EdinBurg Peer Reviewed Journals and Books Publishers
Journal of Finance and Accounting
Vol. 4||Issue 5||pp 59-67||October||2024
Email: info@edinburgjournals.org||ISSN: 2789-0201

Effect of Royalty Payments on Tax Revenue Collection on Multinational Enterprises in Kenya

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How to Cite: Musesya, S. K., Cheboi, J., & Kabete, M. (2024). Effect of Royalty Payments on Tax Revenue Collection on Multinational Enterprises in Kenya. *Journal of Finance and Accounting*, *4*(5), 59-67.

Abstract

Purpose: The study sought to investigate the effect of royalty payments on tax revenue collection on MNEs in Kenya. The study was further explained by the accounting, economic and transaction theories.

Methodology: The study adopted an explanatory research design and longitudinal research design while a secondary data collection method was used to collect data through content analysis of audited financial statements of a target population of 62 firms listed on the Nairobi Securities Exchange (NSE) in Kenya. The sample of the study was identified using inclusion-exclusion criteria to identify the 28 MNEs that met the sampling criteria for this study over an observation period of 11 years.

Results: The study found that royalty payments negatively affect tax revenue collection (β=−0.0000113, p = 0.025).

Conclusion: The study concluded that there is a significant negative relationship between royalty payments and tax revenue collection. This study therefore recommends the government should introduce guidelines on royalty payments, specifically outlining the procedures through which an MNE should claim for deduction of royalty payments, from their incomes.

Keywords: *Royalty Payments, Tax Revenue Collection, Multinational Enterprises, Nairobi Securities Exchange*

Received: 19th September 2024	***Revised: 4th October 2024***	***Published: 16th October 2024***

1.0 Introduction

Tax revenue collection is one significant issue of economic development among others. It has been said that ‘what the government gives it must first take away’. The economic resources available to society are limited, and so an increase in government expenditure normally means a reduction in private spending. Taxation is one method of transferring resources from the private to the public sector (Chaudhry & Munir, 2010).

Tax collection is a description of obedience, submission, compliance, and the implementation of tax regulations. It is a series of actions by the tax insurance agency to reimburse tax debts and collection costs by reprimand, warning, immediate collection, and notice of coercion, proposing prevention, confiscation, arrest, hostage, and sale of confiscated goods (Purba, Wulandari, & Rohimah, 2023).

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Tax collection varies significantly by region, with advanced economies typically collecting a higher percentage of GDP in taxes compared to developing ones. For example, developed economies collect around 40% of GDP in taxes, while developing economies only collect about 15% (IMF, 2024). In Africa, tax collection as a share of GDP averages 14%, similar to other regions with comparable income levels (Okunogbe & Santoro, 2023). However, there is significant variation within Africa: countries like Seychelles and South Africa collect up to 33%, while countries such as Chad and Ethiopia collect as little as 7% (UNU-WIDER Government Revenue Dataset, 2021).

Globalization has facilitated the rise of MNEs and international trade, leading to an increase in cross-border transactions among related parties, which exceeds 50% of all international trade (Novikovas, 2011). With more open economies and increased foreign direct investment (FDI), MNEs have grown significantly, contributing to a tenth of the global GDP, and their sales represent half of the world's GDP (Beebeejaun, 2019). However, this also allows MNEs to exploit different tax jurisdictions, reducing their overall tax payments (Rego, 2003).

Aggressive tax planning by MNEs often involves base erosion and profit shifting (BEPS), which refers to tax strategies that exploit gaps in international tax rules to shift profits to low or no-tax jurisdictions (Burgers & Mosquera, 2017). The OECD identifies transfer pricing, where MNEs set prices for transactions within their group, as one of the key BEPS practices. This can lead to significant revenue losses, especially in developing countries that rely heavily on corporate income tax (OECD, 2023). Developing countries suffer disproportionately from BEPS practices, which cost them an estimated 100-240 billion USD annually, or 4-10% of global corporate income tax revenue (OECD, 2023).

Royalty payments, interest expenses, and intra-group services represent key mechanisms used by MNEs to minimize taxes. Intangible assets like intellectual property are often transferred at manipulated prices to reduce taxable income (Gravelle, 2010). Interest expenses also present tax planning opportunities, as MNEs can capitalize on intra-group loans to reduce taxable income in high-tax jurisdictions (McNair, Dottey & Cobham, 2010).

1.1 Problem statement

According to the data from the OECD's annual Revenue Statistics publication, corporate tax revenues have been falling since the global economic crisis, putting greater pressure on individual taxpayers to ensure that governments meet financing requirements. The average revenues from corporate incomes and gains fell from 3.6% to 2.8% of gross domestic product (GDP) over the 2007-14 period (OECD, 2015). According to the Annual Revenue Performance Report of the financial year 2020/2021, there was a decline in collection of corporation tax by 2.7% (KRA, 2022). MNEs have every incentive to use transfer prices to move profit between tax jurisdictions with differential tax rates, thus minimizing tax revenues. Through transfer pricing, MNEs can avoid taxes and export capital to more favourable locations causing a severe shortage of funds and have a negative impact on the local economy (Sikka & Haslam, 2007). Transfer pricing is a common practice by MNEs through common practices of royalty payments, interest expenses, and intra-group services which are likely to affect tax revenue collection. It is in this context that this study looked into the effect of transfer pricing on tax revenue collection on MNEs in Kenya.

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2.0 Literature Review

2.1 Theoretical Review

Accounting theory is a set of concepts and ideas that guide the development and application of financial accounting practices. It helps to explain how financial accounting is used to create financial statements and how those statements are used to make decisions about the allocation of resources Lundblad (2020). Accounting theory has evolved to encompass a broad range of concepts and ideas, including the role of accounting in society, the use of accounting information in decision-making, and the impact of modern technologies on accounting practices, Wharrad (2021).

Pricing is made up of cost-plus margins. Further, transfer pricing requires constant control over the activities involved. Expectations of tax rules are a crucial factor in multinationals' transfer prices (Twesige, Gasheja, Barayendema, & Uwamahoro, 2020). Transfer prices in accounting theory have two main functions which are profit allocations and maximization. Profit allocation is meant to follow the decisions taken by the management while profit maximization in relation to taxation systems transfers the returns between individuals to reduce the tax base in line with the multinational level to reorganize the returns in a lesser tax rate economical setting (Veres 2011). According to Milner and Tingley (2011), MNEs in Africa have the liberty to change transfer prices in their favor. In this case, transfer pricing becomes a major loss of returns in many African nations. However, with the aim of protecting profits and encouraging growth, African nations are taking measures used in the rest of the world related to transfer pricing (Veres, 2011). The target of the accounting theory is the impact of transfer prices on economic decisions that are used for determining how much a company can produce. Further, it is also used for determining the type of market price that should be used by a firm.

2.2 Empirical Review

According to Contractor (2016), royalty payments occur because of three salient facts. Firstly, typically, MNEs are technology-intensive, and most value resides in their proprietary technologies or intangible assets. Secondly, even if research and development (R&D) costs have been incurred by Firm A (say the home country of the MNE), current rules allow the transfer of the patents or brands to a holding company or subsidiary (in a low-tax country, such as Ireland) or a shell company (in a zero-tax country, such as Bermuda), which then charges royalties to headquarters and other affiliates. Thirdly, most governments allow deductions for royalty payments, which reduces tax liability to the licensee—even if the licensee is part of the same MNE, and even if no R&D had been performed in the licensee's nation.

Waworuntu and Hadisaputra (2016) also investigated royalty payments by studying the major determinants of transfer pricing aggressiveness in Indonesia. The research used a sample of multinational companies listed on the Indonesian Stock Exchange (IDX) from the period of 2010 to 2012. The data analysis was based on the company's financial statements generated from the IDX. Transfer pricing aggressiveness was measured by TPRICE index, which consisted of items that represent occurrences of non-arm's length transactions. Six determinants of transfer pricing aggressiveness were tested in this study, including firm size, profitability, leverage, intangible assets, multi-nationality, and tax haven utilization. Multiple regression analysis was applied. Based on the results, the authors discovered that firm size and leverage are positively associated with transfer pricing aggressiveness, while intangible assets and multi-nationality are negatively associated. This study also showed there was a significant negative relationship between intangible assets and transfer pricing that was examined through the existence of royalties. The outcome implied that the existence of royalties lessens the

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transfer pricing aggressiveness. They conclude that intangible assets that are represented by royalty have a significant effect at α=0.05 to transfer pricing as dependent variables.

Kutera (2017) conducted research to present a model of aggressive tax optimization based on the flow of royalties in supranational groups. The description of the model was preceded by a detailed analysis of transactions concluded between companies in connection with the current tax regulations effective in particular countries. The key tool was an analysis of case studies of tax optimization mechanisms used by the largest multinational corporations, mainly Google, Apple, Facebook, and Microsoft. The main source of data consisted of the reports of OECD on this topic, the annual 10-K financial statements filed with the SEC by Google Inc. (Alphabet Inc.), and detailed legal regulations on taxing international transactions. His findings were that the popular mechanisms of tax avoidance include the skillful use of transfer pricing, fees for intangible services, royalty transfers, establishing offshore companies, and the flow of loans and dividends. He concluded that the most important mechanism was royalty transfers, which have been used by every company under analysis, especially by Google.

2.3 Conceptual Framework

A conceptual framework is a concise description accompanied by a graphic or visual representation of the arrangement of various components or elements that define any phenomenon, event, or occurrence. It is therefore a researcher's conceptualization of the way the phenomenon he or she intends to study operates. The conceptual framework summarizes behaviors and provides explanations and predictions for the majority number of empirical observations (Cooper & Schindler, 2008).

The variables captured in this conceptual framework shown in Figure 1 are independent, dependent, and control variables. In this study, the dependent variable was tax revenue collection, the independent variable consisted of factors of transfer pricing which contain elements like royalty payments.

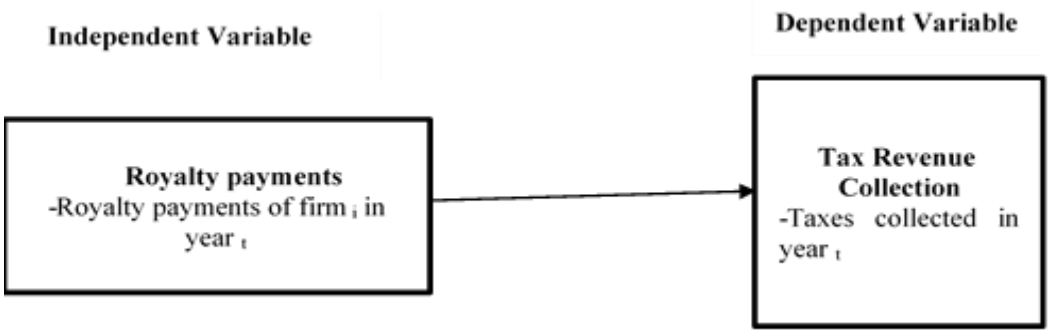

Figure 1: Conceptual Framework

3.0 Methodology

This research adopted an explanatory research design to explain the type of relationships between variables and investigate the causal relationship between them. Additionally, this research design allows for the collection of a large quantity of data regarding the population being studied. The study also used a longitudinal research design as the data collected was a combination of time series and cross-sectional and was used to analyze the changes in patterns on the independent variables to be measured over a period of 11 financial years. The study focused on MNEs in Kenya who have published their audited financial statements on the company's website or the website of NSE for a period of 11 years.

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A time series is a sequence of data points, typically consisting of successive measurements made over a time interval. The Hausman test is frequently used to compare fixed effects versus random effects panel time series models when dealing with panel data. A p-value of less than 0.05 says that the fixed effects model should be preferred; a p-value of 0.05 or above suggests that the random effects model should be selected.

4.0 Results and Discussion

4.1 Descriptive statistics

4.1.1 Royalty payments

Table 1: Descriptive statistics of Royalty payments

Variable	Mean	Std.Dev.	Min	Max	Obs
Royalty Payments	2709.97	895.94	1225.00	4224.00	N = 308
between		268.47	2318.91	3283.36	n= 28
within		856.14	802.16	4444.79	T = 11
between		31.18	22.00	123.00	
within		3.17	60.11	70.11	

Key: Royalty payments, in KES million,

Table 1 shows that Royalty Payments exhibit a mean of KES 2,709.97 million, with a standard deviation of KES 895.94 million. The minimum payment is KES 1,225 million, and the maximum is KES 4,224 million. The between-firm standard deviation in royalty payments (KES 268.47 million) is lower than the within-firm standard deviation (KES 856.14 million), which suggests that while royalty payments are relatively stable between firms, they fluctuate over time for individual firms, consistent with the observations in international tax literature Ochieng (2020).

4.1.2 Tax Revenue Collection

Table 2: Descriptive statistics Tax revenue collection

Variable	Mean	Std.Dev.	Min	Max	Obs
Tax revenue collection	83776.84	193109.70	-850.00	1488042.00	N = 308
					n= 28
between		178461.30	202.04	936051.50	T = 11
within		80500.57	-487051.70	635767.30	
between	83776.84	193109.70	-850.00	1488042.00	
within		178461.30	202.04	936051.50	

Key: Tax revenue collection, in KES million,

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Table 2 For Tax Revenue Collection, the mean stands at KES 83,776.84 million, with a standard deviation of KES 193,109.7 million, reflecting substantial variability across observations. The minimum recorded tax revenue collection is KES -850 million, indicating potential tax rebates or refunds, while the maximum reaches KES 1,488,042 million. Between-entity standard deviation is significant, with a standard deviation of KES 178,461.3 million, suggesting that differences between firms play a large role in determining tax revenue collection, consistent with findings in cross-firm studies (Doe, 2019). In contrast, the within-entity standard deviation over time is lower at KES 80,500.57 million.

4.2 Correlation Analysis

The correlation analysis determined the relationship between t royalty payments and tax revenue collection and the subsequent significance and impact of the relationship.

Table 3: Correlation Analysis

Variables	**(1)**	**(2)**
(1) **Tax revenue collection**	1.000	
(2) **Royalty payments**	-0.480*	1.000
	0.000	

Table 3, revealed that royalty payments showed a negative and significant correlation with tax revenue collection ($r = -0.480$, $p < 0.05$). This indicates that higher royalty payments are associated with lower tax revenues, potentially due to the shifting of profits to jurisdictions with lower tax rates, thereby reducing the taxable income in the current jurisdiction.

4.3 Hausmann Test

The Hausmann test on Table 4 found a p-value =0.000< 0.05 which implies that the fixed effect is preferred to random effects model.

Table 4: Hausmann Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	32.24	1	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
Royalty Payments	-0.0000113	7.52e-06	-0.0000188	0.0000

4.4 Fixed effect Model Results

The study model summary table 5 found that a 10% variation in financial performance was caused by capital deductions $R^2 = 0.100$. The remaining 90% was caused by factors not included in the fixed effect model. F static of 18.909 and p-value of 0.000<0.05 implied that the model was significant in explaining the variation.

The regression coefficient results were summarized in Table 5 through the equation below

$$TaxRevenue\ collectionit = 0.148 - 0.0000113 * RoyaltyPayments_{1it}$$

Table 5 Fixed Effect Regression Model

TaxRevenue collection	Coef.	St.Err.	t	p-value	[95% Conf	Interval]
Royalty payments	-0.0000113	0.0000049	-2.31	0.025	0	0
Constant	0.148	0.0729335	2.03	0.042	-.212	.508
Mean dependent var	0.190	SD dependent var	0.077			
R-squared	0.377	Number of obs	308			
F-test	33.265	Prob > F	0.000			
Akaike crit. (AIC)	-871.813	Bayesian crit. (BIC)	-849.433			

Conversely, royalty payments negatively affect tax revenue collection (β=− 0.0000113, p = 0.025), indicating that higher royalty payments are associated with lower tax revenue collection figures.

4.5 Discussion of Findings

The study was to investigate the effect of royalty payments on tax revenue collection on MNEs in Kenya. The study coefficient analysis found that royalty payments had a negative and significant correlation with tax revenue ($r = -0.480$, $p < 0.05$). This indicates that higher royalty payments are associated with lower tax revenues, potentially due to the shifting of profits to jurisdictions with lower tax rates, thereby reducing taxable income. The study further showed that effects of royalty payments (β = -0.0000113, p-value = 0.025, <0.05) on tax revenue collection were negative and statistically significant. The findings concurred with Waworuntu and Hadisaputra (2016) who also investigated royalty payments by studying the major determinants of transfer pricing aggressiveness in Indonesia.

5.0 Conclusion

The study concluded that there is a significant negative relationship between royalty payments and tax revenue collection. This indicates that higher royalty payments are associated with reduced tax revenues, likely due to profit shifting to jurisdictions with lower tax rates. Therefore, royalty payments by MNEs contribute to a decrease in taxable income within Kenya.

6.0 Recommendations

This study therefore recommends the government should introduce guidelines on royalty payments, specifically outlining the procedures through which an MNE should claim for deduction of royalty payments, from their incomes. Apart from the general requirement that the transactions between related parties must be at arm's length as required under section 18(3) of the Income Tax Act, specific guidelines should be issued on royalty payments, interest expenses and intra-group services.

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