EFFECT OF CUSTOM DUTY INCENTIVES ON FINANCIAL PERFORMANCE OF MANUFACTURING COMPANIES IN KENYA

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Abstract:
Background: The purpose of the study was to assess the effect of custom duty incentives on the financial performance of manufacturing firms in Kenya. The study focused on the manufacturing companies registered by Kenya Association of Manufacturers. **Materials and Methods:** The population of the study was the 447 manufacturing companies in the register of Kenya Association of Manufacturers in 2019. The study applied a stratified random sampling technique in the determination of the sample size, where 211 manufacturing companies were selected for the study. Primary data was collected by the use of questionnaires targeting accountants and other senior management officers in manufacturing companies. Secondary data was collected from audited financial statements covering a period of 10 years from 2009 to 2018. The response rate on the questionnaires was 73.5 %. Data analysis was performed by use of SPSS version 25. The study performed both descriptive and inferential statistics, diagnostic tests involving multi-collinearity tests, auto-correlation, heteroscedasticity and test of normality were carried out. **Results**: The data did not suffer from multi-collinearity neither was there auto-correlation; however, the data violated the assumption of normality. The study applied ordinal regression analysis so as to determine the predictive model. Pseudo-R square was computed which showed that custom duty incentives explain 4% of the change in financial performance meaning there are other factors that contribute to the change in financial performance. The results of the study also showed that custom duty incentive has a statistically significant relationship with the financial performance of manufacturing companies. **Conclusion:** The conclusion of the study was custom duty contributes positively to the financial performance of manufacturing companies in Kenya. The study recommended that manufacturing companies should embrace the aspects of custom duty incentives offered by the government.

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1. Introduction

Tax incentives are of great value as far as economic development is concerned; they are a means by which governments lower the cost of capital for new industries with high risk while still sustaining high tax rates for general tax collection (IEA, 2012). According to Joosung (2017), tax incentives can be a way to improve the productivity and economic growth of countries with the huge informal sector by discouraging firms from moving into the informal sector. He also noted that the rapid economic growth in countries like Republic of Korea, Ireland, Mauritius, Taiwan and Singapore is a result of investment incentives.

Tax incentives have been embraced by many countries simply because they have a lower effect on fiscal revenues in comparison to a general tax deduction, they also target some specific organizations that would result in greater value addition to the country (Jacques & Neda, 2004). Governments all over the world implement many tax incentives for various purposes. Less developed countries provide tax incentives so as to counter the undesirable results which arise out of the bad tax system (Holland & Vann, 1998). In Kenya tax incentives takes the following different forms; investment allowance, tax holidays, tax credits, special zones, accelerated depreciation, tax exemptions, indirect tax incentives and reduction in tax rates (IEA, 2012). The manufacturing sector today has become the channel through which less developed countries are able to benefit from globalization and hence narrow the income gap with the developed countries. However, in Kenya manufacturing companies have experienced performance challenges which are well reflected in their reporting of the end-of-year profits and their decline to the contributions of the GDP in the country. Data from Kenya National Bureau of Statistics (KNBS) shows the contribution of the manufacturing sector to the GDP declined from 11.8% in 2011 to 8.4% in 2017 (KNBS, 2018).

1.1 Statement of the Problem

The manufacturing sector of late has been on a downward trend, in the year 2015 manufacturing sector had grown by 3.6% while in the year 2016 it declined to 3.1% and by the year 2017 it had declined further to 0.7%. in the year 2018, there was a slight improvement where the growth rate increased to 4.3% before decreasing again to 3.2% in the year 2019 (KAM, 2021). This was attributed to some challenges facing the manufacturing sector. Some of these challenges involve the charging of high county fees which includes land rates, garbage collection fees, single business permit and offloading fees (KAM, 2021). The government of Kenya has tried to institute some measures so as to address the challenges. Some of the measures include reviving the manufacturing sector by launching the Kenya Industrial Transformation Programme (KITP) policy document. The purpose of KITP was to revamp the flagship projects in the manufacturing sector. However, despite the measures put in place by the government the manufacturing sector

has continued to perform poorly. This study focused on custom duty incentives as one of the policy measures put in by the government to address the challenges but whose effect has not been adequately studied.

1.2 Objective of the Study

The purpose of the study was to investigate the influence of custom duty incentives on the financial performance of manufacturing companies in Kenya.

2. Literature Review

A study by Kuria (2018) focused on the effect of custom duty incentives on the financial performance of EPZ. The study applied a correlation research design on the 86 firms registered under EPZ. Questionnaires were self-administered in collecting the primary data. Secondary data was obtained from the records of the registered firms to determine the ROA. Both descriptive and inferential statistics were applied to data analysis. The finding of the study showed that custom duty incentives had a positive significant relationship with the financial performance of EPZ firms registered in Kenya. Financial performance was measured by ROA. The study by Kuria (2018) focused on firms operating within the EPZ in Kenya while the current study focused on all manufacturing firms registered under KAM and hence involved a wider scope. The study implied that by offering custom duty incentives than the EPZ firms performance increases.

In Nigeria, Ohaka and Dagogo (2015) conducted a study to determine the effect of custom duty tax incentives on the financial performance of manufacturing firms. The study prepared research questions and the hypothesis was formulated and tested. The sample size comprised 60 manufacturing firms quoted in the stock exchange in Nigeria. The study used both primary and secondary data where questionnaires were used for primary data while secondary data was collected from the Nigeria stock exchange fact book. The findings of the study indicated that custom duty incentives contribute to positive financial performance in manufacturing firms in Nigeria. The findings, therefore, imply that more schemes on customs duty incentives should be applied so as to continue improving the financial performance of firms.

3. Methods

The study applied a descriptive research design. A 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 the effect of tax incentives on FDI in listed Nigerian companies. The target population of the study was 447 manufacturing firms registered under Kenya Association of Manufacturers. The manufacturing companies in Kenya were grouped as plastic and chemical and allied rubber, pharmaceutical and medical equipment food and beverages, paper and board, motor vehicle assemblies and

accessories, building mining and construction timber wood and furniture, energy electrical and electronics, textiles and apparel, metal and allied sector, leather and footwear. The study used a stratified random sampling technique. The sample size of the study was 211 manufacturing companies which were determined by the use of Yamane formula.

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

where:

n = sample size;

N = population size;

e = level of precision;

 The level of precision is taken as 0.05; hence,

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

 The independent variable of the study which was custom duty 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 a test of multi-collinearity, a test of auto-correlation and a 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 an ordinal scale therefore the dependent variable ROA was transformed to be measured by an ordinal scale. The results of the 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 $[P (Y \leq j)] = \beta_0 - (\sum \beta_i X_i) + \varepsilon$

where:

Y = dependent variable;

j = category of the dependent variable;

β_0 = intercept;
β_i = coefficient of x_i which is the independent variable.

4. Results

The 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 Custom Duty Tax Incentives

	SD	D	N	A	SA	Mean	Std. Dev
Waiver of import duties have contributed to increase of revenue in manufacturing companies in Kenya.	0	3.2	2.6	60.0	34.2	4.2516	.66
Waiver of import duties have contributed to decrease of operational cost of manufacturing companies in Kenya.	0	4.5	1.3	69.7	24.5	4.1419	.65
Waiver of import duties have contributed to increase in profitability of manufacturing companies in Kenya.	0	4.5	.6	63.9	31.0	4.2129	.67
Waiver of import duties have contributed to increase in assets in manufacturing companies in Kenya.	1.3	3.2	7.7	53.5	34.2	4.1613	.80
Waiver of export duties have contributed to increase in revenue of manufacturing companies in Kenya.	3.9	1.3	3.9	54.2	36.8	4.1871	.88
Waiver of export duties have contributed to decrease of operational cost in manufacturing companies in Kenya.	3.9	1.3	10.3	41.3	43.2	4.1871	.95
Waiver of export duties have contributed to increase in profitability of manufacturing companies in Kenya.	6.5	1.3	10.3	34.2	47.7	4.1548	1.1
Waiver of export duties have contributed to increase in assets in manufacturing companies in Kenya.	2.6	3.2	6.5	43.9	43.9	4.2323	.90
Customs tax rebates have contributed to increase in revenue in manufacturing companies in Kenya.	2.6	1.3	6.5	49.7	40.0	4.2323	.84
Customs tax rebates have contributed to decrease in operational cost in manufacturing companies in Kenya.	2.6	1.3	14.2	49.0	32.9	4.0839	.87
Customs tax rebates have contributed to increase in profitability in manufacturing companies in Kenya.	3.9	0	7.7	64.5	23.9	4.0452	.82
Customs tax rebates have contributed to increase in assets in manufacturing firms in Kenya.	2.6	2.6	10.3	54.8	29.7	4.0645	.86
Customs preferential tax rates have contributed to increase in revenue in manufacturing companies in Kenya.	2.6	4.5	18.1	43.2	31.6	3.9677	.96
Customs preferential tax rates have contributed to decrease in operational cost in manufacturing companies in Kenya.	2.6	3,2	20.0	42.6	31.6	3.9742	.94
Customs preferential tax rates have contributed to increase in assets in manufacturing companies in Kenya.	3.9	0.0	17.4	48.4	30.3	4.0129	.91
Customs preferential tax rates have resulted to increase in profitability in manufacturing companies in Kenya.	2.6	1.3	11.0	58.7	26.5	4.0516	.81

To set up manufacturing firms in Kenya investors consider customs tax incentives available.	2.6	0.0	3..9	52.9	40.6	4.3072	.76
Customs tax incentives encourage manufacturing firms to continue operating in Kenya.	2.6	0.0	5.8	48.4	43.2	4.2968	.80
Overall Mean Score = 4.03							
N = 155; Key: SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree; Std Dev = Standard Deviation							

The findings implied that import duty waiver, export duty waiver, tax rebates and preferential tax rates do highly influence the 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 the financial performance of small and medium-sized enterprises in Vietnam.

4.1 Null Hypothesis of the Study

The null hypothesis of the study: there is no statistically significant relationship between custom duty 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, the goodness of fit, Pseudo-R square and parameter estimates. Model fitting information was shown in Table 3.

Table 2: Model Fitting Information on Custom Duty Tax Incentives

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept only	75.029			
Final	65.276	9.754	1	.002
Link function: Logit.				

The results in Table 3 show a chi-square statistic of 9.754 which was significant since the p-value 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 custom duty tax incentives and the financial performance of manufacturing companies.

4.2 Test of the Goodness of Fit

Table 4: Goodness-of-Fit on Custom Duty Tax Incentives

	Chi-Square	df	Sig.
Pearson	11.680	15	.703
Deviance	11.793	15	.695
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 4 show the Pearson p-value to be

0.703 while the deviance p-value was 0.695. 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 5: Pseudo R-Square on Custom Duty Tax Incentives

Cox and Snell	.061
Nagelkerke	.064
McFadden	.021
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 Mc Fadden statistic, Cox and Snell, and Nagelkerke statistic. Nagelkerke is more common in the determination of the proportion. Table 4 shows the result Nagelkerke as 0.064 which means 6.4% of the financial performance can be explained by custom duty tax incentives. The 93.6% of variation in financial performance can be explained by other factors apart from custom duty tax incentives.

Table 6: Parameter Estimates on Custom Duty Incentives

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ROAORDINAL = 1]	.665	.520	1.636	1	.201	-.354	1.684
	[ROAORDINAL = 2]	1.883	.540	12.176	1	.000	.825	2.941
	[ROAORDINAL = 3]	3.133	.573	29.897	1	.000	2.010	4.256
	[ROAORDINAL = 4]	3.797	.600	40.060	1	.000	2.621	4.972
Location	CUSTAVERAGE	.418	.134	9.685	1	.002	.155	.681
Link function: Logit.								

Note: CUSTAVERAGE = Custom duty tax incentives.

Table 5 shows the parameter estimates, which include the coefficients, standard error, Wald test and p-values at a 0.05 level of significance. The threshold represents the Intercepts at various categories of ROA. The analysis in Table 5 established that custom duty tax incentives were a significant predictor of ROA since the p-value was less than 0.05. The log odds of a customs duty tax incentive were 0.418. This means for every one-unit increase on custom duty tax incentives there was a predicted increase of 0.418 in the log odds of falling at a higher level on ROA. This was concluded to be as the scores of custom duty tax incentives increase there was an increased probability of falling at a higher level on the ROA. The influence of custom duty tax incentives was shown by the prediction of the following models in various categories.
A. For category 1:

$$\text{Logit } [P (ROA \leq 1)] = 0.665 - (0.418X)$$

It shows the results of the probability of ROA being lowest against the probability of being low or high or higher or highest.

B. For category 2:

Logit [P (ROA ≤ 2)] = $1.883 - (0.418X)$

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.

C. For category 3:

Logit [P (ROA ≤ 3)] = $3.133 - (0.418X)$

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.

D. For category 4:

Logit [P (ROA ≤ 4)] = $3.797 - (0.418X)$

This corresponds to the 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.

4.3 Test of ANOVA

Friedman statistic was used to test the ANOVA, this was in order to test the significance of custom duty incentives on ROA. The results were shown in Table 6.

Table 7: Friedman Test

Test Statistics[a]	
N	155
Chi-Square	118.840
df	1
Asymp. Sig.	.000
a. Friedman Test	

The results in Table 7 gave a p-value of 0.000 which was less than 0.05 indicating that the difference between the ranking in the means of custom duty tax incentives and ROA was

significant. The conclusion made was that the model selected was significant and therefore the variables tested fitted the model.

5. Discussion

The results of the study showed that custom duty tax incentives have a positive effect on the ROA of manufacturing companies in Kenya. The study established that preferential tax rates, tax rebates, export duty waivers and import duty waivers highly influenced the financial performance of manufacturing companies. The study agreed with the study by Pham (2015) and Assidi, Aliani and Omri, (2016) on the effect of custom duty tax incentives on the financial performance of small and medium-sized enterprises in Vietnam that custom duty tax incentives have a positive effect on the financial performance of manufacturing companies.

6. Conclusion

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

Conflict of Interest Statement
The authors declare no conflicts of interest.

About the Authors
The authors are members of faculty in Kirinyaga University School of Business and Education, Kenya. Their research includes financial distress, capital structure, taxation, accounting practices and risk management.

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