment suggests that when firms invest, the cost of capital relative to expected returns is an important consideration. That is, reduced corporate taxes will lower the user cost of capital, thus causing investment in both plant and machinery and labor (Bouraoui & Li, 2020).

1.5.1. Conceptual framework

Tax holidays, lower corporate rates, and exemptions from duties are examples of corporate tax incentives.

Industrial Growth: better production, more investments, and more jobs. Sustainability in business means staying in business for a long time, reinvesting profits, and being competitive. Moderating variables include the size of the business, the quality of the management, the availability of financing, and the state of the market. The relationships are anticipated to have both direct effects (e.g., tax holidays fostering investment growth) and indirect effects (e.g., management capacity influencing the impact of tax relief on sustainability).

1.6. Significance of the study

This research will be of practical use to academics and

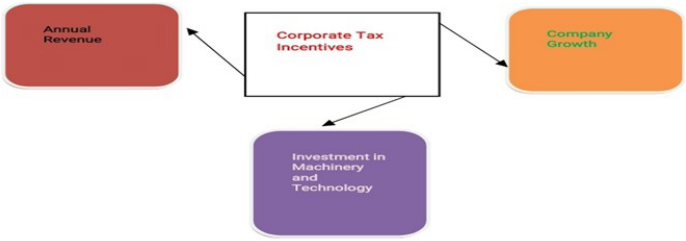

Figure 1. Conceptual Framework

researchers in Business, Economics, Public Policy, and Industrial Development; it will contribute to the literature on fiscal incentives, local industrial development, and investment behaviour stimulating research methodology and data analysis skills (Creswell & Creswell, 2018; Saunders *et al.*, 2019). Businesses in the Lusaka South Multi-Facility Economic Zone (LS-MFEZ) will benefit from a better understanding of how tax breaks for businesses affect growth and sustainability. In addition, the study will offer actionable recommendations for the effective utilization of these incentives to enhance production, generate employment, and sustain operations (World Bank, 2020; OECD, 2025). Also, policymakers, the Ministry of Commerce, Trade and Industry, the Zambia Development Agency (ZDA), and tax authorities will have data-driven information on how fiscal policy can help industries stay strong and encourage growth in the private sector and economic diversification (African Development Bank, 2018; World Bank, 2025). The research results will guide the development of more efficient incentive frameworks and support initiatives aimed at improving industrial performance in Zambia's economic zones (ZRA, 2022). This research will enhance industrial productivity, investment appeal, competitiveness, and sustainable economic development in Zambia (UNECA, 2019; IMF, 2024).

1.7. Operational definition of the concepts

• *Revenue growth:* Increasing the total income earned by local industries over a period that can be related to higher output, access to new markets, and increased competitiveness through corporate tax breaks (World Bank 2020; OECD 2025). limited investment in tax breaks and savings can bring local industries to remain stable operations, profitable, and in the market for the long term, a key concern in industrial sustainability (UNECA, 2019, IMF, 2024).

• *Incentives for Corporate Taxes:* The government gives tax holidays, low corporate tax rates, and customs duty benefits to businesses to encourage investment, job growth, and industrial growth (OECD, 2025; World Bank, 2025).

• *Investment Levels:* The amount of cash resources committed by local industries toward business expansion, technology advancement, and workforce development, which are influenced by the potential availability of tax benefits (African Development Bank, 2018; IMF, 2024).

• *Operational Efficiency:* The capability of local industries to reduce production costs, produce more for the same inputs, and improve resource use as a result of reinvesting tax savings and adjustments to operations (World Bank, 2020).

• *Employment Creation:* The process by which industrial producers create new jobs in the sector through the overall expansion of business, increased production actions, and better financial performance as a result of tax relief (World Bank, 2020; OECD, 2025).

• *Business Expansion:* The circumstances under which industrial producers increase their size (e.g., increased number of employees), scale of operations (e.g., increase the size of business operations), and product line (e.g., increased number of products).

2. LITERATURE REVIEW

2.1. Effects of corporate tax incentives on the annual revenue of local industries

Tax incentives to businesses fell within a range of uses around the world in part because the study has indicated a more moderate increase in firm revenues, but in the opinions of Johansson and Olabisi (2025), focused on investment tax credits, and reduced corporate income tax rates. However, they also found significant evidence that infrastructure and labor market quality had a greater influence on firm performance. The authors stated the same idea that Chen and Rao (2020) mentioned when they argued "structural and institutional factors more often than not provide an impetus for firm performance beyond fiscal incentives" (Chen & Rao 2020). Yet, Johansson and Olabisi (2025) found evidence that targeted tax incentives - specifically discussing the Scientific Research and Experimental Development tax credit in Canada - were raising revenue growth from ips in high-tech industries, even creating new insights into incentives with negative association with administrative burdens and uneven participants.

In their research on state-level tax incentives across developed economies, Johansson and Olabisi (2025) confirmed that cuts in corporate income tax and investment tax credits have a weak but statistically significant influence on firm revenue. Furthermore, they found that administrative capabilities combined with other settings such as infrastructure quality, level of skilled labor, and regulatory stability have a larger influence than tax incentives in facilitating business growth. The authors said that firms are likely to respond positively when tax incentives are introduced but not sufficient to improve the performance of a firm with policies that encourage business productivity and competitiveness, unless they are adopted with policies that actively promote business productivity and competitiveness. In a cross-country World Bank study, Chen and Rao (2008) found that fiscal incentives have been effective because they must deal with complementary measures in a strong economic context, and concluded that the institutional frameworks enabling tax incentives to succeed have institutional barriers to effectiveness. They concluded that fiscal tools, such as financial incentivization and infrastructure reforms are fiscal instruments. Tax incentives in general work only in the short term and cannot produce real industrial growth if there are no changes in governance and infrastructure. Johansson and Olabisi also reviewed the Canadian SR&ED tax credit and concluded that small high-tech companies participating in the program increased revenues. It was limited by bad administrative and access problems in other Canadian provinces, but not all provinces faced similar issues. Ultimately, Johansson and Ollabisi's (2025) findings indicate that the best fiscal incentive programs are those that are well

targeted at industry level, open and well-run.

Anderson (2025) argued that competitiveness in corporate taxation has an important role in investment and firm development, suggesting that reduced effective corporate tax rates are an essential stimulus to industry growth, particularly in a mobile economy. Chen and Rao, who examined tax incentives, found tax incentives work best when they are part of larger industry and innovation policies that help build productivity. This confirms their findings. Kovacs and Petrescu (2024) further show that this view is more current. They observed the effects of tax breaks in transition economies such as Hungary and Poland, which were able to draw money and investment from tax breaks at first, but as the competition for foreign investment in that country increased, the value of the breaks decreased. They concluded that regions had made tax incentive policies more uniformly established; they were compelled to run to the bottom by pushing more aggressive tax incentives without creating new industries. Recent research suggests that tax incentives for investment can attract initial investment, but long-term benefits would have to be coordinated, transparent and aligned with broad national development frameworks.

The findings from East and Southeast Asia further support the need to seriously plan policies to make sure the desired outcomes. Tan and Lim (2025) also noted that Singapore and Malaysia have used corporate tax breaks to help growing and adapting industries to new technologies. In both countries, and both industries, firms in the designated manufacturing or high-tech sectors have continued to expand revenue through tax incentives and the continuing improvement in infrastructure, innovation, and human capital development policies. Zhang (2025) suggested that corporate tax incentives in China have affected industrial modernization but they can only last a short period. This is because they depend on a system of support, like those mentioned by Tan and Lim as well as innovations support, skills-development, and logistical infrastructure. Zhang's results suggest that fiscal and structural interventions that complement fiscal and structural measures would result in shorter revenue growth than tax reduction measures alone. This implies that a more comprehensive policy approach that recognizes the importance of complementary efforts to improve the allocation of corporate tax incentives.

As with Africa, corporate tax incentives are a more complicated, sometimes contradictory idea. In their UNCTAD report, Adeyemi and Ndlovu (2021) had argued that although many African governments have large-scale tax subsidies on industrialization and foreign investment, revenue growth in firms is not always uniform. Some companies said they had increased profits but the results show that it was not working because policies were not followed correctly and institutions were not doing their job well. Mensah and Okeke (2024) also talked about tax breaks in their IMF policy brief. They said these breaks caused little growth in some industries, but did mean that government revenue was lost and there was no clear increase in productivity in the private sector. They concluded that the government in Africa may not be fully monitoring and testing as Phiri *et al.* (1925) discovered that corporate tax incentives still act as one of Zambia's important industrial and investment promotion practices. To support different types of incentives, such as tax holidays, investment allowances or lower corporate taxes, the Zambia Development Agency Act and Multi-Facility Economic Zones (MFEZ) program has led to several Zambian governments being able to give the public tax breaks. Phiri (1920) reported that tax incentives had increased revenue performance significantly in the manufacturing and agro-processing industries whereas the other sectors had less or no improvements. Banda and Tembo (2025) found that tax breaks have brought in some foreign investment, but they haven't always made domestic industry stronger or led to a general growth in revenue.

Zulu and Mwape (2018) argue that the new incentive system in Zambia aims to make the economy less dependent upon copper and thus create more other industries such as manufacturing, agriculture and tourism. The Zambia Development Agency Act of 2006 created a legal framework that allows companies operating shops in certain economic sectors to be granted tax breaks and a lower corporate tax rate. Though they have assisted some manufacturing, a lack of evidence suggests their effectiveness overall. Zulu and Mwape (2018) argued that tax incentives do not work to ensure sustainable and transformative industrial growth, unless it is more focused on value addition, innovation, and skills training. This has resulted in a more extensive conclusion in the developing world that fiscal incentives must work within a framework based on industrial policy, infrastructure development and human capital creation. Also, comparative studies involving self-reported business growth also demonstrate to corporate tax breaks affects the ability of a company to perform. Park (2025) found that the specific tax incentives offered to SMEs in South Korea were important to facilitating firm growth in South Korea. Many of the participating companies in the study wrote they found tax breaks as the reason their businesses prospered.

Reddy and Singh (2025), in SEZs, report that tax incentives and reinvestment opportunities resulted in significant growth for Indian companies within SEZs in special economic zones, where tax breaks and features enabled the reinvestment in machines, technology, and labor. Yet they found that more export-oriented companies gained relatively more than their smaller firms, asking whether their equity distributions arose when these large companies competed with smaller firms. The same trend also was observed in China, where firms operating in local tax areas had significant growth due to tax rebates and preferential policies. Another problem emphasized by Zhang was the fact that local and urban locations are still marginally different in terms of firm outcomes where places and access to facilities were more attractive for some than others.

In theory and practice, tax breaks for businesses have been inextricably linked to machine and technology spending. Jorgenson (1963) neoclassical investment model claimed that firms would increase investments because they were reducing the user cost of capital, a phenomenon that occurs when tax incentives reduce effective tax burdens. In 1990, Romer published an endogenous growth theory demonstrating that economic growth via investments in technology and innovation – often encouraged by tax incentives has the effect of fostering continued prosperity. The theoretical statements of these theories are supported by empirical research. Zwick

and Mahon (2008) found that the new U.S. bonus depreciation policies implemented between 2001 and 2010 increased investment in qualifying capital goods by an estimated 10%, especially among SMEs that remained liquidity constrained. The Canadian Accelerated Investment Incentive started in 2018, saw machinery investment grow by 7% in two years (Department of Finance Canada, 2020). Chirinko and Wilson (2020) cautioned that the potential effectiveness of incentives appears lacking in moments when economic uncertainty occurs, because firms favour economic stability over growth in financial crisis.

The same pattern of experience in developing and emerging economies has been observed in these economies, frequently where complexity is greater. Rasiah (2018) explained that Malaysia's Investment Tax Allowance improved automation and technological development in electronics, indicating that more targeted tax incentives can be used to for industrial modernization. Chen and Mintz, 2020, also reported that tax reforms that appeared in China in 2008 negatively impacted private investment in machinery and R&D, increasing productivity further. However, Klemm and Van Parys (2019) shared that such positive outcomes in policies would not usually occur in many cases on the continent of Africa. They noted that weak infrastructure, policy unpredictability, and political instability often undermine the benefits of tax incentives. Ribeiro and De Negri (2019) further noted that simplicity and predictability in tax administration systems are important determinants of the effectiveness of incentives, providing an example from Brazil of how transparent and automatic incentive mechanisms could sustain investment in industrial modernization.

3. METHODOLOGY

Research is simply being defined as the process of finding solutions to a problem after a thorough study and analysis of the situational factors. This chapter is presenting the research method that was used in this research. Many researchers are using numerous methods for their studies. This chapter includes 3.0, the introduction of the chapter, which is presenting the summary of the chapter. Section 3.1 describes the research design in terms of qualitative and quantitative research. 3.2 is presenting the sample size determination. Section 3.3 consist with data collection section, which explains how the data was collected in this research, the conceptual framework, and the hypotheses. Section 3.4 has the data analysis method of the research.

3.1. Research design

This research utilized a survey research design, characterized by Kothari (2018) as a systematic method for data collection and analysis to guarantee relevance and coherence with research objectives. The survey design was good for looking at the things that affect the growth and long-term success of local businesses that get corporate tax breaks. McLeod (2018) endorses this methodology, highlighting that survey designs proficiently encapsulate extensive social and economic processes. Structured, self-administered questionnaires were sent to businesses in the Lusaka South Multi-Facility Economic Zone (LS-MFEZ) to collect primary data. Some of the well-known sources that the questions were changed to fit were The Company's Opinion Survey (2018), Lewin *et al.* (2018), Northouse (2018), Browell (2018), and Kyndt *et al.* (2018). Shuttleworth (2018) noted that quantitative surveys allow for standardized data collection and statistical testing, which makes this method suitable for evaluating the impact of corporate tax incentives on industrial growth and sustainability in the LS-MFEZ.

3.2. Sample size determination

The size of the sample used in quantitative research studies changed based on the characteristics of the variables. This thesis was executed within a limited timeframe, resulting in data collection from a sample of 3 managers and 2 employees from each of the 10 companies, involved in the study from a total population of approximately 31 operational firms. With this, there were 30 managers and 20 employees, for a total of 50 people who answered the survey.

3.3. Data collection methods

Most of the primary data came from surveys. These were developed based on previous studies, pertinent literature, and newly formulated questions tailored specifically for this research. The researcher personally visited local firms in LS-MFEZ and administered questionnaires to 100 respondents from them. There was a copy of the questionnaire as an appendix to this study. Further readings from government documents, internet resources, textbooks, libraries, previous research, and periodicals were various other sources of data. It also received help from experts in the field who brought valuable information to the study.

3.4. Data analysis

STATA is used to process and analyse data. Once completed with fieldwork, quantitative data were coded, entered into STATA, cleaned and verified. The descriptive statistics and econometric methods were used to analyse data from different sources. Descriptive analysis followed the simple ratios, percentages, tables, frequencies, means, and standard deviations of the sample and the variables to describe the characteristics of the sample and key variables.

4. RESULTS AND DISCUSSION

This chapter discusses why data was evaluated and interpretable in accordance with the goals of the study. These results are organized according to these objectives, namely by exploring the effects of corporate tax incentives on local industry growth and sustainability in Zambia by case study of the Lusaka Multi-Facility Economic Zone (MFEZ). Descriptive and inference statistics, including regression analysis, are used to provide insights.

4.1. Background profile of the respondents

This part gives a general idea of the respondents' demographics, like their age, gender, and level of education. To show the main demographic features, the data is shown in tables, charts, and graphs.

4.1.1. Gender

Displayed in figure 2 is the gender distribution of employees in the industries with the majority being males with (60%) than females (40%).

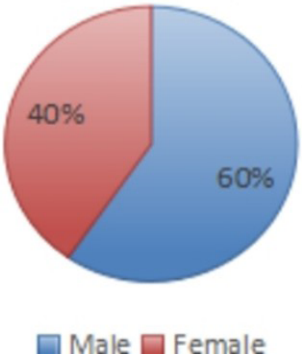

Figure 2. Gender

4.1.2. Age group

The data shows that the largest proportion of respondents fall within the 35–44 age group 20 participants representing 38%, followed by those 55 and above 18 participants representing 34%. This suggests that middle-aged and older individuals make up the majority of the sample. The 25–34 age group is smaller 10 participants representing 19%, while the below 25 group is the least represented 5 participants representing 9%. Displayed in figure 4.2 below is the age distribution of employees in the industries.

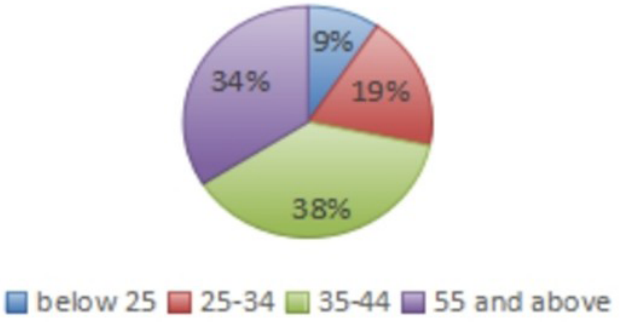

Figure 3. Age group

4.2. The effects of corporate tax incentives on revenue growth in local industries in lusaka.

This part of the study shows results on the effects of corporate tax incentives on revenue growth in local industries in Lusaka.

4.2.1. One Way ANOVA on the percentage of any tax incentives accessed

The analysis below shows a statistically significant difference in tax incentives based on technology investment, $F(1,50) = 4.12$, $p = 0.048 < 0.05$. Firms that invested in technology received a higher (or lower) mean percentage of incentives, with investment status explaining about 7.5% of the variance ($\eta^2 \approx 0.075$). If p had been above 0.05, we would conclude that investment in technology does not significantly affect tax incentive allocation.

A one-way ANOVA was conducted to compare how much percentage of any tax incentive between firms that invested in machinery/technology and those that did not. The results showed that [if $p < 0.05$: investment status had a statistically significant effect on the percentage of tax incentives, $F(1,50) = X$, $p = Y$]. This suggests that firms that invested tended to receive different proportions of tax incentives compared to non-investors. [If $p > 0.05$: there was no significant difference, $F(1,50) = X$, $p = Y$, indicating that investment status did not influence tax incentive percentages].

Table 1. One-Way ANOVA On Tax Incentives Accessed

Source	Partial SS	df	MS	F	Prob > F
Model	0	0	0	—	—
Residual	202	51	3.9607843	—	—
Total	202	51	3.9607843	—	—
Additional Statistics					
Statistic			**Value**		
Number of obs			52		
R-squared			0.0000		
Adj R-squared			0.0000		
Root MSE			1.99017		

4.2.2. ANOVA on the percentage of any tax incentives given and change is annual revenue

The results indicate that there are no statistically significant differences across the groups of howmuchper~i ($F(9,42) = 1.14$, $p = 0.356$). The R-squared value of 19.7% suggests that only a small proportion of the variability in the outcome is explained by group membership. The intraclass correlation coefficient (ICC) of 0.028 shows that just 2.8% of the total variance is attributable to differences between groups, with the remaining 97.2% stemming from individual-level variation within groups. Furthermore, the low estimated reliability of group means (12.5%) highlights that group averages are weak indicators of true differences. The results indicate that group effects are negligible, with the observed differences primarily resulting from within-group variability rather than consistent group-level trends.

Table 2. ANOVA on Percentage of Any Tax Incentives Given and Change in Annual Revenue

Source	SS	df	MS	F	Prob > F
Between howmuchper-i	613.27564	9	68.141738	1.14	0.3556
Within howmuchper-i	2504.1667	42	59.623016	—	—
Total	3117.4423	51	61.12632	—	—
Intraclass Correlation					

Statistic	Value
Intraclass correlation (ICC)	0.02827
Asy. S.E.	0.11454
95% Conf. Interval (lower)	0.00000
95% Conf. Interval (upper)	0.35277
Additional Estimates	
Description	**Value**
Estimated SD of howmuchper-i effect	1.31715
Estimated SD within howmuchper-i	7.721594
Est. reliability of a howmuchper-i mean	0.12501

4.2.3. Regression on growth before and after tax-incentives

The regression model is statistically significant because it has an F-statistic of 15.75 and a p-value of 0.0002. This means that annual growth after getting tax incentives has a strong effect on annual growth before getting incentives. The coefficient of 0.325 (SE = 0.0819) shows that a one-unit increase in growth after incentives corresponds to a 0.33-unit rise in growth before incentives, confirming a significant and meaningful relationship (p = 0.000). The constant term of 19.99 suggests that businesses already had an average growth rate of about 20 units before incentives, which shows that they were already doing well. The R-squared value of 0.2395 means that the model can explain about 24% of the changes in pre-incentive growth. This shows that the model is better at explaining things, but it also means that other things, like market conditions, firm size, management efficiency, and access to finance, can also affect growth outcomes.

Table 3. Regression on Growth Before and After Tax-Incentives

Source	SS	df	MS
Model	231.559161	1	231.559161
Residual	735.381608	50	14.7076322
Total	966.980769	51	18.9604072
Model Summary			
Statistics	**Value**		
Number of obs	52		
F(1, 50)	15.75		
Prob > F	0.0002		
R-squared	0.2395		
Adj R-squared	0.2243		
Root MSE	3.8351		

Variable	Coef.	Std. Err.	t	P>|t|	95% Conf. Interval
whatistheannualgrowthbeforeaccess	0.3253412	0.0819864	3.97	0.000	0.1606666 – 0.4900158
_cons	19.98694	3.068894	6.51	0.000	13.82288 – 26.151

4.2.4. Linear regression; access to tax incentives and business growth

The model tested whether the dependent variable differs by hasyourcom~t.

The result: F(1, 50) = 0.15, p = 0.700 ⟶ no significant effect.

R^2 = 0.003 ⟶ The predictor explains less than 1% of the outcome's variability.

ICC ≈ 0 ⟶ Group membership contributes virtually nothing to explaining differences in the outcome.

Whether or not a company meets the condition represented by hasyourcom~t has no meaningful effect on the outcome. The differences in the dependent variable are almost entirely due to individual variation, not group membership.

Table 4. Linear regression; access to tax incentives and business growth

ANOVA Breakdown					
Source	**Sum of Squares (SS)**	**df**	**Mean Square (MS)**	**F**	**Prob > F**
Between hasyourcom-t	9.333612	1	9.333612	0.15	0.7000
Within hasyourcom-t	3108.1087	50	62.162174		
Total	3117.4423	51	61.12632		
Asymptotic S.E.			95% Confidence Interval		
0.00000			[0.00000, 0.26371]		

Summary Statistics
Number of observations : 52
R-squared: 0.0030

4.2.5. T-test on the change in growth before and after tax incentives

A two-sample t-test with unequal variances (Welch's t-test) was conducted to compare two independent groups: whatis~e (n = 52, mean = 32.67, SD = 4.68) and howmuc~e (n = 52, mean = 37.67, SD = 7.82). The difference in means was −5.00, with a 95% confidence interval of [−7.51, −2.49], indicating that the first group's mean is significantly lower. The test statistic (t = −3.9567, df = 83.399) and very small p-values (p = 0.0001 for one-tailed; p = 0.0002 for two-tailed) provide strong evidence that whatis~e is lower than howmuc~e. The difference of about 5 units, roughly 14% of the overall average (~35.17), corresponds to a moderate-to-large effect size (Cohen's d ≈ −0.78), confirming a meaningful and statistically significant difference between the two groups.

Table 5. T-Test on the Change in Growth Before and After-Tax Incentives

Two-Sample t-Test with Unequal Variances					
Variable	**Obs**	**Mean**	**Std. Err.**	**Std. Dev.**	**[95% Conf. Interval]**
whatis-e	52	32.67308	0.6491212	4.68088	31.36991 33.97624
howmuc-e	52	37.67308	1.084208	7.818332	35.49644 39.84971
combined	104	35.17308	0.6752924	6.886658	33.83779 36.51236
diff		-5	1.263671		-7.513213 -2.486787
diff = mean(whatischange - e) - mean(howmuchchangej - e)					
t = -3.9567					
H_o: diff = 0					
Satterthwaite's degrees of freedom = 83.399					

4.2.6. Z -test the percentage of tax incentive accessed and change in business growth

The Z-test results in Table 4.3.3 show a significant difference between the percentage of tax incentives accessed and the change in business growth, with the first group (mean = 16.00) being about 21.67 units lower than the second group (mean = 37.67). The 95% confidence interval [−22.06, −21.29] is completely below zero, which shows that the first mean is much smaller. The test statistic, z = −110 and the p-value, p = 0.0000 have significant results. This means that more tax incentives would likely lead to more business growth.

Table 6. Z -test the percentage of tax incentive accessed and change in business growth

Two-sample z-test statistical analysis					
Variable	**Observations**	**Mean**	**Std. Error**	**Std. Deviation**	**95% Confidence Interval**
howmuc~i	52	16.000	0.138675	1.000	15.7282 to 16.2718
howmuc~e	52	37.67308	0.138675	1.000	37.40128 to 37.94488
Difference		-21.67308	0.1961161		-22.05746 to -21.2887
Hypothesis Test					
Null hypothesis (H_o): Difference in means = 0					
Alternative hypotheses (Ha):					
o diff < 0					
o diff != 0					
o diff > 0					
Test Statistic			Value		
z-value			-110		
P-Values			Value		
Pr(Z < z)			0.0000		
Pr(			Z		

• *Interpretation:* The p-values indicate a statistically significant difference between the two variables' means, rejecting the null hypothesis at conventional significance levels.

4.5. Discussion of findings

Administrative delays, bureaucratic failures and lack of eligibility make it harder for local businesses to benefit from corporate tax breaks because they are far from able to get their own tax breaks (Bird & Zolt, 2018; Fjeldstad & Heggstad, 2018). The lack of information causes access issues, similar to the conclusions that information asymmetry hinders policy implementation (Klemm & Van Parys, 2018). Companies that invest in machinery and technology are more likely to be successful (James, 2019; OECD, 2020), but other factors such as managers' skill and their strong finances can also be impacted on performance (UNCTAD, 2019). The connection between incentives and revenue growth is good, but not quite strong. For the long-run it will depend on how money is reinvested and on how much support the institution

receives (World Bank, 2019).

Company tax holidays are also useful for businesses to take advantage of cash flow problems (Van Parys & James, 2019; Zolt, 2018). This means that incentives are needed to be flexible in handling the finances of the local firms. The results contrast with resource-based theory, which claims that development can be determined through the strategic use of resources (Barney, 2018). Encouragement should be incorporated into broader industrial policies and technology adoption, skill development and supply chain development (James, 2019; UNCTAD, 2019). The tax breaks also help people buy new machines and technologies that will help businesses stay current and competitive (Hall & Van Reenen, 2019; Chen *et al.*, 2018). Small businesses struggle to get loans, but that shows the importance of having additional credit options (World Bank, 2019). Managers need to see incentives as opportunities to improve technology and increase productivity. In general, Lusaka's corporate tax breaks help industry grow, but they only work if the government has good management, good reinvestment plans and strong institutions.

5. CONCLUSION

The study suggests that tax incentives for Lusaka businesses are important but not always beneficial for improving financial performance, growth and investments in technology. But incentives make getting cash easier and encourage people to reinvest in machinery and technology – but their full effect is limited to administrative problems, inadequate eligibility, and limited access to information. This is especially a problem in the small businesses. In the research published, incentives help modernization but structural problems such as lack of funding, poor management skills and poor operational conditions hinder expansion at a larger scale. According to a resource-based theory, Barney (2018) states that the competitive advantage of a company is determined by its ability to use resources over the long term. Institutional theory continues to argue that bureaucratic problems make policies less effective.

RECOMMENDATIONS

To help decrease bureaucratic delays, modernize tax administration by using technology like digital platforms, one-stop shops and updating the information on eligible recipients (Zambia Revenue Authority, 2022). The aim should be to support long-term industry goals in ways that promote performance-based, sector-specific incentives for industry growth, especially manufacturing, ICT, and renewable energy, and also in terms of regional benchmarks (OECD, 2020). With the help of partners like the World Bank and AfDB (2019), low-interest loans for businesses could be deposited with the World Bank, credit guarantees, and development funds. Integrate incentives into larger policy systems. This involves combining tax breaks with trade, innovation and skills development policies. Check with the World Bank for strong monitoring and assessment processes to maintain accountability and show results (World Bank, 2019; African Development Bank, 2018).

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