

EFFECT OF TAX INCENTIVES ON INVESTMENT IN RWANDA: A CASE STUDY OF PRIVATE SECTOR MANUFACTURING COMPANIES IN KIGALI SPECIAL ECONOMIC ZONE (2013 - 2016)

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Abstract: Tax incentives have become a global phenomenon as more governments try to attract multinational companies and enhance the associated technology spillovers. Although hardly new, this trend appears to have strengthened since the early 1990s. It is assumed that tax incentives play a major role in attracting investments inflows especially in developing countries. The same has been proved empirically in developed countries. However, in developing countries the research is at its infancy stage. The main objective of this study was to establish the effect of tax incentives on investment using private sector manufacturing companies in Kigali special economic zone, Rwanda. Specifically, the following objectives guided the study: to examine the tax incentives available for private companies in Rwanda, to assess the level of investment by the private companies in Rwanda and to establish a relationship between tax incentives and level of investment by private companies. The study adopted descriptive research design and the study population comprised of thirty-nine manufacturing companies in free zone in Rwanda which are registered by the private sector. A sample size of 36 private companies was determined from a total population of 39 individuals. Only two employees that are acquainted with decision making from each manufacturing companies registered by the private sector were targeted hence the target population respondents was 72 respondents. Stratified random sampling technique was used to select the respondents. Data was collected from both primary and secondary data using questionnaires and documentation. Data collected was analyzed using SPSS version 21. Data analysis involved statistical computations for averages, percentages, and correlation and regression analysis. Ordinary least squares (OLS) regression method of analysis was adopted to determine the inferential statistics. The findings in the study revealed that tax incentives have significant positive effect on investment in private sector manufacturing companies in Kigali special economic zone, Rwanda. The p-values for all the variables are lower than 0.05%, which implies they are significant. This implies foreign investors can maximize their investment by taking advantages of the available tax incentives allowed by the government to create an enabling investment environment. From the study the p-values are 0.009, 0.000, 0.003 and 0.000 for company income tax, capital allowance, value added tax and capital gains tax incentives respectively. The capital allowance incentive has the highest t value of 4.656, followed by company income tax incentives with 3.954, next is capital gains tax incentives with 3.184, while the lowest is the value added tax incentives with 2.954. The capital allowance incentives have the highest effect on investments while the VAT has the lowest effect on investments private sector manufacturing companies in Kigali special economic zone Rwanda. The positive and statistically significant relationship between the various tax incentives and investment implies foreign investors can maximize their investment by taking advantages of the available tax incentives allowed by the

government to create an enabling investment environment. Based on the empirical evidences and results of the analysis, there is positive and statistically significant relationship between the tax incentives and investments. The study concludes that tax incentives have been adopted by governments as a policy tool for accelerating investment in specific economic sectors and shaping the investment environment of the country. The study recommends that Government and policy makers should concentrate on efforts at ensuring that more VAT incentives and strategies are introduced to improve the flow of investments into the manufacturing companies. Policies that will generate employment and increase investment should be pursued. Rwanda Revenue Authority (RRA) as the regulatory authority of VAT should analyze the effect of VAT on investment. Further the study recommends that the investors should be encouraged to make use of the roll over tax relief under capital gains tax by replacing their old machines with the modern machine to improve their efficiencies.

Keywords: Tax incentives, Investment, Company income tax incentives, Capital allowances incentives, Value added tax (VAT) incentives, Capital gains tax incentives.

1. INTRODUCTION

1.1 Background of the study

According to Fletcher (2012), tax incentives are those special exclusions, exemptions, or deductions that provide special credits, preferential tax rates or deferral of tax liability. Tax incentives can take the form of tax holidays, investment allowances and tax credits, accelerated depreciation, special zones, investment subsidies, tax exemptions, reduction in tax rates and indirect tax incentives. The international bureau of fiscal decentralization defines tax incentives as fiscal measures that are used to attract local or foreign investment capital to certain economic activities or particular areas in a country. Tax incentives are much easier to provide than to correct deficiencies in the system, for example, in infrastructure or skilled labor they do not require an actual expenditure of funds or cash subsidies to investors. They are therefore, politically easier to provide than funds. Anyanwu & Charles (2011) described tax incentive as an exemption or relief granted to an individual or a company to reduce the effect of taxation and thus encourage savings and investment.

Globally, the rationale behind granting of tax incentives is to exploit investments opportunities, where tax system is seen as an obstacle (Klemm& Parys, 2009). Investments create employment and act as a vehicle of technology transfer, provides superior skills and management techniques, facilitates local firm's access to international markets and increases product diversity. Most countries strive to use tax incentives because of its acknowledged advantages as a tool of economic development. This view is supported by Nwankwo (2006) study on Nigeria which stated that investments is an engine of economic growth and development in Africa where its need cannot be over emphasized (Nwankwo, 2006).

A 2006 Report by the African Development Bank and IMF focusing on tax incentives in East Africa confirmed that, based on empirical evidence available, investment incentives particularly tax incentives are not an important factor in attracting Foreign Direct Investments. The IMF report further indicated that, most countries that have been most successful in attracting FDI have not offered large tax or other incentives and that providing such incentives was not sufficient to attract FDI, if other factors or conditions are not in place more important factors in attracting FDI are good quality infrastructure, low administrative costs in setting and running businesses, political stability and predictable macro-economic policy (Basu & Srinivasan, 2012).

Governments in East Africa are providing a wide range of tax incentives to businesses to attract greater levels of FDI into the country. Studies show that such tax incentives are leading to very large revenue losses for governments, promoting harmful tax competition in the region, and are not needed to attract FDI. In total, Kenya, Uganda, Tanzania and Rwanda are losing up to US\$2.8 billion a year from tax incentives and exemptions. Not all of these mechanisms are bad. Some, such as VAT reductions, can help reduce poverty. But much of the revenue loss is explained by tax incentives provided unnecessarily to attract foreign investment. These revenue losses are depriving countries of critical resources needed for reducing poverty (Action aid, 2012).

The associated costs of tax incentives can be classified in following main categories: forgone revenues, these are the losses in tax revenue from tax incentives which mainly come from three sources; the forgone revenue that otherwise would have been collected from the activities undertaken; the forgone revenue from projects that would have been undertaken if the investor did not receive any tax incentives; and lost revenue from investors and activities that improperly claim incentives or shift income from related taxable firms to those firms qualifying for favorable tax treatments. Resource allocation (neutrality) costs which originate when tax incentives create distortions on investment

choices among sectors or activities instead of correcting market failures. Enforcement and compliance costs: these costs increase with the complexity of the tax system and the system of fiscal incentives in terms of qualifying and reporting requirements (Becker & Murphy, 2012).

Rwanda has in place a complex system of tax incentives and exemptions for investors. The main beneficiaries are big businesses, many of which are foreign-owned, although domestically-owned businesses can benefit from some of the incentives and exemptions. The largest amount is exemptions on imported goods amounting to 84 per cent of the total while only 0.17 per cent is for employing Rwandans. The latter is generally regarded as a preferable type of incentive as it rewards output (Action Aid, 2015). Thus, rendering the researcher to conduct the research on effects of tax incentives on investment in Rwanda.

1.2 Problem statement

A tax incentive is a way of minimizing taxes for business and individuals in exchange for specific desirable action or investments on their parts. Tax incentives are meant to encourage those business and individuals to engage in behavior that is socially responsible and or benefits the community (Shah & Ahmed 2015). This enhances the firm's performance and hence economic growth. Firms that qualify enjoy tax incentives are able to save and invest their money leading to increased profitability (IBRD, 1998).

Rwandan government has continued offering tax incentives to various sectors of the economy despite slow growth in GDP within the last four years. Lack of evaluation on the performance in relation to contribution to development has resulted to major loss of income which could have otherwise been used in social welfare of Rwandan citizens. This study focused on establishing whether reforming tax incentives structure in Rwanda would aid in exploiting the full potential of the key economic sectors with respect to investments.

The objective of granting tax relief and incentives to the manufacturing sector to enhance their growth and development, thus contributing to the overall economic development of the country. However, the objective cannot be achieved in a situation where the would-be beneficiaries are not even aware of the existence of such incentives (Action Aid, 2010). Moreover, the few who are aware of these incentives do not even bother to apply for them due to the poor and inefficient tax administration. Therefore, there is the need to proffer solutions to our institutions to benefit from tax savings for improved performance.

Smith (2014) did a study in the relationship between tax incentives and financial performance of SME's in Ghana, Accra; The study found that tax incentives measures were used to stimulate SME's performance. Chukwumerije & Akinyomi (2011) examined the impact of the tax incentives on the overall performance of registered small-scale industries in Rivers State, Nigeria. It was discovered that tax incentives do significantly affect the profitability, staff strength and the growth and development of small scale industries positively. Barbour (2005) assessed South Africa's investment incentive regime on performance with a focus on the manufacturing sector. The results observed that there was a significant relationship between tax incentives and performance.

None of the studies known to the study have investigated the effect of tax incentive on the investment in Rwanda. This study therefore attempts to an answer to the following research question: What is the effect of tax incentive on investments of private sector manufacturing companies in Kigali special economic zone Rwanda?

1.3 Objectives of the study

This research has general objective and specifics objectives.

1.3.1 General objective

The general objective of the study was to establish the effect of tax incentives on investment using private sector manufacturing companies in Kigali special economic zone Rwanda.

1.3.2 Specific objectives

The study was guided by the following specific objectives:

1. To examine the tax incentives available for private companies in Rwanda
2. To assess the level of investment by the private companies in Rwanda
3. To establish a relationship between tax incentives and level of investment by private companies.

2. CONCEPTUAL FRAMEWORK

The conceptual framework is the mental picture of the relationship between the independent variables, the dependent variable and the intervening variable. Conceptual framework is a scheme of concept (variables) which the researcher operationalizes in order to achieve the set objectives (Mugenda & Mugenda, 2013). A variable is a measure characteristic that assumes different values among subject (Mugenda & Mugenda, 2013). Independent variables are variables that a researcher manipulates in order to determine its effect of influence on another variable. The conceptual framework for this study is presented in Figure 1, which identifies the independent variables for the study, which are company income tax incentives, capital allowances incentives; value added tax incentives and capital gains tax incentives. The investment which is the dependent variable is measured by “Reinvestment of Earnings, increase in assets and Exports” expressed in terms of units of shares and represents the annual level from investor countries to the host country during each year.

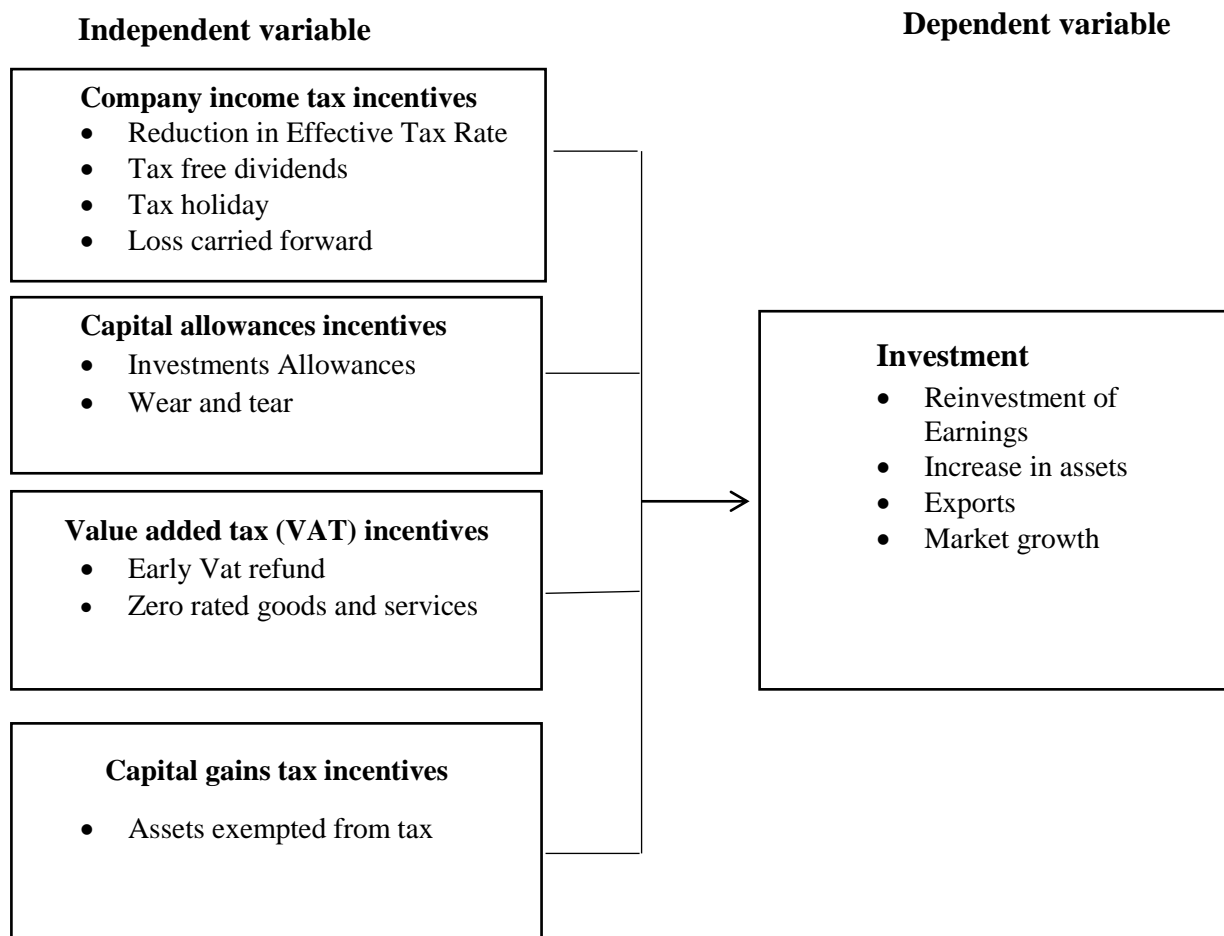


Figure 1: Conceptual framework

Source: Primary data, 2018

The current study considers several scholars views on the effect of tax incentives on investment. The conceptual framework is critiqued, and various variables incorporated in the conceptual framework of the current study.

3. RESEARCH DESIGN

Orodho (2013) defines research design as the scheme outline or plan that is used to generate answers to research problems. Survey research design with specific reference to descriptive research design and correlation research design was utilized in this study. Kothari (2014) states that a descriptive research design is useful when the researcher objectives include determining the degree to which one variable (dependent) affect the other variable (independent). The tax incentives were regressed against the investments in private sector manufacturing companies in Kigali special economic zone Rwanda. Qualitative and quantitative approach was used. In quantitative approach the study employed data in form of numbers collected from employees on manufacturing companies. Qualitative was used through interviews in order to

establish the effect of tax incentives on investment in private sector manufacturing companies in Kigali special economic zone Rwanda.

3.1 Target population

Kothari (2014) defines a population as the total of items about which information is desired and is also known as the “universe”. The study population of this study was 39 private companies which operate in special economic zone. However, the study targeted only two employees that are acquainted with decision making from each manufacturing companies registered by the private sector. These two employees included the managers and directors of finance in each manufacturing company. These categories were chosen because of their knowledge about finance and tax policies in Rwanda.

3.2 Sample size

Kombo & Tromp (2009) and Kothari (2014) describe a sample as a collection of units chosen from the universe to represent it. Marczyk *et al.*, (2015) and Yang (2008) define a sample as subset of the population to be studied. Its main advantages are cost, speed, accuracy and quality of the data sampling technique is the strategy used to select study participants or respondents (Kothari, 2014). Sampling is defined as the process of selecting a number of individuals for a study in such a way that they represent the larger group from which they are selected (Mugenda & Mugenda, 2013). A sample size of thirty-six (36) private manufacturing companies was determined from a total population of thirty-nine (39) private manufacturing companies using the formula of Yamane. Two employees were purposively selected from the sampled companies the number of respondents was seventy-two (72). Stratified random sampling technique was used to select the respondents. Stratified random sampling technique ensures that different groups of a population are adequately represented in the sample. Stratified sampling divides the population into homogeneous groups such that the elements within each group are more alike than the elements in the population as a whole (Nachimas & Nachimas 2008).

$$n = \frac{N}{1 + N(e)^2}$$

Where n = the desired sample size

e= probability of error (i.e., the desired precision, e.g., 0.05 for 95% confidence level)

N=the estimate of the population size.1.0975

$$n = \frac{39}{1 + 39(0.05)^2} = 36$$

Table 1: Sample Size

Sectors	Numbers	Sample
Consumer goods	5	5
Conglomerates	2	2
Services	3	3
Health care	3	3
Industrial goods	23	21
Stores	3	2
Total	39	36

Source: Primary data, 2018

4. RESEARCH FINDINGS

4.1.1 Effect of company income tax incentives on investment.

The effect of company income tax incentives on investment using private sector manufacturing companies in Kigali special economic zone Rwanda was examined. Respondents’ opinion on company income tax incentives on investment using private sector manufacturing companies in Kigali special economic zone Rwanda was examined.

Table 2: Company income tax incentives

Statements	SD %	D %	N %	A %	SA %	Mean	Std. Dev
Company income tax is effective in attracting investments in manufacturing companies Rwanda.	2 (3.1)	4 (6.3)	9 (14.1)	17 (26.6)	32 (50.0)	4	1
Tax free dividends encourage free flow of investments to the manufacturing companies	1 (1.6)	5 (7.8)	5 (7.8)	17 (26.6)	36 (56.3)	4	1
Exemption from minimum tax increases investments inflows	0 (0.0)	8 (12.5)	17 (26.6)	20 (31.2)	19 (29.7)	4	1
Loss carried forward relief is an important incentive in attracting investments in manufacturing companies	0 (0.0)	3 (4.7)	15 (23.4)	26 (40.6)	20 (31.2)	4	1
Tax holidays encourage inflow of investments	0 (0.0)	4 (6.3)	5 (7.8)	32 (50.0)	23 (35.9)	4	1

Source: Primary data, 2018.

Table 2 shows that 26.6% of the respondents agreed, 14.1% were neutral, 50.0% strongly agreed, while 6.3% disagreed and 3.1% strongly disagreed. The results show that majority of the respondents believed company income tax is effective in attracting investments, since over 76% agreed with the statement. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). The findings are in line with Chaves (2010) who found out that company income tax leads to increase in investment.

The study intended to establish if tax – free dividends encourage free flow of investment using private sector manufacturing companies in Kigali special economic zone Rwanda. The result shows that 26.6% agreed, 7.8% were neutral while 1.6% disagreed. The majority (56.3%) were of the opinion that tax free dividends encourage free flow of investments into the manufacturing companies. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). That tax planning gives little importance in terms of impacts on investments suggesting that tax-planning renders distinctions between these systems of little importance in terms of impacts on investments. Furthermore, the studies show that empirical results do not find intra-European Union capital to be more responsive to tax differences in the host country. Generally, the effect of taxation can vary between developed and developing countries. Most developing countries have higher incentives to lower their tax in order to attract more investments than developed countries simply because poor countries are more preoccupied with economic growth and developed countries are more concerned about economic stability.

On whether exemption from minimum tax increases investments inflows, 31.2% of respondents agreed, 29.7% strongly agreed, 26.6% were neutral while none strongly disagreed and 12.5% disagreed. This implied that majority agreed that exemption from minimum tax increases investments. The mean is 4 (agree) implying majority agreed that exemption from minimum tax increases investments, with a small variation of 1 (standard deviation is 1). According to UNCTAD, (2010), a survey carried out indicated that countries in the Africa region have put in place an array of tax incentives to promote regional development such as income tax exemption or reduced tax rate. Studies of whether generous tax policies can compensate for weaknesses in the commercial environment and attract TNCs have led to the broad conclusion that tax exemptions can influence some of the investors (Morisset & Pirmia, 2003).

The results on if loss carried forward relief is an important incentive in attracting investments in manufacturing companies indicate that, 40.6% of the respondents agreed, 31.2% strongly agreed, 23.4% were neutral, 4.7% disagreed and none strongly disagreed. The results show a loss carried forward relief is an important incentive in attracting investments in manufacturing companies since over 71% were in agreement with the statement. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). The findings support UNCTAD (2011) that loss carried forward relief may be targeted at investment in regions that are disadvantaged due to their remoteness from major urban centers.

The study found out if tax holidays encourage inflow of investments. The results indicate that 50.0% agreed, 35.9% strongly agreed, 7.8% neutral, 63% disagree. This implies that majority of the respondents agreed that tax holidays encourage inflow of investments. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). In the study carried out by Oyetunde (2008), findings indicate that tax holidays are attractive to investment authorities in developing and transition economies with rudimentary corporate tax systems given their ease of administration.

4.1.2 Effect of capital allowances incentives on investment

The study sought the view of the respondents in regard to the effect of capital allowances incentives on Investment in private sector manufacturing companies in Kigali special economic zone Rwanda. The statements, respondents' opinions and their percentages are as shown below:

Table 3: Capital allowance incentives

Statements	SD	D	N	A	SA	Mean	Std. Dev
	%	%	%	%	%		
Initial and annual allowances are important incentives in attracting investment	2 (3.1)	4 (6.3)	9 (14.1)	17 (26.6)	32 (50.0)	4	1
Investment allowance is a method used to encourage investment in Rwanda manufacturing Companies	1 (1.6)	5 (7.8)	5 (7.8)	17 (26.6)	36 (56.3)	4	1
Rural investment allowance encourages in flow of investment in Rwanda manufacturing Companies	0 (0.0)	8 (12.5)	17 (26.6)	20 (31.2)	19 (29.7)	4	1
Foreign entities are satisfied with the present level of investment allowance to attract investment	0 (0.0)	3 (4.7)	15 (23.4)	26 (40.6)	20 (31.2)	4	1
Investment allowance supports expansion in existing Rwandan manufacturing companies	0 (0.0)	4 (6.3)	5 (7.8)	32 (50.0)	23 (35.9)	4	1
Capital allowance incentives are effective incentives used to attract investment in Rwanda manufacturing	0 (0.0)	4 (6.3)	5 (7.8)	32 (50.0)	23 (35.9)	4	1

Source: Primary data, 2018

Table 3 established the effect of capital allowances incentives on investments using private sector manufacturing companies in Kigali special economic zone Rwanda. On the importance of initial and annual allowances in attracting investments, the study findings revealed that 26.6% of the respondents agreed, 14.1% were neutral, 50.0% strongly agreed, 6.3% disagreed while 3.1% strongly disagreed. The majority of 76% confirmed that initial and annual allowances are important in attracting investments. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). Initial and annual allowances encourage investment in short-lived capital assets as supported by Oyetunde (2008). Reports by UNCTAD (2008) also support capital allowance as an important incentive for investments.

The study found out if investment allowance is a method used to encourage investment in the manufacturing sector. 26.6% of the respondents agreed, 7.8% were neutral, 56.3% strongly agreed, 7.8% strongly disagreed while 1.6% disagreed. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). This implies that majority of the respondents agreed that investment allowance is a method used to encourage investment in the manufacturing sector. Morisset & Pirnia (2000) find that "industrialized countries have opted for investment allowances or accelerated depreciation" to encourage foreign direct investment. Bond & Samuelson (1986) argued that investment allowance may be used by countries as signals of their "quality" as locations for foreign investment and investment incentives are presumed holding to encourage companies to invest more by increasing the rate of return from assets.

On the question of whether rural investment allowance encourages in flow of investments in private sector manufacturing companies in Kigali special economic zone Rwanda, the results revealed that 31.2% agreed, 26.6% neutral and 12.5% disagreed. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). While the responses were spread within a standard deviation of 1 from the mean. Oyetunde (2008) emphasized that in Nigeria, indigenous and foreign investors are entitled to rural investment allowances depending on the type of infrastructure required for companies established in rural, underdeveloped and inaccessible location.

In response to the view that foreign entities are satisfied with the present level of investment allowance to attract foreign direct investment was agreed by 40.6% of the respondents, strongly agreed by 31.2%, 23.4% were neutral, 4.7% disagreed while none strongly disagreed. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1).

On the facts that investment allowance supports expansion in existing listed manufacturing companies, 50.0% agreed, while 7.8% were neutral, 35.9% strongly agreed, 6.3% disagreed and none strongly disagreed. These results show that majority of the respondents agreed with the view that investment allowance supports expansion in existing listed manufacturing companies. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). Investment allowance is aimed at encouraging re-investment of profits. The allowance is available as a percentage of the expenditure incurred on the qualifying projects and its deduction is restricted to a percentage of the statutory income. Oyetunde (2008) emphasized that investment allowances may be more effective in promoting new investment than tax holidays, for instance tax allowances may be granted for value addition in processing industries by rewarding firms, which increase domestic productivity and net local content.

The study investigated if capital allowances are effective incentives used to attract investments in private sector manufacturing companies in Kigali special economic zone Rwanda. 50.0% of the respondents agreed, 7.8% were neutral, 35.9% strongly agreed, 6.3% strongly disagreed while none disagreed. Majority agreed with the statement that capital allowances are effective incentives used to attract investments in private sector manufacturing companies in Kigali special economic zone Rwanda. The mean is 4 (agree) implying that majority agreed with the statement with a small variation of 1 (standard deviation is 1). Under capital allowances, companies are provided with generous write - offs for qualifying capital costs (Wijeweera *et al.*, 2007). In addition, capital allowance leads to reduction in taxable income and it is of no immediate benefit to investors who have no profits/ tax liability against which to set it.

4.2 Multiple linear regressions for tax incentives and investments

Results of the regression analysis are presented below.

4.2.1 Model Summary

Regression analysis was done to determine the relationship between tax incentives and investments.

Table 4: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.934 ^a	.889	.881	.727

Predictors: (Constant), Company Income Tax Incentives, Capital Allowance Incentives, Value Added Tax Incentives and Capital Gains Tax Incentives

Source: Primary data, 2018

According to Table 4, R= 0.934, this indicates that there is a strong relationship between the tax incentives and investments. While R - square = 0.889, this indicates that 88.9% variation in investments is explained by all the combined tax incentives (independent variables) while the remaining 11.1% is explained by other factors.

This is in support with the study by Tuomi (2009) that focused on middle income country, particularly on South Africa, looked at the topic from microeconomic perspectives by using firm level data. He found that investment climate is more important than incentives.

4.4.2 ANOVA

To determine the level of significant ANOVA test was done on tax incentives on investments.

Table 5: ANOVA results showing the combined effect ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.191	4	5.548	19.999	.000 ^a
	Residual	9.709	35	.277		
	Total	31.900	39			

b. Dependent Variable: Investments

c. Predictors: (Constant), Company Income Tax Incentives, Capital Allowance Incentives, Value Added Tax Incentives and Capital Gains Tax Incentives

Source: Primary data, 2018

The ANOVA test in Table 8 indicates that the significance of the P value 0.000 is less than 0.05, implying that null hypothesis is rejected, and alternative hypothesis accepted. It is concluded that there is a significant effect of all the four incentives on investments. In the study conducted by Bond and Samuelson (1986), it was argued that capital allowance (investment allowance) may be used by countries as signals of their “quality” as locations for foreign investment and investment are presumed to encourage companies to invest more by increasing the rate of return from holding assets.

4.4.3 Overall regression model coefficients

Overall coefficients were done on the four variables of tax incentives on investments.

Table 6: Coefficient results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.174	.060			.006
	Company income tax incentives	0.162	.046	.444	3.954	.009
	Capital allowance tax incentives	0.285	.050	1.231	4.656	.000
	Value Added Tax (VAT) incentives	0.149	.052	1.075	2.956	.003
	Capital gain incentives	0.219	.044	.230	3.184	.000

Source: Primary data, 2018

From the data in the above table the established regression equation was

$$Y = 0.174 + 0.162 X_1 + 0.285 X_2 + 0.149 X_3 + 0.219 X_4$$

From the above regression equation, it was revealed that holding Company Income Tax Incentives, Capital Allowance Incentives, Value Added Tax Incentives and Capital Gains Tax Incentives to a constant zero, investments would be at 0.174.

The beta coefficients were subjected to further test and the resulting model in Table 6 shows that all the tax incentives have significant positive effect on investments. While the p-values for all the variables are lower than 0.05. In the estimated model, capital allowance is highly significant at 5% level in explaining investments. The results indicate that capital allowance has the highest beta coefficient of 0.285. The beta value of 0.285 implies that a unit change in capital allowance incentives will lead to 0.285 units change in the volume of investments. However, value added tax has the lowest coefficient of 0.149. The beta value of 0.149 implies that a unit change in value added tax incentives will lead to 0.149 units change in the volume of investments. The capital allowance incentive has the highest t test of 4.656 and the lowest is company income tax. A support comes from Margalioth (2003) who argued that tax incentives are good and appropriate policies to attract investments to developing countries. He justified the effectiveness of incentives by addressing the main arguments forwarded by the opponents of tax incentives. These arguments are: incentives distort behavior, they are harmful and ineffective and incentive may also divert focus from other important determinants of investments.

From the study the p-values are 0.009, 0.000, 0.003 and 0.000 for company income tax, capital allowance, value added tax and capital gains tax incentives respectively. The capital allowance incentive has the highest t value of 4.656, followed by company income tax incentives with 3.954, next is capital gains tax incentives with 3.184, while the lowest is the value added tax incentives with 2.954. They are all significant at less than 0.05%. The capital allowance incentives have the highest effect on investments while the company income tax has the lowest effect on investments private sector manufacturing companies in Kigali special economic zone Rwanda. In the study conducted by Barthel *et al.* (2010), it was discovered that economic reforms of low and middle-income countries that opened up to foreign investors may explain both the tax incentives and the rise in investments.

It is also evident that the null hypothesis is rejected while the alternative hypothesis is accepted. Therefore, tax incentives on investment in private sector manufacturing companies in Kigali special economic zone Rwanda are significant.

5. CONCLUSION, RECOMMENDATIONS, AND SUGGESTION

5.1 Conclusion

Tax incentives have been adopted by governments as a policy tool for accelerating investment in specific economic sectors and shaping the investment environment of the country. Some of the efforts of the government to create a conducive environment for investment in Rwanda are such that Rwandan companies with a minimum of 40% foreign equity and within their first year of operation are exempt from payment of minimum tax. In addition, loans granted to Rwandan companies may be exempt from tax where the required conditions are met, tax holidays are granted to a company as a tax-free status for a certain period. The capital gain or loss is not due until the asset is finally disposed of and can be avoided if the asset is held until death or donated to charity. Based on the empirical evidences and results of the analysis, there is positive and statistically significant relationship between the tax incentives and investments. This implies foreign investors can maximize their investment by taking advantages of the available tax incentives allowed by the government to create an enabling investment environment.

5.2 Recommendations

From the findings and conclusion, the following recommendations were established:

1. Investment allowances encourage a long-term planning and enhance approach towards investment. The tax authority should introduce a policy of carrying over investment allowance that is not utilized in the current year to the subsequent year as an advantage to the investors to reduce their tax liability. Investment allowance may be used by Rwanda as signals of locations for foreign investment and companies should be encouraged to invest more with the availability of investment incentives on their assets.
2. Government and policy makers should concentrate on efforts at ensuring that more VAT incentives and strategies are introduced to improve the flow of investments into the manufacturing companies. Policies that will generate employment and increase investment should be pursued. Rwanda Revenue Authority (RRA) as the regulatory authority of VAT should analyze the effect of VAT on investment.
3. Investors should be encouraged to make use of the roll over tax relief under capital gains tax by replacing their old machines with the modern machine to improve their efficiencies. The essence of the roll over tax relief is to differ the payment of capital gain tax to future date. The capital gain or loss is not due until the asset is finally disposed off.

5.3 Suggestion for further research

This study assessed the effect of tax incentives on investment using private sector manufacturing companies in Kigali special economic zone Rwanda. The findings provide evidence that the various tax incentives influence on investment using private sector manufacturing companies in Kigali special economic zone Rwanda. The variables were restricted to company income tax incentives, capital allowance incentives, value added tax incentives and capital gains tax incentives. The study could be extended in detail to the other non-tax incentives that can attract on investment using private sector manufacturing companies in Kigali special economic zone Rwanda

Further research is therefore recommended on the influence of other unexplored nontax incentives in on investment using private sector manufacturing companies in Kigali special economic zone Rwanda that have not been addressed in this study.

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