Effect of Corporate income tax Incentives on Financial Performance of Manufacturing Companies in Kenya

Gideon M. Mwangi[1*], Robert Gitau[2], James Kung'u[3]

[1] Accounting, Kirinyaga University, Kenya
[*]Corresponding author: Kirinyaga University, Kenya.
[2] Accounting, Kirinyaga University, Kenya
[3]Commerce, Laikipia University, Kenya

Abstract
Background: *The aim of the study was to investigate the effect of corporate income tax incentives on financial performance of manufacturing firms in Kenya. The main focus of the study was on all manufacturing companies in the register of Kenya Association of Manufacturers.*
Materials and Methods: *The study adopted descriptive research design where the total population was 447 manufacturing companies and the sample size selected was 211 companies by use of stratified random sampling technique. The data was collected for period ranging from 2009 to 2018 and targeted respondents were officers in the senior management and the accountants in the organizations. Questionnaires were issued to the respondents and only 73.5% of the questionnaires were returned. Data analysis was conducted by use of descriptive and inferential analysis. Diagnostic tests were carried out which involved test of auto-correlation, multi-collinearity, test of heteroscedasticity and test of normality.*
Results: *The data violated the test of normality and so the study applied non-parametric method of analysis. The study adopted ordinal regression analysis in order to determine the predictive model of the study. The study established that that corporate income tax incentives has a statistically significant effect on financial performance of manufacturing companies measured by ROA.*
Conclusion: *The study therefore concluded that corporate income tax incentives contributes to improvement in financial performance of manufacturing companies in Kenya. The study recommended that the government should review the corporate income tax policy so as to widen the scope of corporate income tax incentives. The study also recommended that the management of the manufacturing companies should utilize every available aspect of corporate income tax incentives offered by the government.*
Keywords: *Financial Performance; Manufacturing companies; Corporate income tax incentives.*

I. Introduction

Tax incentives have been one of the major strategies applied by the government so as to develop and sustain domestic industries (Basu & Srinivasan, 2002). According to Uwaoma (2016) basically, tax incentives are intended to promote investment in some specific sectors of the economy as well as attracting foreign investment to support the domestic investment for a faster economic development. These incentives include; capital allowance, personal allowance, tax free dividends, investment allowance, export processing zones and tax free holiday (Uwaoma, 2016). Different authors give different reasons for granting tax incentives. According to Philip (2010), tax incentives are described as a way of reducing tax liability on the tax payer with a focus of promoting a particular sector in the economy.

1.1.1 GLOBAL PERSPECTIVE OF CORPORATE INCOME TAX INCENTIVES

Tax incentives for investment are generally offered by developing countries. East Asia, Pacific and South Asia usually use tax holidays as tax incentives, while research and development (R&D) incentives and reduced tax rates are mostly used in East Asia and Pacific. Most of the countries in this region offer tax incentives on discretionary basis. Special economic zones have also been established in this region where tax and duty exemptions are offered as fiscal incentives (World Bank, 2015). A study was carried out in Vietnam on effect of government assistance on financial performance for the period 2007 to 2015 (Nguyen, Van, Francesca & Tran, 2018). The study focused on manufacturing firms which were small and medium sized enterprises. The findings of the study indicated that government support to the manufacturing firms has a significant effect on firm's financial performance. In particular, it indicated that tax exemptions promote financial performance of private small and medium manufacturing enterprises in Vietnam.

1.1.2 REGIONAL PERSPECTIVE OF CORPORATE INCOME TAX INCENTIVES

In the early 1980s Sub Saharan African countries which were considered as low income countries did not have areas designated as tax free zones, but by the year 2005 these special zones had been adopted by 50% of the countries. In the same period of 1980s only 40% of the Sub Saharan countries were offering tax holidays but by 2005 more than 80% of the countries were offering tax holidays as tax incentives (IMF, OECD, UN, & World Bank, 2015). In Cameroon fiscal incentives have undergone several transformations since 1990. The government of Cameroon also offers exemption from income tax to firms operating within free zone area, they are generally exempted from duty for a period of 10 years from the first year of their operation (Wujung & Fonchamnyo, 2013). A survey conducted in Cameroon showed that firms which benefited from tax exemption showed higher financial performance than the ones which did not benefit. (KPMG, 2016).

1.1.3 LOCAL PERSPECTIVES OF CORPORATE INCOME TAX INCENTIVES

In Kenya, manufacturing sector is one of the key sectors where the government has majored in, in terms of incentives. The main beneficiaries are the export processing zones (EPZ). The government of Kenya provides a number of tax incentives in EPZ which take the form of tax holiday for a period of 10 years, followed by a lower corporate tax rate of 25% for the next 10 years as compared to the normal corporate tax rate of 30%, firms in EPZ also enjoy a period of 10 years for an exemption of all withholding taxes (Ngure, 2018). A study by Mayende (2013) was conducted in Uganda on the effect of tax incentives on firm performance. In this study performance was measured by value added and gross sales where the researcher applied panel data estimation technique. According to the findings of the study the manufacturing firms enjoying tax incentives performs better in terms of value addition and gross sales in comparison to their counterparts in the industry.

1.2 STATEMENT OF THE PROBLEM

The growth of manufacturing sector in Kenya has not been stable in the recent years, recorded data shows that in the year 2015 the growth rate was 3.6% which then declined to 3.1% in 2016 and then declined further to 0.7% in 2017 before increasing to 4.3% in 2018 and then declined in 2019 to grow at 3.2% KAM (2021). This is an indicator that manufacturing sector has been facing some challenges that need be addressed. Among the challenges facing manufacturing sector include high cost of electricity incurred in the operation of the business and poor infrastructure leading to high cost of operating the business. Manufacturing industries have also been affected by the practice of illicit trade especially at the point of entry on import, this has promoted counterfeit goods and threatened the production of genuine goods in the sector (KAM, 2021).

Government has tried to come up with different ways of addressing the challenges, key among them being Kenya vision 2030 manufacturing policy with the aim of making the GDP to grow at the rate of 10% per annum (KAM, 2018). The government of Kenya has also come up with the big four agenda one of them being the promotion of the manufacturing sector with the aim of making the manufacturing sector to achieve a growth rate of 15% by the year 2022 compared to 7.5% in 2019. The poor performance reported by manufacturing companies such as mumias sugar company and subsequent closure of some companies such as Cadbury East Africa and Eveready East Africa is a clear indication that the challenges in the manufacturing sector have not been adequately addressed (Burre and Omagwa, 2017). The study considered corporate income tax incentives as one of the policy interventions that the government has put in place but has not been adequately studied.

1.3 OBJECTIVE OF THE STUDY

The purpose of this study was to determine the effect of corporate income tax incentives on financial performance of manufacturing companies in Kenya.

1.4 LITERATURE REVIEW

A study was carried out in Tunisia to determine the effect of corporate income tax incentives on the financial performance of the listed and non-listed firms (Assidi, Aliani and Omri, 2016). The study used descriptive research design on a sample of all Tunisian listed and non-listed 35 firms. The data used in the study covered a period of 11 years from 2000 to 2010. The data for the listed firms were collected from the published financial statements while the data for the non-listed firms were collected from the accounting services in the individual firms. The dependent variable of the study was firm value which was measured by return on assets (ROA), according to Lassala (2017), ROA is the most efficient measure of firm value. The independent variable of the study was tax optimization, according to Capiez (1994) tax optimization is defined as the reduction of income tax so as to improve on financial performance of the firm. The study developed a multiple linear regression model. The findings of the study indicated that there was a negative impact of corporate tax on financial performance of Tunisian firms. This indicated that lowering of corporate tax rates has a positive effect on financial performance of the firms. The study concluded that minimization of corporate tax rates improves financial performance of the firms. The study by Assidi, Aliani and Omri, (2016) agreed with the study by,

Gadzo and Kportorgb, (2013) on the effect of Corporate Income Tax on Financial Performance of Listed Manufacturing Firms in Ghana.

II.   Methods

The study applied both descriptive and explanatory research design. Descriptive research design establishes the facts as they appear during the time of the study (Cooper and Schindler, 2011). Descriptive research design has been used in a number of studies including but not limited to   Olaleye (2016) on effect of tax incentives on FDI in listed Nigerian companies. Explanatory research design has been applied by Mwangangi (2016) in the study on influence of logistics management on performance of manufacturing firms in Kenya.

The target population of the study was 447 manufacturing firms registered under Kenya Association of manufacturers. The manufacturing companies in Kenya were grouped as, food and beverages, Plastic and chemical and allied Rubber, motor vehicle assemblies and accessories textiles and apparel, building mining and construction timber wood and furniture, energy electrical and electronics, metal and allied sector, paper and board, pharmaceutical and medical equipment Leather and foot wear. The study used stratified random sampling technique. The sample size of the study was 211 manufacturing companies which were determined by use of Yamane formula.

n= $\frac{N}{1+Ne^2}$

n =sample size

N=Population size

e = level of precision

the level of precision is taken as 0.05

hence n= $\frac{447}{1+447(0.05)^2}$ = 211

presentation of data was done inform of tables which was given inform of frequencies or percentages. Under descriptive analysis the mean and standard deviation were calculated showing the average distribution of the data and the range within which the data was dispersed. The independent variable of the study which was corporate income tax incentive was measured by ordinal scale while the dependent variable which was the financial performance was measured by ratio scale. Diagnostic tests were carried out which involved test of multi-collinearity, test of auto-correlation and test of normality. The data did not suffer from multi-collinearity neither was auto-correlation detected. On the test of normality, the data violated the assumption of normality, therefore the study opted to apply non-parametric methods of analysis. The study used ordinal regression analysis. Ordinal regression requires that the dependent variable be measured by ordinal scale therefore the dependent variable was transformed to be measured by ordinal scale. The results of transformed data were in Table 1.

Table 1: Transformation to ordinal scale.

ROA	Label	Ordinal scale
Below 8.77	Lowest ROA	1
8.78-16.45	Low ROA	2
16.46-24.14	High ROA	3
24.15-31.82	Higher ROA	4
31.83-39.5	Highest ROA	5

Ordinal regression analysis was carried out by use of SPSS version 25 in order to determine the ordinal regression model of the form.

Logit [P (Y≤ j)] = $\beta_0 - (\sum \beta_i X_i) + \varepsilon$

Y= dependent variable

j = category of dependent variable

β_0= intercept

β_i= coefficient of x_i which is the independent variable

III.   Results

Descriptive analysis produced the result in table 2, showing the mean and standard deviation of the opinion of the respondents.

Table 2: Respondents Opinion on Company Income Tax Incentives

Statement	SD %	D %	N %	A %	SA %	Mean	Std. Dev
1. Differential tax rates have contributed to increase in revenue in manufacturing firms in Kenya	1.3	11.6	12.9	60.0	14.2	3.7	.89

2.	Differential tax rates have contributed to decrease in operational costs in manufacturing firms in Kenya.	3.2	2.6	25.2	58.7	10.3	3.7	.82
3.	Differential tax rates have contributed to increase in assets in manufacturing firms in Kenya	0.0	4.5	25.2	55.5	14.8	3.8	.74
4.	Differential tax rates have contributed to increase in profitability in manufacturing firms in Kenya	0.0	4.5	20.6	60.0	14.8	3.9	.72
5.	Tax free dividends have contributed to increase in revenue in manufacturing companies in Kenya.	7.1	4.5	59.4	20.0	9.0	3.1	.97
6.	Tax free dividends have contributed to decrease in operational costs of in manufacturing firms in Kenya	6.5	3.2	58.1	18.7	13.5	3.2	.97
7.	Tax free dividends have contributed to increase in assets in manufacturing firms in Kenya.	6.5	52.3	16.1	2.6	21.7	3.8	1.0
8.	Tax free dividends have contributed to increase in profitability in manufacturing firms in Kenya	6.5	49.7	5.8	2.6	34.6	3.0	1.1
9.	Tax holidays encourage investments in manufacturing companies	1.9	1.4	5.8	50.3	40.6	4.7	3.5
10.	Wear and Tear allowances have contributed to decrease in operational costs in manufacturing firms in Kenya.	3.9	2.6	17.4	50.3	25.8	4.6	4.3
11.	Wear and Tear allowance have contributed to increase in assets in manufacturing firms in Kenya.	1.3	4.5	11.0	63.2	20.0	4.0	.78
12.	Wear and Tear allowance have contributed to increase in profitability in manufacturing firms in Kenya.	0.0	11.0	5.1	64.5	19.4	3.9	.83
13.	Investment Deduction allowance have contributed to decrease of operational cost in manufacturing firms in Kenya	1.3	7.7	7.7	60.0	19.4	3.9	.84
14.	Investment deduction allowance have contributed to increase in assets in manufacturing firms in Kenya.	1.3	2.6	11.6	67.7	16.8	4.0	.71
15.	Investment deduction allowance have contributed to increase in profitability in manufacturing firms in Kenya.	0.0	0.0	23.9	57.4	18.7	3.9	.65
16.	Industrial Building allowance have contributed to decrease in operational costs in manufacturing firms in Kenya.	1.3	0.0	14.2	67.1	17.4	4.0	.66
17.	Industrial building allowance have contributed to increase in assets in manufacturing firms in Kenya	0.0	1.3	7.7	65.2	25.8	4.2	.60
18.	To set up manufacturing firms in Kenya investors consider income tax incentives available.	0.0	4.5	8.4	49.0	38.1	4.2	.78
19.	Income tax incentives encourage manufacturing firms to continue operating in Kenya	0.0	4.5	7.1	48.4	40.0	4.2	.77
	Overall Mean Score = 3.98							
	N = 155; Key: SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree; Std Dev = Standard Deviation							

The findings implied that tax free dividends do not highly influence performance of manufacturing companies in Kenya while differential tax rates, capital allowances and tax holidays do highly influence financial performance of manufacturing companies in Kenya. A study agreed with the study by Pham (2015) and Assidi, Aliani and Omri, (2016) on the effect of corporate income tax incentives on financial performance of small and medium sized enterprises in Vietnam.

The null hypothesis of the study: There is no statistically significant relationship between corporate income tax incentives and financial performance. The null hypothesis was tested by applying the parameters of the ordinal regression analysis.
The analysis of ordinal regression produced results in form of model fitting information, goodness of fit, Pseudo-R square and parameter estimates.
Model fitting information was shown in table 2.

Table 2: Model Fitting Information on income tax incentives

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	55.106			
Final	41.912	13.194	1	.000
Link function: Logit.				

The results in table 2 shows a chi-square statistic of 13.194 which was significance since p-vale of 0.000 was less than 0.05. Therefore, the results revealed the model gives a statistically significant improvement over the intercept only. Hence it was concluded; there is a statistically significant relationship between corporate income tax incentives and financial performance of manufacturing companies.

Test of the goodness of fit
Table 3: Goodness-of-Fit on income tax incentives

	Chi-Square	df	Sig.
Pearson	8.633	11	.656
Deviance	7.723	11	.738
Link function: Logit.			

The test for the goodness of fit tests if the data fits the model well. This is the case where the p-value is greater than 0.05. The results in Table 3 shows the Pearson p-value to be 0.656 while the Deviance p-value was 0.738. since the p-value was greater than 0.05 the null hypothesis was not rejected and it was hence concluded that the data did fit the model well.

Table 4: Pseudo R-Square on income tax incentives

	Pseudo R-Square
Cox and Snell	.082
Nagelkerke	.086
McFadden	.029
Link function: Logit.	

Pseudo R square is used to show the proportion that is explained by the model successfully. Pseudo R-Square uses three statistics that is Cox and Snell, Mc Fadden statistic and Nagelkerke statistic. Nagelkerke is the most used value in the determination of the proportion. Table 4 shows the result Nagelkerke as 0.086 which means 8.6% of the financial performance can be explained by corporate income tax incentives. The 81.4% of the variation in financial performance can be explained by other factors apart from corporate income tax incentives.

Table 5: Parameter Estimates on income tax incentives

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ROAORDINAL = 1]	2.170	.920	5.556	1	.018	.366	3.974
	[ROAORDINAL = 2]	3.401	.943	12.997	1	.000	1.552	5.250
	[ROAORDINAL = 3]	4.668	.967	23.293	1	.000	2.773	6.564
	[ROAORDINAL = 4]	5.337	.984	29.393	1	.000	3.408	7.267
Location	ITAVERAGE	.687	.203	11.453	1	.001	.289	1.084
Link function: Logit.								

ITAVERAGE = Corporate income tax incentives.
Table 5 shows the parameter estimates, which includes the coefficients, standard error, Wald test and p-values at 0.05 level of significance. Threshold represents the Intercepts at various categories of ROA. The analysis in Table 5 established that corporate income tax incentives was a significant predictor of ROA since the p-value was less than 0.05. The log odds of corporate income tax incentive were 0.687. This means for every one-unit increase on corporate income tax incentives there was a predicted increase of 0.687 in the log odds of falling at a higher level on ROA. This was concluded to be as the scores of corporate income tax incentives increases there was an increase probability of falling at a higher level on the ROA. The influence of corporate income tax incentives was shown by the prediction of the following models at various categories.
For category 1
Logit $[P (ROA \leq 1)] = 2.170 - (0.687X)$
This corresponds to intercept of ROA being lowest and low. It can be interpreted as the log odds of ROA being lowest versus the ROA being low or ROA being high or the ROA being higher or the ROA being highest. It shows the results of the probability of ROA being lowest against the probability of being low or high or higher or highest.
 For category 2
Logit $[P (ROA \leq 2)] = 3.401 - (0.687X)$
This corresponds to intercept of ROA being low and ROA being high. It can be Interpreted as the log odds of ROA being lowest or ROA being low versus the ROA being high or the ROA being higher or the ROA being highest.

For category 3

Logit [P (ROA ≤ 3)] = 4.668 – (0.687X)

This corresponds to intercept of ROA being high and ROA being higher. It can be Interpreted as the log odds of ROA being lowest or ROA being low or ROA being high versus the ROA being higher or the ROA being highest.

For category 4

Logit [P (ROA ≤ 4)] = 5.337 – (0.687X)

This corresponds to intercept of ROA being higher and ROA being highest. It can be Interpreted as the log odds of ROA being lowest or ROA being low or the ROA being high or ROA being higher versus the ROA being highest. When the model was turned to exponential it was interpreted as the probability of ROA being lowest or low or high or higher versus the probability of ROA being highest.

Test of ANOVA

Test of ANOVA was done by use of Friedman statistic test; this was carried out so as to test the significance of the corporate income tax on ROA. The results were shown in Table 6.

Table 6: Friedman Test

Test Statistics[a]	
N	155
Chi-Square	117.730
df	1
Asymp. Sig.	.000
a. Friedman Test	

The results in table 6 gave a p-value of 0.000 which was less than 0.05 indicating that the difference between the ranking in the means of corporate income tax incentives and ROA was significant. The conclusion made was that the model selected was significant and therefore the variables tested fitted the model.

IV.   Discussion

The results of the study showed that corporate income tax incentives have a positive effect on ROA of manufacturing companies in Kenya. The study established that differential tax rates, tax holidays and capital allowances highly influenced the financial performance of manufacturing companies. It was also established that tax free dividends do not highly influence the financial performance of manufacturing companies in Kenya. The study agreed with the study by Pham (2015) and Assidi, Aliani and Omri, (2016) on the effect of corporate income tax incentives on financial performance of small and medium sized enterprises in Vietnam that corporate income tax incentives have a positive effect on financial performance of manufacturing companies. The study by Pham (2015) used multiple regression analysis while this study used ordinal regression analysis.

V.   Conclusion

The results of the study established that corporate income tax incentives have a significant effect on financial performance of manufacturing companies in Kenya measured by ROA. The null hypothesis that there is no statistically significant relationship between corporate income tax incentives and financial performance of manufacturing companies in Kenya was therefore rejected and conclusion made that there was a statistically significant relationship between corporate income tax incentives and financial performance in Kenya. The results indicate that there is need for the government to enhance the corporate income tax incentives as they have a positive effect on financial performance of manufacturing companies in Kenya. The government of Kenya should consider reviewing the tax incentive policies so as to improve on financial performance of manufacturing companies. The study agrees with Olaleye (2016) who concluded that there is need to lay better strategies for the improvement of corporate income tax incentives.

References

[1]. Assidi, S., Aliani, K., & Omri, M.A. (2016). Tax optimization and the firm's value: Evidence from the Tunisian context. BorsaIstanbul Review, 16(3), 177 – 184.
[2]. Basu, A. and Srinivasan, K. (2002) Foreign Direct Investment in Africa- Some case studies, http://www.imf.org/external/pubs/ft/wp/2002/wp0261.pdf (last consulted: 28 February 2015)
[3]. Burre, H & Omagwa, J. (2017). Financial Management and Financial Performance of Firms Listed under Manufacturing and Allied Sector at the Nairobi Securities Exchange, Kenya. The International Journal of Business & Management, 5(11), 290-297.
[4]. Cooper, D. R., & Schindler, P. S. (2011). Business research methods (11 ed.). Boston: McGraw-Hill.
[5]. Gatsi, J., Gadzo, S., Kportorgb, H. (2013). The Effect of Corporate Income Tax on Financial Performance of Listed Manufacturing Firms in Ghana. Research Journal of finance and Accounting 4(15), 118-125
[6]. IMF, OECD, UN, & World Bank. (2015). Options for Low Income Countries' Effective and Efficient Use of Tax Incentives for Investment. IMF. Retrieved June 17, 2019, from https://www.imf.org/external/np/g20/pdf/101515.pdf
[7]. Lassala (2017). Sustainability matter and financial performance of companies. Sustainability Journal,9-1498.

[8].   KAM. (2021). Manufacturing Priority Agenda. Nairobi: Kenya Association of Manufacturers. Retrieved April 27, 2021, from kam.co.ke/kam/wp-content/uploads/2021/02/KAM-Priority-Agenda-2021.pdf

[9].   KPMG. (2016). Africa Incentive Survey. Retrieved from https://home.kpmg/za/en/home/.../kpmg-launches-2016-africa-incentive-survey.html

[10]. Philips, E. (2010). Tax Incentive and employment opportunities in an economy, Washington, DC: World Bank.

[11]. Mayende. S (2013). Effects of tax incentives on firm performance: Evidence from Uganda. Journal of politics and   law. Vol 6

[12]. Mwangangi, P. (2016). Influence of logistics Management on performance of Manufacturing firms in Kenya, Unpublished PhD thesis, Jomo Kenyatta University of Agriculture and Technology.

[13]. Ngure, P. M. (2018). Tax Incentives and Performance of Selected Manufacturing Companies in Kenya. Retrieved from Kenyatta Universty Repository: https://ir-library.ku.ac.ke/handle/123456789/18838

[14]. Nguyen, Van, Francesca and Tran, (2018). The impact of government support on firm **performance** in vietnam: new evidence from a dynamic approach. Asian academy of management journal. 2018, 23(2), 101-123

[15]. Pham, A. (2015). A temporary corporate income tax reduction and its effects on firm behavior: A case study of Vietnam. (Unpublished Dissertation, George Mason University, USA).

[16]. Olaleye, M. O. (2016). Effects of Tax Incentives on Foreign Direct Investment in Listed Nigerian Manufacturing Companies. Retrieved from JKUAT Repository: http://hdl.handle.net/123456789/2186

[17]. Uwaoma, I. (2016). The Impact of Tax Incentives on Economic Development of Nigeria (Evidence of 2004-2014). International Journal of Economics, Commerce and Management., 686-737.

[18]. World Bank (2015), East Asia and Pacific Economic Update, October

[19]. Wujung,V., & Fonchamnyo, C. (2013). Assessing the effect of the Cameroons investment charters on private investment. Journal of Economics and finance, 1(2), 28-41