EFFECTS OF TRANSFER PRICING ON REVENUE GENERATION BY MULTINATIONAL ENTERPRISES IN KENYA

BY

MASEKI LUCY WAUSI

D63/67612/2013

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

OCTOBER 2015

DECLARATION

CANDIDATE

This project is my original work and has not been presented for award of any degree in any other university or institution. No part of this project may be reproduced without the prior permission of the author and / or University of Nairobi.

SIGNED:…… **DATE:……**

Maseki Lucy Wausi

D63/67612/2013

SUPERVISOR

This project has been submitted for examination with my approval as the University Supervisor

SIGNED BY:…… …… **DATE:……**

Dr. Kennedy Okiro

Department of Finance and Accounting

School of Business

University of Nairobi

ACKNOWLEDGEMENT

I would like to extend my gratitude to the God Almighty who ensured I never lacked by providing to me through out.

I acknowledge with much appreciation the support, advice and effort of my supervisor Dr. Okiro in the supervision during my research work and in writing of this research project.

Regards to my close friends and family for providing the much needed moral support during my study and accepting my being away from many activities in order to complete my research.

Finally I thank my fellow students who encouraged me and contributed positively towards my study and my colleagues for sharing their vast knowledge on the study and encouraging me to expand and convert my professional experience and knowledge into this research project.

This project paper is an expression of my learning and no criticism is intended towards any person and organisation mentioned in this paper.

DEDICATION

This research is dedicated to my mother, Mary Joseph Maseki and my father, Joseph Maseki for never giving up on me and on my studies.

ABSTRACT

The purpose of the study was to establish the effects of Transfer Pricing on revenue generation by Multinational Enterprises in Kenya. In the past decade, Kenya has seen an influx of Multinational Enterprises registering subsidiaries and branches in the country due to the foreseen growth and potential in the market. For uniformity purposes and to enjoy economies of scale, related Multinational Enterprises transact with each other across jurisdictions hence the importance of Transfer Pricing rules which have a great impact on revenue generated by the entities ultimately having an effect on the revenue collected in the country. Despite the enactment of Transfer Pricing rules, there are still concerns that Multinational Enterprises are still engaging in transfer mispricing activities that deprives off revenue from Kenya to other jurisdictions. The study adopted a descriptive research design. The population comprised of the 8 Multinational Enterprises currently operating in Kenya. The data collected was standardised and analysed using the Microsoft Excel software to determine different measures of central tendency. The key finding of the study is that the relationship between revenue generated and related party sales showed strong direct relationship and related party expenses have a negative relationship with the revenue generated by the Multinational Enterprises. This means that a change in the related party sales and related party expenses by a company engaging in related party transactions has the potential to affect the revenue generated by the company and ultimately revenue collected in Kenya. The study recommends an evaluation of the effect of Transfer Pricing on revenue generated by Multinational Enterprises in Kenya on a case by case basis.

TABLE OF CONTENTS

DECLARATION ..... **ii**
ACKNOWLEDGEMENT ..... **iii**
DEDICATION ..... **iv**
ABSTRACT ..... **v**
CHAPTER ONE **2**
INTRODUCTION **2**
1.1 Background to the Study 2
1.1.1 Transfer pricing 3
1.1.2 Revenue Generation 4
1.1.3 Multinational Enterprises 5
1.1.4 Transfer Pricing Rules and Revenue Generation 6
1.2 Research Problem 8
1.3 Research Objective 10
1.4 Value of the Research 10
CHAPTER TWO **12**
LITERATURE REVIEW **12**
2.1 Introduction 12
2.2 Theoretical Literature Review 12
2.2.1 The Economic Theory 12
2.2.2 The Accounting Theory 13
2.2.3 The Economic Deterrence Theory 16
2.3 Determinants of Revenue Generation by MNEs 18
2.3.1 Exchange Rates 18
2.3.2 Taxes 19
2.3.3 Government and Revenue Institutions 20
2.3.4 Trade Protection 21
2.4 Empirical Literature Review 22
2.4.1 International Studies 22
2.4.2 Local Studies 25
2.5 Summary of Literature Review 26
CHAPTER THREE **28**
RESEARCH METHODOLOGY **28**

3.1 Introduction 28
3.2 Research design 28
3.3 Target Population 29
3.4 Sample 29
3.5 Data Collection 30
3.6 Data Analysis and Presentation 30
CHAPTER FOUR 42
DATA ANALYSIS, RESULTS AND DISCUSSION 42
4.1 Introduction 32
4.2 Summary Statistics 32
4.3 Relationship between the Variables 34
4.3.1 Results of Mean and Standard Deviation 34
4.3.2 Results of Regression Analysis 35
4.3.3 Results of Regression P-Values 37
4.3.4 Results of the Correlation Analysis 38
4.4 Discussion of the Findings 39
CHAPTER FIVE 42
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 42
5.1 Summary of the Study 42
5.2 Conclusion 42
5.3 Policy Recommendations 43
5.4 Limitations of the Study 44
5.5 Suggestions for Further Studies 44
REFERENCES 45

LIST OF ABBREVIATIONS

TP – Transfer Pricing

ITP – International Transfer Pricing

MNEs – Multinational Enterprises

OECD – Organisation for Economic Co-operation and Development

KRA – Kenya Revenue Authority

IPR – Intellectual Property Rights

Table 4.1 – Related Party transactions identified

Table 4.2 – Mean and standard deviation of the variables

Table 4.3 – Regression model results

Table 4.4 – Regression p-values

Figure 4.1 – Related party transactions identified

Figure 4.2 – Regression p-values

Figure 4.3 – Correlation analysis for the variables

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Owners and high level management of corporations always wish to maximize the long-term health and profitability of their organizations. In order to do this, they set goals, plan and strategize on how to achieve these goals. Consequently, organizational strategies evolve. Amidst this, there is an increasing rate of globalization coupled with trade liberalization and heightened competition in the domestic market front and across several jurisdictions as noted by Foley and Forbes (2004). This has pushed most organizations to extend their operations across borders thus creating associated entities in the overseas markets. This process results to creation of Multinational Enterprises (MNEs). In most cases, the arrangement will involve setting up of associated entities in other jurisdictions, often with low tax rates. The positive contribution of MNEs to the overall economy cannot be underestimated. They are known for their heavy tax contributions and the enormous employment opportunities they offer to the citizenry. Overall, their contributions bolster the economic growth of the country.

On the other hand MNEs may also take advantage of available incentives in form of differential tax regimes between jurisdictions to use TP to shift profits for their own benefits, thus minimizing total revenue reported by the MNEs in the high tax jurisdictions (Slemrod and Venkatesch, 2004). This will therefore mean that revenue is lost by these jurisdictions to the low tax jurisdictions. For instance, a parent company in a country whose rate of tax is high can purchase goods from its subsidiary in a country whose rate of tax is lower at a price substantially above the market price. Subsequently, the subsidiary will report high profit, which will be taxed at the lower rate. On the other hand, the parent company will report a low profit or even appear to be in financial distress due to high cost of goods purchased. To this effect, the MNE will

benefit from the lower global tax expense. The tax authority in the subsidiary's jurisdiction will not object to the transfer price, since their tax revenue is increased by an artificially high profit. On the contrary, the tax authority in the parent company's jurisdiction will find the existing transfer price and lost tax revenue objectionable (Wong, et al., 2011). When MNEs engage in such activities, revenue authorities from the high tax jurisdictions are denied their fair share of the revenue generated in their states. The study has thus studied the effects of TP activities on revenue generation by MNEs in Kenya. Accordingly, this introduction section discusses the key concepts considered for the purposes of the study.

1.1.1 Transfer pricing

Transfer Pricing (TP) is a pricing strategy on products, semi-finished products or components transferred between related parties or units in order to review the compliance with the purpose and ideal performance based on maximum profit and minimum tax (Borkowski, 1997). TP was once an obscure area studied only by a few academics but has now gained a lot of popularity with various stakeholders across nations including tax authorities in several jurisdictions. It has now become front page news worldwide. It involves the pricing of transactions between related parties of MNEs often tax residents in different jurisdictions. Related parties are separate legal entities where either one controls the other, or both are controlled by a common shareholder, or each relates to the other individual having shareholding ownership in the companies. Ideally, MNEs are built up by related parties. When two or more related parties do business with and / or for each other, this then translates to related party transactions (Wong et al. 2011).

Related party transactions covered in TP include; the sale or purchase of goods, the sale, purchase or lease of tangible assets, the transfer, purchase or use of intangible assets, the provision of services, the lending or borrowing of money and any other transactions which may affect the profit or loss of the enterprise involved. In the past, some MNEs in Kenya have tried to

price their transactions with their related parties in a way that benefits them from a tax perspective. For instance, overpricing goods and services sold to related parties in order to have a higher amount of cost deductible against any income derived by the Kenyan company or even understating prices charged for sales to related parties in order to report a lower income resulting in lower taxes paid to the KRA. This is especially so, where the related party is located in low tax jurisdiction, otherwise referred to as tax havens. These activities often result to disputes between the KRA and MNEs.

1.1.2 Revenue Generation

Revenue is income generated by a person. Taxes are a revenue raising activity for the government. Taxation is part of public financing while public financing is that department of economic theory which deals with the public expenditure and revenue. Revenue generation from taxation is therefore part of public finance that deals with the means by which the government raises revenue from the public by using taxes (Kaplow, 2008). The government both national and county provides some goods and services to the public, these cost money which means the government incurs expenditure to provide them hence the need for government to raise revenue. The main objective of taxes is to raise revenue for the government. Taxes are actually the main sources of revenue to provide government funding to ensure the citizens' social welfare is taken care of, to ensure fair distribution of income, to provide employment, for economic stability and protection policy (Kaplow, 2008).

Revenue generation by MNEs is affected by TP as they engage with their overseas related parties. MNEs make use of diverse TP strategies when making cross-border transaction decisions, which may lead to tax avoidance. The strategies of tax avoidance by MNEs in developing countries are less well understood. These strategies revolve around shifting income from higher tax to lower or no tax countries (Ki Ho and Lau, 2005). Profit shifting strategy is achieved by limiting operational activities and related income in the higher tax state, by moving

them to a subsidiary located in a lower-tax state. This is facilitated through favourable setting of prices for transactions between companies that are part of the same multinational group. In the past this mainly concerned physical goods but now involves the rights to use intangible goods and use of services such as headquarters' support. Although TP rules require the use of arm's length price to correctly state revenue generated by MNEs, it is often not obvious how the arms-length prices should be determined.

1.1.3 Multinational Enterprises

International business has led to the establishment of MNEs. A MNE is a firm which has been registered in more than one country or that has operations in more than one country. Such companies have offices and/or factories in different countries and usually have centralized or regional head offices where global management is coordinated (Foley and Forbes, 2004). The other terms referring to MNEs include; an international corporation, multinational corporation or a transnational corporation. There are vast numbers of MNEs around the world which vary widely in size and specialization. MNEs have far reaching effects which are as they affect the daily lifestyle of consumers. In different scenarios, MNEs have both positive and negative effects to both the home country as well as the host country. KCB, Kenol-Kobil, Nakumatt, East African Portland Cement Company Limited, Nation Media Group & East African Breweries Limited are examples of home grown or outbound MNEs. Firms like Unilever, Proctor and Gamble, Barclays Bank and Samsung are MNEs with branches in Kenya.

According to a report by Frontier Strategy Group quoted in Business Daily (2014), Kenya was ranked second with a score of 23.17 per cent after Nigeria which was top on the continent and globally with a score of 29.57 per cent. Globally, Kenya was fifth behind Saudi Arabia (24.69 per cent), Vietnam (24.72 per cent) and Argentina which was second (24.72 per cent). Frontier

Strategy Group is a US data vendor that tracks emerging markets. The index is based on input from 200 MNEs such as Coca Cola and General Electric (Business Daily, 2014).

In the absence of clear regulatory requirements or in situations in which the benefits of not complying with such requirements outweigh the potential costs, MNEs may have incentives to engage in transfer mispricing (Salanie, 2003). This happens in order to reduce tax liabilities by taking advantage of differences in national tax rates and customs duties on imports and exports. Transactions within MNEs across borders are growing rapidly and are becoming much more complex hence gaining popularity with the KRA. Any time related parties on different sides of international borders conduct business, the tax authorities from both countries will insist on taxing their fair share of the income. Transfer prices ensure the remuneration for inter-company transactions are based on the arm's length principle. Therefore, MNEs and transfer prices go hand in hand (Gault, 2006).

1.1.4 Transfer Pricing Rules and Revenue Generation

TP rules in Kenya were enacted in Kenya in 2006 to guide MNEs when pricing their goods and this has led to correct statement of revenue generation. The TP rules are governed by Section 18 Sub-Section 4 of the Income Tax Act. The main objective of the rules is to ensure that any transfer prices charged between related parties satisfy the arm's length principle. The Rules are also meant to provide administrative guidance including the types of records and documentation to be submitted to the KRA by a person involved in TP arrangements (Income Tax Act, 2014). In the process of facilitating these objectives, the TP rules have enhanced revenue collection with the KRA. The TP rules in Kenya heavily borrow from the OECD Guidelines. They provide guidelines to be applied by related parties in determination of the arm's length pricing of goods and services transacted within the group. The underlying regulations are based on the principle that transactions between related parties should be evaluated on an arm's-length basis, that is;

how unrelated parties would structure a transaction in an uncontrolled / unrelated situation. The arm's-length nature of a transaction between related parties is best tested by comparing the results of the same transaction in question with the results of unrelated parties engaged in comparable transactions under comparable circumstances (Income Tax Act, 2014).

Some of the strategies MNEs use to understate revenue generated include; use intercompany loans as a strategy of shifting profits for tax advantages. Intercompany loans given from entities in lower-tax states to subsidiary companies in higher-tax countries pass interest income to the lower-tax state, reducing the taxable profit in the higher-tax country. This profit is further reduced by the higher interest rate or level of debt. Payment for intangibles is yet another significant strategy for profit shifting as observed by OECD (2013). In this case, a group company in a lower-tax environment with company Intellectual Property Rights (IPR) ownership rights, charges another group entity in a higher tax state for use of an intangible, such as a technology royalty, licenses, brands or patents. The pricing should reflect the value of the technology; i.e. how important the technology is in the creation of the profits. A MNE can have a company owning its IPR in a country where no taxes are payable on license fees, and then charge its affiliates around the world for their use.

Shell holding companies are also used by MNEs as a beneficial TP strategy that results to understatement of revenue generated. These holding companies are found mostly in jurisdictions with an extensive tax-treaty network and offering low tax rates on payments like dividends and capital gains. The holding company may be a shell company, which does not engage real trading, production or distribution activities or may have centralized financing, licensing and other management activities. Shell holding companies are used in multiple ways for tax planning activities (Wong et al. 2011). As mentioned earlier, for fair pricing of goods and services transacted by MNEs across borders, the arm's length principle has to be considered. The 'arm's

length principle' requires that the remuneration for all transactions between related parties are set as if the transactions are taking place between independent parties. A related party transaction meets the arm's-length standard if the results of the transaction are consistent with the results that would have been realized if unrelated independent taxpayers had engaged in comparable transactions under comparable circumstances.

1.2 Research Problem

MNEs in Kenya are under constant competitive pressures to structure their business operations effectively and efficiently. They are always in search for tax efficient corporate structures, low cost of raw materials and low cost in supply of labour to meet earnings per share targets set by shareholders and investors. They also aim at achieving the most effective global tax rate (Allingham and Sandmo, 1972). Consequently, MNEs may end up having aggressive tax planning strategies by use of wrong transfer prices and shifting revenues when transacting with related parties which more often than not are aimed at reducing their effective tax liability. When there is a reduction of the effective tax liability of MNEs, this then affects the revenue generation by leading to significant losses of revenue in Kenya through lower taxes reported and remitted to the tax authority. In a bid to mitigate this, TP Rules were enacted in Kenya in 2006 aiming at containing transfer mispricing and shifting revenues among the MNEs operating in Kenya. The rules were expected to eliminate if not minimize revenue loss through transfer mispricing by MNEs. Despite the enactment of the TP rules, there are still concerns that MNEs are still engaging in activities that deprives off revenue from Kenya to other jurisdictions (Wong et al. 2011). The KRA expresses losses of revenue through transfer mispricing activities by MNEs.

A number of studies have been conducted on TP and its effect on MNEs. International researches carried out on TP include; Chan, Agnes and Lan (2006) studied a sample of 163 TP

audits on foreign investment enterprises in China. The authors examined the impact of managerial autonomy on an International Transfer Pricing (ITP) and whether foreign subsidiaries autonomy in making pricing and sourcing decisions on intra-firm transfers affect their profit shifting through ITP. The study found that tax audit adjustments by the revenue authority for respondents that have autonomy in setting transfer prices or sourcing from outsiders are smaller than those that have their transfer transactions dictated by parent companies. Gault (2006) carried out a survey on tax directors in multinational companies across several countries. One of the findings in the study was that the respondents considered TP as becoming more complex as cross-border transactions increase, and that it is the most important tax issue facing their organizations. The survey also found how, as TP audits become more detailed and tax authorities become more experienced, it becomes more important for tax directors to have adequate defences.

Researches carried out in Kenya include; Muli (2012) studied the relationship between tax enforcement environment, transfer prices and taxes on multinational companies operating in Kenya. According to the study TP is the largest tax risk facing multinational companies. Also, Nchocholoi (2014) studied the opportunities and threats paused to developing economies due to taxation of MNEs and Ngundi Mutua (2012) studied TP management strategies by MNEs within the main investment segment of the Nairobi Securities Exchange (NSE). Conservative estimates from the US-based international financial watchdog, Global Financial Integrity (GFI), have put Kenya's TP-related tax losses in the past 10 years at KES 115 billion or KES 11.5 billion per annum. The amount is equivalent to half the budget Kenya has allocated to 47 counties in the financial year 2014/2015 to tackle unemployment, the broken health system and to revamp infrastructure (Business Daily 2014). Most of the money is lost through clever accounting involving intra-company deals that account for between 50 and 60 per cent of cross-border trade. From the above discussion, it can be seen that limited studies if any have been conducted on the

effects of TP on revenue generation by MNEs in Kenya. This study therefore sought to fill this research gap and was guided by the following main research question - what are the effects of TP on revenue generation by MNEs operating in Kenya?

1.3 Research Objective

The objective of the study was to establish the effects of Transfer Pricing on revenue generation by Multinational Enterprises in Kenya.

1.4 Value of the Research

The research hopes to benefit various stakeholders both at the policy formulation and implementation levels. The finding of the study will assist MNEs in Kenya to make proper estimates and budgets when it comes to the effects TP has on their revenue generation, the KRA and policy makers on estimating the expected revenue generated from MNEs operating in Kenya and other researchers and academicians through contributing towards sealing the gap that is in existence with regard to benefits and interest derived from TP that need to be further addressed. The KRA's revenue targets are heavily affected by MNEs cross border activities with their overseas related parties through transfer mispricing. By highlighting on the TP strategies engaged by MNEs, the research will be useful for policy makers and the KRA to effective tailor policies to address the issue of transfer mispricing. The study will also hope to help the practice to appreciate the effects of TP on revenue generation by MNEs in Kenya.

TP is and will continue to be a major risk for MNEs operating in Kenya. The risk is significant considering the increased aggressiveness of the KRA over the recent past as per the increased number of TP audits undertaken. This research will therefore be useful for MNEs engaging in TP activities with their overseas related parties to identify the impact of these activities to their revenue disclosures. By analysing the impact of TP on the revenue generation by the MNEs, this

will help the MNEs to be audit ready. In addition, TP also helps in tax planning for the MNEs. By highlighting different principles applicable in TP, they are able to plan around their intercompany transactions to minimize the level of exposure from a TP perspective without triggering any extra tax implications and burden.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This literature review describes the theoretical literature and empirical literature on the various aspects relevant to the current research. The chapter is organised as follows: 2.2 presents the theoretical review; 2.3 presents a literature review on the determinants of revenue generation by MNEs; 2.4 presents the literature review of the existing empirical studies in TP and 2.5 presents a summary of the literature review.

2.2 Theoretical Literature Review

This research was based on the principles pronounced in the Economic Theory, the Accounting Theory and the Economic Deterrence Theory of Tax Compliance.

2.2.1 The Economic Theory

The literature in the Economic Theory based approach to TP is built upon the Hirshleifer (1956) model. As noted by Grabski, (1985) this was the first formal treatment of the TP issue from the economics viewpoint. This model assumes two profit centres one is a manufacturing division and the other a distribution division. The manufacturing division has no external market for its product, whereas the distribution division has a competitive external market. Hirshleifer (1956) then analysed the problem under varying demand conditions and concluded that when a perfectly competitive market exists for the intermediate product, it should be transferred at the market price. Otherwise, the basic conclusion yielded was to price along the marginal cost curve for intracompany transfers. This conclusion held even when the assumption of no external market for the intermediate product was relaxed. This market was then examined under

situations of both perfect and imperfect competition (Eccles, 1985). However, the economic models have been criticized that they focus on profit maximization in the short term, without regard for long term strategic decisions hence the economic models can only be applied in conceptually simple cases.

In the TP approaches based on economic theory, the firm is viewed as a mini-economy in which scarce resources need to be allocated. Just as in the general economy, prices are a mechanism to allocate these scarce resources. The objective of the economic theory based approaches was to find the transfer price that will lead the divisions, both buying and selling, to choose production levels which maximize total firm profits Eccles, (1985). Persons within the organization were viewed as rational utility maximizers. Therefore, they hypothetically will not exhibit dysfunctional behaviours that would lead to a misallocation of the scarce resources. To reach the same figures for the optimal output of each division, yet retain their autonomies, Hirshleifer (1956) suggested that the manufacturing division supply the distribution division with the quantities to be produced at specified prices. When divisional managers are evaluated based upon their divisional profits, as is often the case, the temptation frequently would exist to not supply truthful, relevant information. Thus, gaming is a possibility inherent in Hirshleifer's model (Grabski, 1985). Also, the assumptions of technological independence between the divisions are frequently not reflective of reality (Eccles, 1985).

2.2.2 The Accounting Theory

The TP approaches based on accounting theory had the same objective as the economic theory approaches. They sought to find the transfer price that would motivate divisional managers to make decisions that benefited the firm as a whole. The accounting theory approaches also used the same assumptions about individual motivation and incentives as the preceding approaches. The primary focus of this stream of literature was whether market price or some form of

standard variable cost should be used (Eccles, 1985). The first effort to apply Hirshleifer's (1956) theory to accounting was made by Solomons (1965). He prescribed five different transfer prices applicable to five different environmental conditions. The first of these prescriptions was that market price was applicable when the external market was highly competitive. The next four were for situations when the external market was not highly competitive. They were for varying forms of cost, dependent upon how important the transfer price issue was to the organization. The final prescription was for the situation when there was no competitive external market for the product. He recommended mathematical programming to solve this situation because the producing division was assumed to be operating under capacity constraints. Also, it was assumed that most of the producing department's goods were transferred to other departments. Kaplan (1982) would have categorized this department as a cost centre.

Solomons (1965) recognized the effect of TP on performance evaluation and the problems thus caused. However, he chose to focus solely on the transfer price as a method of resource allocation. He also implicitly assumed that the buying division was forced to source internally. Benke and Edwards (1980) built upon Solomons' (1965) model; however they were willing to forfeit the objective of profit maximization for performance evaluation. They established a general rule for transfer pricing that prescribed standard variable cost plus lost contribution margin for most situations. They tested this general rule in various economic situations ranging from perfectly competitive external markets to no external markets (Grabski, 1985). Anthony and Deardon (1980) departed somewhat from Solomons (1965) and Benke and Edwards' (1980) prescriptions for varying forms of standard cost in less-than-competitive markets by suggesting that firms use market price whenever it is available. They reasoned that market price would force the selling division to constantly review its make-or-buy decisions; therefore, it would only produce what it could produce profitably.

Further, Anthony and Deardon (1980) suggested three cost-based methods, but recommended they be used when neither market nor "rough estimates" of market were available. These three cost based methods were: standard variable cost plus a monthly charge for fixed costs, standard variable cost plus a portion of the contribution earned, and dual pricing where the selling division receives an approximation of the outside sales price minus a discount and the buying division pays standard variable cost.

Like Anthony and Deardon (1980), Kaplan (1982) recommended market price when the external market is highly competitive. When external markets are not perfectly competitive, Kaplan (1982), like Solomons (1965), suggested marginal cost. Due to the limitations associated with marginal cost, particularly the lack of profit, thus lack of incentive to the supplying division, he suggested a two-part transfer price. This two-part price was to be used only when the transfer is not a major portion of the supplying division's output. Kaplan (1982) held that when the transferred product represents a major portion of the output, the division should be classified as a cost center. Kaplan (1982) also recognized the performance evaluation problem and suggested that negotiated market-based prices could be used when a perfectly competitive market does not exist. However, he mentioned that the use of this method would depend upon the sharing of information among negotiators. This problem arose due to the fact that Kaplan (1982), like other accounting theorists writing on the transfer pricing issue, assumed that performance evaluations are to be based on divisional profits without consideration of each division's strategic situation.

Overall, the accounting theorists, like the economic theorists focused on how transfer prices affect economic decisions (Eccles, 1985). These decisions, made by the division managers, regarding how much to produce based upon the transfer price, were a short-term aspect of corporate performance. Because of the performance evaluation and reward system, managers were making decisions for the short-term: that is because the quantitative methods ignore

strategy in their models. Also, the performance evaluation system assumed in the models ignored strategic decisions. These strategic decisions may cause divisions to be operating under different objectives and constraints.

2.2.3 The Economic Deterrence Theory

According to this theory, taxpayer compliance views taxpayer as a perfectly moral, risk neutral or risk averse utility maximizing individuals who chose to evade tax whenever the expected gain exceeded the cost. Some of the earliest models based on the economic deterrence factors are the models developed by Allingham and Sandmo (1972). They developed models to measure individual tax compliance behaviour by analysing the relationship between tax rates and taxpayer's cheating behaviour. In general, the models try to establish whether higher tax rates influence tax compliance. The study found that increases in penalty rates and the probability of detection will increase tax compliance. Their models were further developed by many other researchers by including various additional factors in their models. Yitzhaki (1974) included fines as a component of Allingham and Sandmo's model. He concluded that taxpayers‟ cheating behaviour will decline when the tax rate is higher but only on the condition that the penalty is comparable to the amount of tax evaded.

Proponents of economic deterrence theory suggested that deterrents could be used interchangeably. When detection rates are low, penalties should be high and vice versa. Where the probability of detection is certain, mild punishment may be as effective a deterrent as a more severe one (Slemrod, 2004). Hence, increasing the penalty level will not necessarily achieve a greater deterrent effect if the offender knows that the chance of being caught is very high. The tax compliance debate extended into the 1980‟s as the US government extended the range of penalties for non-compliance. The penalties however failed to improve the rate of compliance raising questions about the merits of the pure economic deterrence models. It was argued that if

the sanctions were perceived as being too severe, the taxpayers may become alienated, leading to general disrespect of the law. In a separate study Slemrod (1990) introduced the variable of complexity of the tax structure into the economic model. It was argued that because complexity increased the cost of complying with the law it increased non-compliance since taxpayers had to hire professional tax advisor who are often expensive to majority of the taxpayers (Devos, 2004).

In summary, the traditional economic deterrence models draw upon deterrence theory and expected utility theory to predict that a rational taxpayer will evade tax as long as the payoff from evading is greater than the expected cost of being caught and punished. However, there is only ambiguous empirical evidence to support the predictions of economic deterrence models as a whole. Researchers summarise the effect of factors that determine the monetary cost of compliance as including the tax rate, detection probability, the level of income and penalty structure, and suggest, for all of them, that existing empirical evidence provides no firm conclusions (Hasseldine, 2000). Studies have suggested that a combination of penalties and rewards is more effective in increasing compliance than a system that focuses solely on sanctions. As such, other factors such as enforcement, public education and the behavioural aspects of taxpayers are critical and must also be considered (Devos, 2004). The economic deterrence model of tax compliance is suitable for the analysis of tax compliance by MNEs in developing economies. It analyses tax compliance of MNEs in developing economies in view of the fact that in maximizing their profits, MNEs seek to minimize their tax liabilities. They arrange their global structures in such a way that tax liability are paid in jurisdictions where rates of corporation tax are lowest.

2.3 Determinants of Revenue Generation by MNEs

A large body of literature examining determinants of revenue generation by MNEs have significantly focused on exchange rate movements, taxes, institutions and trade protection as per the following literature review.

2.3.1 Exchange Rates

The effect of exchange rates on MNEs has been examined both with respect to changes in the bilateral level of the exchange rate between countries and in the volatility of exchange rates. Prior to the study by Froot and Stein (1991), the common wisdom was that expected changes in the level of the exchange rate would not alter the decision by a firm to invest in a foreign country. In rough terms, while an appreciation of a firm's home country's currency would lower the cost of assets abroad, the expected nominal return goes down as well in the home currency, leaving the rate of return identical (McCulloch, 1989). However, Froot and Stein (1991) presents an imperfect capital markets story for why a currency appreciation may actually affect the revenue generated by MNEs. Imperfect capital markets mean that the internal cost of capital is lower than borrowing from external sources. Thus, an appreciation of the currency leads to increased firm wealth and provides the firm with greater low-cost funds to invest compared to the period when the country is experiencing devaluation of its currency.

Froot and Stein (1991) provides empirical evidence of increased revenue by MNEs with currency depreciation through simple regressions using a small number of annual US aggregate MNE observations, which Stevens (1998) finds is quite fragile to specification. Klein and Rosengren (1994), however, confirm that exchange rate depreciation increased revenues realised by US MNEs using various samples of US MNEs disaggregated by country source and type of MNE. Other studies have generally found consistent evidence that short-run movements in

exchange rates lead to increased revenues by MNEs, including Grubert and Mutti (1991), Swenson (1994), and Kogut and Chang (1996). Thus, the evidence has largely been consistent with the Froot and Stein (1991) and Blonigen (1997) hypotheses. One serious issue in the literature is that most of these exchange rate effects have been tested almost exclusively with US data.

These previous studies have also made the implicit assumption that exchange rate effects on MNEs are symmetric and proportional to the size of the exchange rate movement. The financial crises of the late 1990s led to emergence of small nascent literature on the effects of large sudden exchange rate swings on a variety of economic variables affecting MNEs. Lipsey (2001) studied U.S. MNEs in three regions as they experienced currency crises (Latin America in 1982, Mexico in 1994, and East Asia in 1997) and finds that capital flows in MNEs are much more stable during these crises than other flows of capital. Desai, Foley and Forbes (2004) compare the performance of U.S. foreign affiliates with local firms when faced with a currency crisis and find that U.S. foreign affiliates increase their investment, sales and assets significantly more than local firms during and subsequent to the crisis.

2.3.2 Taxes

Interest in the effects of taxes on MNEs has been considerable from both international and public economists. An obvious hypothesis is that higher taxes discourage MNEs with the more important question one of magnitude. Most of the literatures on taxation effects of MNEs point to Hartman's papers (1984) as the starting point of the literature, as these were the first to point out a way in which certain types of MNEs may surprisingly not be very sensitive to taxes. The key insight by Hartman (1985) is that earnings by an affiliate in foreign country will ultimately be subject to parent and host country taxes regardless of whether it is repatriated or reinvested in the foreign affiliate to generate further earnings. There is no way to ultimately avoid foreign

taxes on these earnings. On the other hand, new investment decisions consider transfers of new capital from the parent to the affiliate that do not originate from the host country and, thus, have not yet incurred any foreign taxes. This has a number of important implications (Slemrod, 1990). First, it means that firms will want to finance new investments through retained earnings as much as possible, before turning to new infusions from the parent. Second, this means that MNEs through retained earnings should only respond to host country tax rates, not parent country tax rates or the parent country's method of dealing with double taxation issues. MNEs through new transfers of capital, on the other hand, will potentially respond to both parent and host country taxes and rates of return available in both the parent and host markets (Scholes and Wolfson, 1990).

2.3.3 Government and Revenue Institutions

The quality of institutions is likely an important determinant of MNEs activities, particularly for less-developed countries for a variety of reasons (Wei, 2000a). First, poor legal protection of assets increases the chance of expropriation of a firm's assets making investment less likely. Poor quality of institutions necessary for well-functioning markets and/or corruption increases the cost of doing business and, thus, should also diminish MNEs revenues. And finally, to the extent that poor institutions lead to poor infrastructure i.e., public goods, the expected profitability of MNEs falls. While these basic hypotheses are non-controversial, Wei (2000b) observes that estimating the magnitude of the effect of institutions on MNEs is difficult because there are not any accurate measurements of institutions. Most measures are some composite index of a country's political, legal and economic institutions, developed from survey responses from officials or businessmen familiar with the country. Further, the author notes that comparability of the measures across countries is questionable when survey respondents vary across the countries.

In addition, institutions are quite persistent, so there is likely to be little informative variation over time within a country. For these reasons, while cross-country studies on MNEs often include measures of institutions and/or corruption, they do not often have it as a focus of the analysis (Wei, 2000a). Overall, Weil's (2000a and 2000b) papers have shown that a variety of corruption indices are strongly and negatively correlated with MNE, though other studies can be found that did not find such evidence (Wheeler and Mody, 1992). Hines (1995) provides an interesting "natural experiment" approach by examining how the 1977 U.S. Foreign Corrupt Practices Act which stipulated penalties for U.S. MNEs found to be bribing foreign officials. His estimates find a negative impact on U.S. MNEs in the period following this Act. Analysis of such natural experiments hold out the hope of even more convincing evidence in the future, though finding such natural experiments is often difficult.

2.3.4 Trade Protection

The hypothesized link between MNEs and trade protection is seen as fairly clear by most trade economists (Kogut and Chang, 1996). In this case higher trade protection may make firms more likely to substitute foreign affiliate production for exports to avoid the costs of trade protection. This is commonly termed tariff jumping by MNEs. Perhaps because the theory is fairly simple and general, there have been few studies to specifically test this hypothesis. Another possible reason is data-driven. It is difficult to quantify non-tariff forms of protection in a consistent fashion across industries. Many firm level studies have controlled for various trades protection programs using industry-level measures, but often with mixed results (Grubert and Mutti, 1991). An alternative to industry measures is provided by antidumping measures which apply firm-specific antidumping duties that are often quite large. Using these more precise measures of changes to a trade protection faced by a firm, Belderbos (1997) and Blonigen (2002) both find more robust evidence of tariff-jumping by MNEs, though Blonigen's results strongly suggest

that such responses are only seen from multinational firms based in developed countries. This may be another reason why support for tariff-jumping of other measures of trade protection has been mixed (Blonigen and Figlio, 1998).

2.4 Empirical Literature Review

This section presents a review of the empirical studies with regard to TP activities among MNEs from both an international and local perspective.

2.4.1 International Studies

Globally, TP and profit shifting has attracted media attention with major issues being headlines in business news in the dailies and internet in both developed and developing economies. For instance, in the case of Apple Inc. the company was able to shift most its profits from United States (US) to low tax jurisdictions like Ireland leading to estimated loss of federal taxes amounting to USD 2.4 billion (Kitty and Craig, 2014). Another example in Africa is about the Associated British Foods (ABF) and Zambia Sugar Company where it was reported that ABF a British sugar MNE caused the Zambia Government the loss of tax revenues estimated at USD 17.7 Million through shifting of profits from that country to tax havens such as Jersey and Mauritius (ActionAid, 2013).

A report done by Global Financial Integrity indicated that developing countries lose about USD 98 billion to 106 billion every year through mispricing. In response to the supposedly widespread use of profit shifting techniques by MNEs around the globe, the Organization for Economic Cooperation and Development with support from the G20 and individual governments, has taken the initiative and started a major effort to restrain what they call base erosion and profit shifting (BEPS). The Finance Ministers of G20 in their meeting of 5-6 November 2012 clearly advised that they welcomed the work being done by OECD on Base

Erosion and Profit Shifting (BEPS). The G20 leader in their Mexico meeting 18-19 June explicitly declared that there is need to prevent base erosion and profit shifting (OECD, 2013).

According to Heckemeyer and Overesch (2012) TP and licensing is the dominant channel of profit shifting. The researchers conclude that the existence of low tax jurisdictions and tax havens has made the situation worse since they have created avenues and incentives for MNEs to shift profits from high tax jurisdictions to low tax jurisdictions and tax havens by use of TP schemes. Profit shifting by MNEs leads to reduction of the tax base in terms of the profit reported and ultimately leads to reduction in corporation tax paid by such enterprises in the affected countries. Thus, countries all over the world and their tax authorities are currently putting in place measures to safeguard their tax base.

Hassett and Newmark (2008) describe tax-motivated TP as "the practice of multinational corporations of arranging intra-firm sales such that most of the profit is made in a low-tax country." At the same time, global tax authorities have raised concern about the loss of tax revenues that may be the result of abusive TP (OECD 2013). The profits of each portion of MNE business are most typically structured through intercompany transactions, including intercompany sales, licensing, leasing and the like. Management of MNE is often interested in maximizing global profits as well as minimizing the overall tax paid by the group. Thus, the management of MNE group examines and review tax laws and administrative requirements in various jurisdictions of operation with a view of assessing their potential tax exposure. One way through which MNEs minimize their effective tax exposure is through TP by shifting profits from normal or high tax jurisdictions to low-tax jurisdiction and in some cases to tax havens (Hollingshead, 2010). A growing body of evidence indicates that MNEs do indeed minimize their tax obligations by shifting profits from high to low tax jurisdictions.

Chan, Agnes and Lan (2006) have based on a sample of 163 TP audits on foreign investment enterprises in China, the authors examined the impact of managerial autonomy on an international TP, and whether foreign subsidiaries autonomy in making pricing and sourcing decisions on intra-firm transfers affect their profit shifting through international TP. The study found that tax audit adjustments for respondents that have autonomy in setting transfer prices or sourcing from outsiders are smaller than those that have their transfer transactions dictated by parent companies. Gault (2006) carried a survey on tax directors in multinational companies across several countries. Findings have shown that the respondents considered TP as becoming more complex as cross-border transactions increase, and that it is the most important tax issue facing their organizations. The survey also found how, as TP audits become more detailed and tax authorities become more experienced, it becomes more important for tax directors to have adequate defences. TP documentation was found to be more important for 70% of respondents in the survey than it was two years ago. The number of audits has also increased, 65% of parent companies and 59% of subsidiaries stating that they have experienced an examination of their transfer prices since 2001.

In another study, Ki Ho and Lau (2005) examined international TP (ITP) practices of U.S. multinationals (MNEs) in the People's Republic of China (PRC) and the United Kingdom (UK) on comparative basis. They examined the U.S. multinationals' practices towards ITP for transactions with their affiliates in these countries and provide empirical evidence on the methods of ITP practices. The sample used in this study consisted of 463 U.S. MNEs that were drawn from the 500 largest corporations in 2000. Empirical evidence suggests that market price and full cost plus are the most commonly used ITP methods. The results of this study also reveal that there are no significant differences in the perceived frequency of use of various ITP methods by U.S. MNEs for transactions with their affiliates in the PRC and the UK. In another study, Abdalla and Ekeledo (2005) surveyed a sample of 178 American global companies in the steel

industry to ascertain whether the relative performance of managers of foreign subsidiaries of global companies reflects the objective and operational performance measures of their companies through using intra-company pricing. The study found that the relative managerial performance of subsidiary managers could be measured and compared with a high degree of objectivity, which means that the global companies should consider all environmental factors in their performance evaluation systems. A model for evaluating the performance of foreign subsidiary managers combined with TP system is provided in this study.

2.4.2 Local Studies

Muli, (2012) studied the relationship between tax enforcement environment, transfer prices and taxes on multinational companies operating in Kenya. According to the study TP is the largest tax risk facing multinational companies. The research findings were in agreement with the findings of Njeia (2013) who found that the second-largest area of corporate income tax uncertainty as disclosed in 2010 is related to international TP. Also, Awour and Ngigi (2013) find that increased tax risk related to strict TP enforcement adversely impacts cross-border merger and acquisition premier. Given the growing focus on minimizing tax risk, it is therefore unclear whether TP is currently a useful tool for tax minimization for MNEs, or whether the operational and enforcement costs are too great to risk implementing aggressive TP strategies. Collectively, the literature does not provide direct insights into whether and how much certain firm practices and strategies with respect to TP lead to differences in tax minimization across multinationals. Additionally, it is unclear whether new mandatory financial reporting disclosures, such as FIN 48, impacts tax-motivated TP positions. Finally, despite impressions left in most academic research and current media, there is little evidence whether all MNEs view TP as purely an opportunity for tax minimization, and if they do, whether these firms are indeed capable of converting TP opportunities into reductions in tax burdens.

In another study by Mutai, (2012) involving the cross-sectional analysis between manufacturing firms and non-manufacturing firms planning and asset concentration, it is suggested that about a decade and half ago, manufacturing firms were spending a higher amount on planning than non-manufacturing firms, but now there is no statistically significant difference. Similarly, firms with high asset concentrations spent more on planning in 2000 than firms with lower asset concentrations, but again now there is no longer a statistically significant difference. These changes may be the result of limited planning opportunities related to increased TP scrutiny and stricter enforcement of arm's length principles that are more limiting for tangible goods, and therefore may have weighed heavier on the manufacturing industry relative to non-manufacturing firms. The results suggest a major shift in the propensity to invest in TP planning over the past decade.

Awour and Ngigi, (2012) found that when it comes to TP strategies, non-manufacturing firms are more likely to adopt a goal of tax minimization than manufacturing firms. Also, firms with less intense internationalization are more likely to pursue a goal of tax compliance as opposed to minimization. These results are consistent with the TP literature using indirect evidence, which provides some external validity as to the quality of our survey responses. We also find that TP consumes, on average, a larger proportion of tax budgets in non-manufacturing firms and firms with more intense internationalization. Similarly, firms whose TP practices are assessed on tax minimization goals spend a higher percentage of their TP resources on tax planning relative to firms with tax compliance goals.

2.5 Summary of Literature Review

There has been significant research on the concept of TP presented in the existing theoretical and empirical researches. Theories like the Optimal Taxation Theory, the Economic Theory and the Economic Deterrence Theory of Tax Compliance have summarised different aspects of taxation

as applied to TP. Similarly, various empirical studies from both local and international perspectives have been done on the research topic, various articles have been published with supportive evidence that TP has an impact on revenue generation by both MNEs and the state. From the various international studies, local studies and publications, it is evident that the area of TP is and will remain a hot topic for various stakeholders including Multinational companies, revenue authorities and the international tax experts. On one hand, MNEs are aiming at maximizing investor value while on the other hand the revenue authorities are working towards maximizing the state revenues. Locally, some studies have been done on implications of TP methodologies to financial reporting as well the economics associated with TP. However, there have been minimal documented researches on the area of the effect of TP on revenue generation by multinational companies over the last five years. This will be the main focus for this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a discussion of the research methodology that was used in the study. It discusses the research design especially with respect to the choice of the design. The chapter covers the population of the study, sample and sampling techniques, data collection method used as well as data analysis and data presentation method that was employed in the study in order to attain the research objectives.

3.2 Research design

Kothari (2012) defines a research design as the arrangement of conditions for collecting and analysing of data in a manner that aims to combine relevance to the purpose of the research with economy in the procedure. For the purposes of this research, a descriptive research design was adopted. This approach was appropriate for this study as it described the effect that TP has on revenue generated by MNEs in Kenya. The research design ensured that the evidence obtained from the study answered the initial research question as unambiguously as possible. Research design deals with a logical problem but not a logistical problem (Cooper and Schindler, 2003). The study used regression analysis to find the relationship between TP in terms of transfer price, number of subsidiaries and the tax planning in terms of the tax saved. Regression was used to distinguish the relationship between parameters to be measured and the dependent variables using Microsoft Excel software.

3.3 Target Population

Cooper and Schindler (2003) define a population element as the subject on which the measurement is being taken and is the unit of study. The target population for the purpose of this research comprised of MNEs operating in Kenya. There are many MNEs that have set their presence in Kenya. As at the end of 2014 Nairobi, Kenya was home for regional headquarters of 80 MNEs. Appendix I provides a list of the MNEs with regional headquarters in Nairobi as at the end of 2014.

3.4 Sample

As noted by Zaied et al. (2014) estimation of the sample size in research is a fundamental step in obtaining the intended research objectives. According to the advice by Mugenda and Mugenda (2003) the larger the sample size the more accurate the findings of a given research. However, the authors also take into consideration the time and resource constraints and advice that a sample of 10% would be preferable or sufficient for the purposes of research. Further, the study considered the model proposed by Naing et al. (2006) for determining smaller sample size using normal logarithm as follow;

$$n = \frac{\log(1+\alpha^2 N)}{\alpha^2}$$ where;

N is the population size at 80, n is the sample size and α is the significance level which in this case is at 0.01.

Based on this advice and the above normal logarithm formulae, a sample size comprising of 10% of the population was selected by the researcher for the purposes of this research. Consequently, the sample size constituted a total of 8 MNEs in Kenya.

Further, Mugenda and Mugenda (2003) advise that after the researcher has decided on the sample size, the next step is deciding on the procedures of selecting the elements to be included in the sample. There are several sampling techniques including probability and non-probability sampling. In particular research, purposive sampling technique was applied for the purpose of the research. Purposive sampling allows the researcher to use cases that have the required features with regard to the objectives of his or her study (Kothari, 2012). It requires the selection of only those sample elements with certain attributes relevant to the research. In this study, the sample elements needed were MNEs in Kenya with disclosures relating to transactions undertaken with their overseas related parties and this information was available in the public.

3.5 Data Collection

This research was a secondary research and therefore significantly made use of secondary data. The data collection was mainly through review of documents. Specifically, the data was collected from the review of the audited financial statements of the MNEs sampled over the last five years. The information collected related to total revenue (TR) generated by the MNEs, sales revenue with overseas related parties and expenses with overseas related parties over a period of five years. The financial statements were accessed through the internet, analysts' reports, company websites, reputable national newspapers and the Capital Markets Authority (CMA) Library. Specifically, data relating to TP which include details of related party transactions was extracted from the intercompany disclosures contained in the financial statements of the MNEs sampled.

3.6 Data Analysis and Presentation

The data collected was mainly analysed quantitatively. Given the differences in the sizes and operating scale of the MNEs in Kenya, the researcher expected significant variability in the

financial data that was collected. Therefore, the researcher noted the importance of standardizing the data. Variables are standardized for a variety of reasons (Naing et al., 2006). In the case of this study, standardization of the data ensured that all the data collected contributed evenly to the analysis in order to make it easier for the results interpretation of the regression analysis. The standardization procedures were aimed at equalizing the range and variability in the collected data. The following formula was applied in standardising the collected data;

$x^* = (x-m)/\delta$

Where x^* is the standardised variable, x is the observations made, m is the mean of x; and δ is the standard deviation of x.

The standardised data was analysed using the Microsoft Excel software to determine different measures of central tendency including mean scores and standard deviations, which were then be presented in tables, graphs and charts. In addition, the study adopted the multiple regression analysis using the following conceptual model;

$Y = \beta_c + \beta_1 X_1 + \beta_2 X_2$; where

Y is the revenue generated by the MNEs, β_c is the constant, $\beta_{1\&2}$ are the regression coefficients for the respective independent variables ($X_{1\&2}$), X_1 is the related party sales and X_2 related party expenses.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents an analysis and discussion of the secondary research findings in line with the research question and research objective outlined in Chapter 1. In this case, the research analysed the revenues generated by the MNEs and the different transactions the MNEs have with their related parties to determine the relationship, if any, between the variables through regression and correlation analysis as indicated in Chapter 3. This chapter first presents an overview of the MNEs considered for the purpose of this study and the related party transactions they engage in with their related parties outside Kenya. The chapter then provides the findings of the regression and correlation analyses based on the collected and standardised data. Finally, this chapter discusses the findings in a bit to contextualise the research findings within the existing literature as reviewed in Chapter 2.

4.2 Summary Statistics

A total of eight MNEs were identified through a purposive sampling process and used for the purposes of this research. The MNEs have operating offices in Kenya and reported their financial statements over the five-year period under consideration. In addition to third party transactions, the MNEs engaged in transactions with their overseas related parties which have been analysed in order to achieve the objective of the research. This section provides a summary of the nature of the related party transactions entered by the MNEs.

A review and analysis of the financial statements of the surveyed MNEs with operations in Kenya identified a number of transactions that were undertaken by the companies with their related parties. In this case, the related parties considered other related entities incorporated

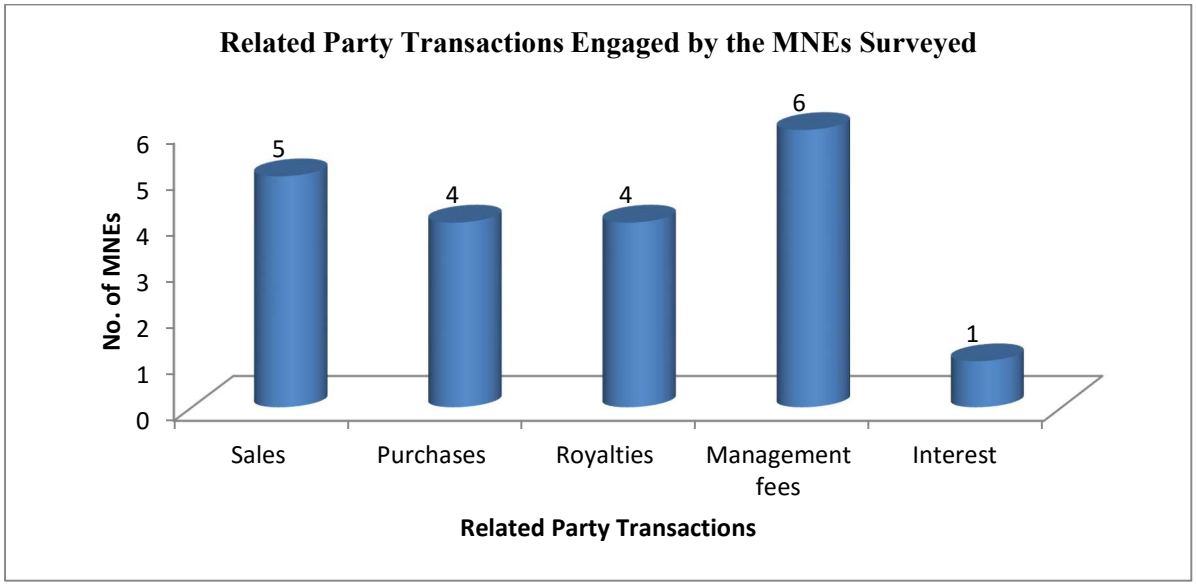
outside Kenya. The financial statements together with the notes to the financials for the period between 2010 and 2014 were reviewed in order to access the data for analysis. The findings have been indicated in the table and figure below.

Table 4.1 Related Party Transactions Identified

Related Party Transactions Engaged by Surveyed MNEs									
Transactions	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Total MNES**
Sale of goods/services	4	4	6	4	4	4	6	6	**5**
Purchase of goods	6	4	6	4	4	4	6	6	**4**
Royalties payments	4	6	6	6	4	6	4	4	**4**
Management fees	4	4	4	4	6	6	4	4	**6**
Interest payments	6	4	6	6	6	6	6	6	**1**
No. of transactions	**3**	**4**	**1**	**3**	**3**	**2**	**2**	**2**	

As can be noted from the above table, five related party transactions were identified as having been entered by the sampled MNEs. Further, each of the MNEs had entered in at least one transaction with its related parties outside the country.

Figure 4.1 Related Party Transactions Identified



As per the figure above, 6 MNEs paid management fees to related parties while 5 made sales to related and 4 MNEs made purchases from and paid royalties to related parties in each case. One

of the MNEs surveyed also paid interest to related parties in addition to management fees, sale of goods to and purchase of goods from related parties.

4.3 Relationship between the Variables

The variables considered for the purposes of this research include the revenue generated, sales made and expenses paid to related parties by MNEs. As noted above, the expenses paid to related parties included purchases of goods, royalties, management fees and interest payments. This section presents the findings from the regression analysis performed on the data collected from the surveyed MNEs.

4.3.1 Results of Mean and Standard Deviation

Mean and standard deviation are both measures of central tendency that can be helpful in understanding the volatility of different variables being considered. Results of the analysis are as indicated in the table below;

Table 4.2 Mean and Standard Deviation of the Variables

Mean and standard deviation of the variables						
	Total Revenue Earned		**Related Party Sales**		**Related Party Expenses**	
MNE	**Mean**	**Stdev**	**Mean**	**Stdev**	**Mean**	**Stdev**
1	43,865,338,400	6,709,605,727	6,248,363,400	1,476,517,102	-2,860,087,000	1,404,428,814
2	14,571,995,600	2,198,587,423	830,114,600	322,755,083	-3,547,671,200	870,283,301
3	5,150,703,400	1,644,832,110	-	-	- 111,111,572	20,648,089.36
4	1,360,134,742	1,104,416,064	97,945,200	110,326,810	-130,972,206	59,083,783
5	3,053,967,200	2,242,962,043	500,401,600	627,747,449	-1,406,402,600	2,165,109,635
6	2,095,281,400	277,813,408	2,095,281,400	277,813,408	-227,921,400	78,718,996
7	2,145,713,575	625,003,087	-	-	-158,863,520	76,402,600
8	911,074,000	140,104,809	-	-	-255,990,000	93,785,810

As it is notable from the table above, the average annual revenue of the MNEs surveyed over the period of five years between 2010 and 2014 ranged between KES 43,865,338 and KES 14,571,995,600. An average of between KES 6,248,363 and KES 2,095,281,400 in sales amount

was made to related parties of the MNEs surveyed over the same period. In addition, the companies made expense payments to their related parties averaging between KES 2,860,087 and KES 3,547,671,200.

The researcher also sought to understand the volatility in the three variables over the five-year period. In this regard, the standard deviation of the collected data on the variables was computed and presented in the above table. The analysis identified significant variability in the revenue generated, sales made to related parties and expenses paid to related parties by the MNEs on year on year basis. This is because of the significant standard deviations relating to the three variables as indicated in the above table.

4.3.2 Results of Regression Analysis

In order to establish whether there exists any relationship between revenue generated by the MNEs and their related party sales and expenses, the researcher performed a regression analysis on the financial data collected. In this respect, the analysis determined the mean and standard deviation of the three variables, the regression models linking the variables and the variables' p-values. The analysis was also aimed at determining the significance of the independent variables in determining the dependent variable by computing the p-values of respective values. The regression analysis was performed through the use of Microsoft software and resulted to the following regression models for the eight companies surveyed;

Table 4.3 Regression Model Results

Relationship between the Variables		
MNE	**Regression Model**	**Adjusted R Square**
1	$Y = 0.4842 + 0.7777X_1 - 0.2625X_2$	0.9709
2	$Y = 0.3897 + 0.2064X_1 - 0.1226X_2$	0.6195
3	$Y = 0.8654 - 0.3886X_2$	0.7031
4	$Y = 0.9121 + 0.2319X_1 - 0.1622X_2$	0.7170
5	$Y = 0.3794 + 0.6142X1 - 0.4804X2$	0.7734
6	$Y = 0.0092 + X_1 - 0.0028X_2$	1.0000
7	$Y = 0.005 - 0.9887X_2$	0.9699
8	$Y = 0.002 - 0.9604X_2$	0.8965

As indicated in the above table, in all the eight companies there was an indication of an existing relationship between the revenue reported by the companies and their related party expenses. On the other hand, only three out of the eight companies did not indicate any existing relationship between the revenue realised and related party sales. This is because, the companies did not report any related party sales over the five-year period. When considered together, related party sales and expenses accounted for at least 61.95% of the changes in the revenue reported by the companies as indicated by the adjusted R squares for the different companies. Also, the regression model for one of the companies indicated that the related party sales and expenses fully explain the changes in the revenue reported by the company. This was indicated by an adjusted R square of 100%. This is because all the reported sales over the five-year period were for management services rendered to related parties and had insignificant related party expenses.

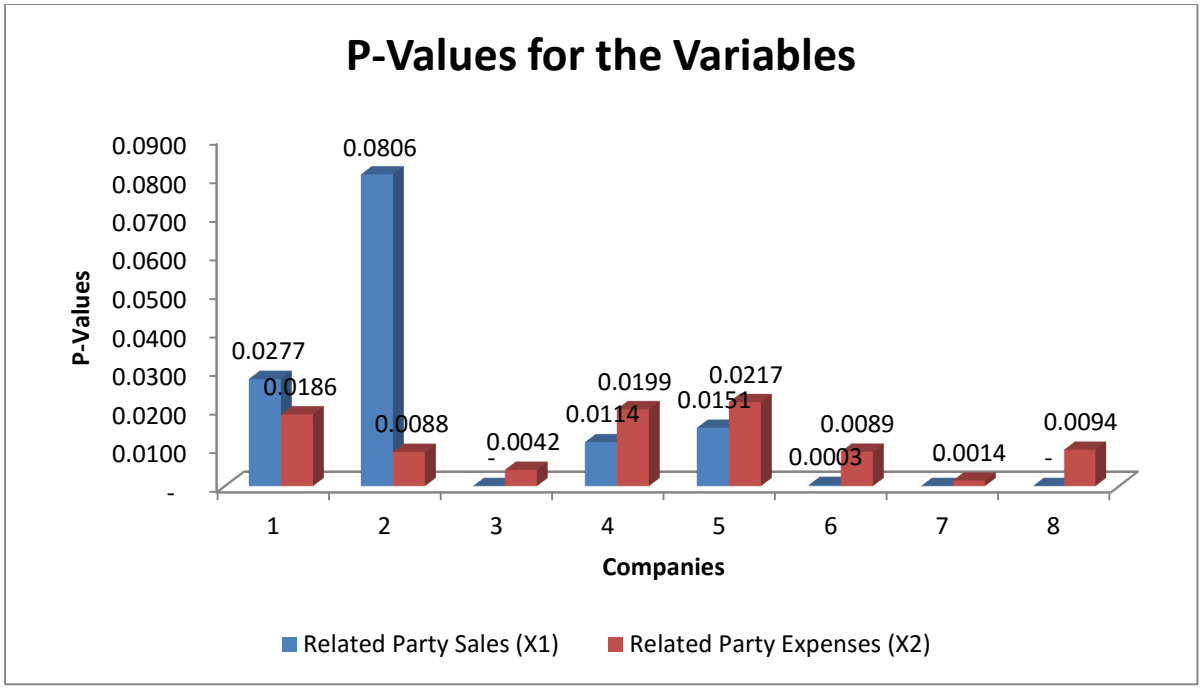
4.3.3 Results of Regression P-Values

In order to determine the statistical significance of the related party sales (X_1) and related party expenses (X_2) in determining the dependent variable, the researcher computed the P values. The results were as indicated in the table and figure below.

Table 4.4 Regression P-values

P-Values for the Variables		
MNE	**Related Party Sales X_1**	**Related Party Expenses X_2**
1	0.0277	0.0186
2	0.0806	0.0088
3	-	0.0042
4	0.0114	0.0199
5	0.0151	0.0217
6	0.0000	0.0089
7	-	0.0014
8	-	0.0094

Figure 4.2 Regression P-values

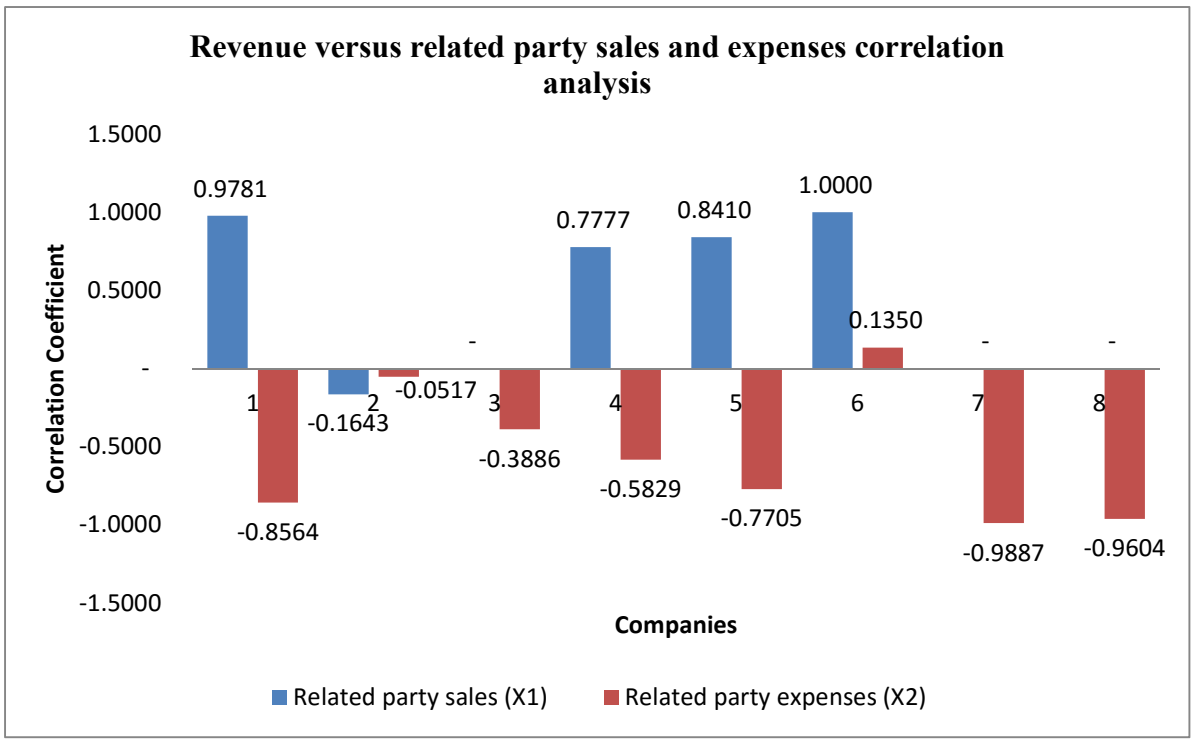


In determining the P values, a significance level of 0.05 was assumed for the purposes of this research. In this case, a variable with a P value of equal to or less than 0.05 was considered as significant to the equation while a variable with a P value of more than 0.05 was an indication that the variable is insignificant in explaining the dependent variable. As indicated in the above table and figure, the P values in all the companies' regression models was below 0.05 for the related party expenses. In the case of the related party sales, four out of the five companies with related party sales had the P values below 0.05.

4.3.4 Results of the Correlation Analysis

The correlation coefficient is a measure of linear association between two variables. Values of the correlation coefficient are always between -1 and +1. A correlation coefficient of +1 indicates that two variables are perfectly related in a positive linear sense; a correlation coefficient of -1 indicates that two variables are perfectly related in a negative linear sense, and a correlation coefficient of 0 indicates that there is no linear relationship between the two variables (Cheung and Chan, 2004). In order to understand the relationship between the individual variables (related party sales and related party expenses) with the revenue generated by the MNEs, the correlation coefficients of the respective variables were computed and the results were as indicated in the figure below.

Figure 4.3 Correlation Analysis for the Variables



From the figure above, it was notable that seven out of the eight (87.5%) companies showed a negative relationship between the revenue reported by the MNEs and their related party expenses. This is indicated by the negative correlation coefficients. Only one company (12.5%) indicated a positive relationship between the two variables. On the other hand, four out of the five (80%) companies with related party sales showed a positive relationship between the reported revenue and related party expenses by the MNEs. Similarly, only one company (20%) indicated a negative relationship between the two variables.

4.4 Discussion of the Findings

MNEs engage in different transactions with their related parties located in other jurisdictions. These transactions can be used by the multinational enterprises to advantageously shift revenues or profits from one jurisdiction to the other. The findings are in line with previous research done by Wong et al. (2011) who made similar findings. This research identified existing relationships between the revenue generated by MNEs and the revenue and expense transactions they engage

with their related parties. According to the regression models sales to related parties have a positive impact on the overall revenue reported by an MNE while on the other hands related party expenses have a negative relationship. That notwithstanding, the effect of these transactions depends on how they are priced. Therefore as Slemrod and Venkatesch, (2004) observes the impact of these transactions should be interpreted in terms of how the transactions have been priced compared to similar third party transactions.

Furthermore, as per the regression findings, related party sales and expenses can significantly be used to explain changes in the revenues generated by the MNEs. This is in view of the significant adjusted R square values determined during the analysis. The Adjusted R Square in the regression analysis as a probabilistic term accounts for the variability in the dependent variable that can be explained by the linear relationship with the independent variables when considered in aggregate (Bobko, 2001). This means that if the Adjusted R Square term is 100%, the model would be deterministic. In this case, knowledge of the value of independent variables would be sufficient to determine the value of the dependent variable or the dependent variable. However, the adjusted R square was not 100% except for one of the companies. This again emphasises the findings made by Wong et al. (2011) on the use of transfer pricing by MNEs to shift profits between jurisdictions. It is therefore notable that the two variables are not the only factors that could explain changes in the revenue generated by the MNEs. These findings agree to the conclusions made by other researches, which indicated a number of other factors that determine revenue generation by MNEs. For instance, Froot and Stein (1991) and Scholes and Wolfson, (1990) identified exchange rates and taxes respectively as important determinants of revenue generation by MNEs in a given jurisdiction.

When the two variables are considered individually, their significance in explaining the revenues generated vary. This is explained by the differences in the P values computed during the

regression analysis. Generally, the P values tell us whether a variable has statistically significant predictive capability in the presence of the other variables, that is, whether it adds something to the equation. Although there is a variance in the magnitude of the P values, it can be concluded that both variables are significant in the regression models determined given a significance level of 0.05. This again adds weight to the assertion that related party transactions both revenue and expense transactions have a significant impact on the revenues generated by MNEs. Hence the positive/negative effect of the transactions depending on their pricing cannot be ignored as noted by Kitty and Craig, (2014).

The correlation coefficients representing the relationship between revenue generated and related party sales showed strong direct relationship. On the other hand, it is generally observed that related party expenses have a negative relationship with the revenue generated by the MNEs. This means that a change in the related party sales and related party expenses by a company engaging in such transactions has the potential to affect the revenue generated by the company. This change is mainly effected through mispricing of the transactions. This finding is in support of the findings by Heckemeyer and Overesch (2012) who argue that MNEs shift their profits through mispricing of related party transactions they engage with their overseas related entities.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the Study

The objective of this research was to determine the effect of TP on revenue generation by MNEs operating in Kenya. In doing so, the research sought to understand the existing relationship, if any, between the revenue reported by MNEs and their related party sales and related party expenses. The research has been conducted as a secondary research involving eight MNEs with operations in Kenya. Their financial data over a period of five years between 2010 and 2014 has been reviewed to identify, compare and model the relationship between revenue reported by the MNEs and the related party sales and expenses incurred by the MNEs. The data was analysed using Microsoft Excel software. This chapter provides the conclusions made from the findings and also recommendations based on the conclusions.

5.2 Conclusion

TP is generally considered a major international taxation issue faced by MNEs today. It is an important issue for many countries, developing and developed. Indeed MNEs in Kenya do engage in significant transactions with their related parties outside the country falling under the ambit of TP. These transactions are varied. Some of the transactions identified during the research include sales of goods and services, purchase of goods and services, payment of royalties, management fees and interest. Sale of goods and services contribute positively to the revenue generation of the MNEs. However, the effect of these transactions depends on the manner in which they are priced by the company. Given the existing relationships, mispricing of the goods or services could result to an indirect shift of revenues from one jurisdiction to the other. When considered in isolation the effect of the related party transactions may not be

evident. However, mispricing is identifiable when the transactions are compared to similar goods or services provided to or between third parties. On the other hand, related party expenses can be used to directly transfer profits from one country to the other given their negative relationship with the revenue generated by the MNEs.

In spite of the identifiable strong relationship between the revenue generated by the MNEs and their related party sales and expenses, the research also identified that the variables do not fully explain the changes in the reported revenues. This means that there are other factors that explain the changes in the reported revenues. These other factors include for instance institutions, taxes and exchange rates among others. Finally, it can be concluded that the phenomenon of revenue hence profit shifting through which MNEs utilize their global organizational structures to minimize the reported revenues from certain jurisdictions and declare more revenues in other jurisdictions is also identifiable from the research findings. This is made possible through planning activities by MNEs around the sales and purchases and payments made to related parties located in tax favourable jurisdictions. These activities are motivated by different factors chief of which is taking advantage of the differential tax rates existing in the different jurisdictions.

5.3 Policy Recommendations

This research established existing relationships between revenue generated by MNEs and their related party transactions. Fundamentally, it is recommendable for a holistic approach to be used to properly address the issue of revenue and profit shifting by MNEs. Government actions should be comprehensive and deal with all the different aspects of the transactions involving related parties both revenue and expense transactions. These include, for example, the balance between source and residence taxation, the tax treatment of intragroup financial transactions, the legislation and implementation of anti-abuse provisions, as well as transfer pricing rules to guide

the process of pricing related party transactions. Also, the comprehensive approach should draw on an in-depth analysis of the interaction of all the entities involved in the transactions.

In spite of the findings of this research, it is worth noting that neither regression nor correlation analyses can be interpreted as establishing cause-and-effect relationships. They can indicate only how or to what extent variables are associated with each other. The correlation coefficient measures only the degree of linear association between two variables. Any conclusions about a cause-and-effect relationship can only be based on the judgment of the analyst.

5.4 Limitations of the Study

The researcher was limited to the sample MNEs in a bid to represent all the MNEs currently operating in Kenya. In addition, the data used by the researcher was limited to the figures available in the financial statements and a breakdown of the figures was not available to evaluate the importance of specific amounts therein to this study.

5.5 Suggestions for Further Studies

The researcher proposes that future researchers should focus on evaluation of the impact of TP on revenue generated by MNEs of the specific facts and circumstances of the case.

REFERENCES

Abdallah, W., Firoz, N. and Ekeledo, I. (2005) Performance Evaluation of Foreign Subsidiary Managers Using Intra Company Pricing, *International Tax Journal* 31 (4), 5-51.

ActionAid, (2013) *Sweet Nothings: The human cost of a British sugar giant avoiding taxes in southern Africa*, Retrieved August 2015 from www.actionaid.org/publications/sweet-nothings.

Allingham, M. and Sandmo, A. (1972) "Income tax evasion: a theoretical analysis", *Journal of Public Economics*, **1**, 323 – 338.

Belderbos, R. (1997) Antidumping and Tariff Jumping: Japanese Firms'DFI in the European Union and United States," *Weltwirtschaftliches Archiv*, 133(): 419-57.

Blonigen, B. (1997) "Firm-Specific Assets and the Link between Exchange Rates and Foreign Direct Investment" *American Economic Review,* 87(3): 447-65.

Blonigen, B. (2002) "Tariff-Jumping Antidumping Duties," *Journal of International Economics*, Vol. 57(1): 31-50.

Blonigen, B. and Figlio, F. (1998) Voting for Protection: Does Direct Foreign Investment Influence Legislator Behavior?" *American Economic Review*, 88(4): 1002-14.

Bobko, P. (2001) *Correlation and regression: Applications for industrial organizational psychology and management* (2nd ed.). Thousand Oaks, CA: Sage Publications

Borkowski, S. (1997) Environmental and Organisational Factors Affecting Transfer Pricing: A Survey. *Journal of Management Accounting Research,* 2, Fall, p.78-99

Business Daily (2014) *Kenya ranked second in Africa as investment hub for global firms*, accessed August 2015 at http://www.businessdailyafrica.com/Kenya-ranked-second-in-Africa-as-investment-hub-for-global-firms/-/539552/2353266/-/118e6hiz/-/index.html.

Business Daily, (2014b) *Tax evasion sting recovers Sh25bn from multinationals*, accessed August 2015 at http://www.businessdailyafrica.com/Tax-evasion-sting-recovers-Sh25bn-from-multinationals/-/539546/2382632/-/1ib8wwz/-/index.html.

Chan, K., Agnes, W. and Lan, P. (2006) Managerial Autonomy and Tax Compliance: An Empirical Study on International Transfer Pricing, *Journal of the American Taxation Association* 28 (2), 1-22.

Chen, P. and Popovich, M. (2002) *Correlation: Parametric and nonparametric measures*, Thousand Oaks, CA: Sage Publications

Cheung, M. and Chan, W. (2004) Testing dependent correlation coefficients via structural equation modeling, *Organizational Research Methods, 7*(2), 206-223.

Cooper, R. and Schindler, S. (2003) *Business Research Methods*. (8th ed.). Boston: McGraw-Hill Irwin.

Davies, R. (2004) "Tax Treaties and Foreign Direct Investment: Potential versus Performance," *International Tax and Public Finance*, 11: 775-802.

Devos, K. (2004). *Penalties and Sanctions for Taxation Offences in Anglo Saxon Countries: Implications for Tax Payer Compliance.* Retrieved August 2015, from Revenue Law Journal: http://epublications.bond.edu.au/rlj/vol14/iss1/5

Eccles, R. (1985) *he Transfer Pricing Problem*: A Theory for Practice, Lexington, Lexington Books.

Foley, F. and Forbes, K. (2004) "Financial Constraints and Growth: Multinational and Local Firm Responses to Currency Crises," *Working Paper 10545*, National Bureau of Economic Research, Cambridge,

Froot and Stein (1991) "Exchange Rates and Foreign Direct Investment" An Imperfect Capital Markets Approach," *Quarterly Journal of Economics*, 106(4): 1191-1217.

Gault, L. (2006) Transfer pricing is priority tax issue for tax executives globally, *International Tax Review* 17 (1), 2-3, p. 6.

Grabski, S. (1985) "Transfer Pricing in Complex Organizations: A Review and Integration of Recent Empirical and Analytical Research," *Journal of Accounting Literature,* 4, pp.33-75.

Grubert, H. and Mutti, J. (1991) Taxes, tariffs and transfer pricing in multinational corporate decision making, *Review of Economics and Statistics* 73: 285–93.

Hartman, D. (1985) "Tax Policy and Foreign Direct Investment," *Journal of Public Economics*, 26(1): 107-21.

Hasseldine, J. (2000). Linkages between compliance costs and taxpayer compliance research, *Bulletin for International Fiscal Documentation 54 (6),* 299-303.

Hassett, K. and Newmark, K. (2008) Taxation and business behavior: A review of the recent literature. In: *Fundamental Tax Reform: Issues, Choices and Implications*, ed. J. Diamond and G. Zodrow, MIT Press, Cambridge: 191–214.

Heckemeyer and Overesch (2012)

Hines (1995) "Lessons from Behavioural Responses to International Taxation," *National Tax Journal*, 52(2): 305-22.

Hirshleifer, J. (1956) On the economics of transfer pricing, *The Journal of Business* 29: 172– 84.

Hollingshead, A. (2010) *The Implied Tax Revenue Loss from Trade Mispricing,* Global Financial Integrity.

Kaplow, L. (2008) *The Theory of Taxation and Public Economics,* Princeton University Press.

Ki Ho D. and Lau, T. (2005) An Exploratory Study of Transfer Pricing Practices by Multinationals with International Affiliates, *International Tax Journal* 31 (4), 37-54, p. 6.

Kitty, R. and Craig, J. (2014) Offshore Corporate Profits: The Only Thing 'Trapped' Is Tax Revenue, accessed August 2014 at https://www.americanprogress.org/issues/tax-

reform/report/2014/01/09/81681/offshore-corporate-profits-the-only-thing-trapped-is-tax-revenue/.

Kogut, B. and Chang, S. (1996) "Platform Investments and Volatile Exchange Rates: Direct Investment in the U.S. by Japanese Electronic Companies," *Review of Economics and Statistics*, 78(2): 221-31.

Kothari C. R. (2012) *Research Methodology: Methods and Techniques,* 2nd Edition, New Delhi, New Age International (p) Limited Publishers.

Lipsey, R. (2001) "Foreign Direct Investors in Three Financial Crises," NBER Working Paper No. 8084

McCulloch, K. (1989) "Japanese Investment in the United States," in David B. Audretsch and

Michael P. Claudon (Eds.), *The Internationalization of U.S. Markets*. New York: New York University Press, 171-97.

Mugenda O. and Mugenda A. (2003) *Research Methods: Quantitative and Qualitative Approaches,* Nairobi, African Centre for Technology Studies.

OECD (2013) Addressing Base Erosion and Profit Shifting, Accessed in August 2015 at: http://dx.doi.org/10.1787/9789264192744-en.

Salanie, B. (2003), *The Economics of Taxation*. MIT Press

Scholes, M. and Wolfson, M. (1990) "The Effects of Changes in Tax Law on Corporate Reorganization Activity," *Journal of Business*, 63: S141-S164.

Slemrod, J., and V. Venkatesch. (2004) The income tax compliance cost of large and midsize businesses, *A Report to the IRS LMSB Division.*

Stevens, G. (1998) "Exchange Rates and Foreign Direct Investment: A Note," *Journal of Policy Modeling*, 20(3): 393-401.

Swenson, D. (1994) "The Impact of U.S. Tax Reform on Foreign Direct Investment in the United States," *Journal of Public Economics,* 54(2): 243-66.

Tuomala, M. (1990) *Optimal Income Tax and Redistribution*, New York: Oxford University Press.

Wei, S. (2000a) "How Taxing is Corruption on International Investors?" *Review of Economics and Statistics*, 82(1): 1-11.

Wei, S. (2000b) "Local Corruption and Global Capital Flows" *Brookings Papers on Economic Activity*, 0(2): 303-46.

Wheeler, D. and Mody, A. (1992) "International Investment Location Decisions: The Case of U.S. Firms," *Journal of International Economics*, 33(1-2): 57-76.

Wong, H., Nassiripour, S., Mir, R. and Healy, W. (2011) Transfer Price Setting in Multinational Corporations, *International Journal of Business and Social Science*, 2(9), 10-14.

Yitzhaki, S. (1974) A Note on Income Tax Evasion, A Theoretical Analysis, *Journal of Public Economic*, 201, 2-3.

APPENDICES

Appendix I: MNEs with Regional Headquarters in Kenya

1. Bamburi Cement
2. Haas Factory Outlet (HFO-Nairobi)
3. Gulf African Bank
4. Kenya Airways
5. Kenya Commercial Bank Group
6. NIC Bank Group
7. Sameer Group
8. Serena Hotels
9. The Standard
10. Kenya Television Network
11. Unga Group
12. United Nations Environment Programme
13. Safaricom
14. Barclays bank
15. Standard chartered bank
16. Equity bank
17. Coorperative Bank of Kenya
18. The Consulting Chamber
19. Commercial Bank of Africa
20. China Central Television
21. China Daily
22. China Radio International
23. China-Africa Development Fund
24. Huawei
25. Xinhua News Agency
26. GSM Association
27. Nokia
28. Nokia Research Hub
29. BASF
30. Bosch
31. Merck KGaA
32. Bharti Airtel
33. Mitsubishi Motors
34. Sony
35. Toyota
36. Heineken
37. TNT
38. Eltek
39. Jotun
40. Kaspersky Lab
41. LG
42. Scania AB
43. Stockholm Environment Institute

44. IUCN
45. Nestlé
46. Panalpina
47. Asus
48. GEMS Education
49. Diageo
50. ITF
51. Pricewaterhouse Coopers
52. Sage Group
53. Standard Chartered Bank
54. ICAO
55. Chartis
56. Cisco Systems
57. Citibank
58. Coca Cola
59. FirstCarbon Solutions
60. General Electric
61. Google
62. Hill International
63. IBM
64. IMF
65. Intel Corporation
66. Kiva
67. Mastercard
68. Motorola Solutions
69. Pfizer
70. Qualcomm
71. Rockefeller Foundation
72. RTI International
73. Stratlink Global
74. Visa Inc.
75. World Bank
76. NIIT
77. United Nations Human Settlements Programme
78. BlackBerry Ltd
79. AVIC International
80. Bank of China

Appendix II: SAMPLED MULTINATIONAL ENTERPRISES

MNE 1

	Y	X1	X2
Year	**Revenue**	**Related Party Sales**	**Related Party Expenses**
2010	35,278,860,000	4,070,816,000	-1,753,082,000
2011	38,862,508,000	5,523,805,000	-1,929,234,000
2012	44,784,207,000	6,588,152,000	-1,969,028,000
2013	49,880,429,000	7,696,139,000	-3,726,854,000
2014	50,520,688,000	7,362,905,000	-4,922,237,000
m	43,865,338,400	6,248,363,400	-2,860,087,000
δ	6,709,605,727	1,476,517,102	1,404,428,814

Standardised data (x* = (x-m)/δ)

	Y	X1	X2
Year	**Revenue**	**Related Party Sales**	**Related Party Expenses**
2010	-1.279729205	-1.474786439	0.788224358
2011	-0.745622113	-0.490721305	0.662798278
2012	0.136948226	0.230128455	0.634463628
2013	0.896489428	0.980534257	-0.617166916
2014	0.991913664	0.754845032	-1.468319348

	Transactions	Sales
		Royalties
		Management fees

Regression Analysis = Y = βc + β1X1 + β2X2

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9927
R Square	0.9854
Adjusted R Square	0.9709
Standard Error	0.1707
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	3.9417	1.9709	67.6487	0.0146
Residual	2	0.0583	0.0291		
Total	4	4			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.4842	0.0763	0.6300	1.0000	-0.3284	0.3284
X1	0.7777	0.1322	5.8815	0.0277	0.2088	1.3466
X2	-0.2625	0.1322	-1.9850	0.0186	-0.8314	0.3065

Model **Y = 0.4842 + 0.7777X1 - 0.2625X2**

Correlation Analysis

	Y	*X1*	*X2*
Y	1		
X1	0.978129	1	
X2	-0.85644	-0.76380264	1

MNE 2

Year	Y Revenue	X1 Related Party Sales	X2 Related Party Expenses
2010	11,524,454,000	998,520,000	-3,335,923,000
2011	13,214,442,000	717,941,000	-3,048,928,000
2012	15,976,763,000	1,310,923,000	-4,326,865,000
2013	15,142,017,000	548,229,000	-4,544,457,000
2014	17,002,302,000	574,960,000	-2,482,183,000
m	14,571,995,600	830,114,600	-3,547,671,200
δ	2,198,587,423	322,755,083	870,283,301

Standardised data (x* = (x-m)/δ)

Year	Y Revenue	X1 Related Party Sales	X2 Related Party Expenses
2010	-1.386136193	0.521774587	0.243309506
2011	-0.617466281	-0.34755022	0.573081432
2012	0.638940888	1.489700474	-0.895333507
2013	0.259267107	-0.873373077	-1.145357838
2014	1.10539448	-0.790551764	1.224300408

Transactions: Sales, Purchases, Management fees, Interest

Regression Analysis = Y = βc + β1X1 + β2X2

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.2006
R Square	0.0402
Adjusted R Square	0.6195
Standard Error	1.3855
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	0.1610	0.0805	0.0419	0.9598
Residual	2	3.8390	1.9195		
Total	4	4			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.3897	0.6196	0.6289	1.0000	-2.6659	2.6659
X1	0.2064	0.7376	-0.2798	0.0806	-3.3799	2.9672
X2	-0.1226	0.7376	-0.1662	0.0088	-3.2961	3.0510

Model: **Y = 0.3897 + 0.2064X1 - 0.1226X2**

Correlation Analysis

	Y	X1	X2
Y	1		
X1	-0.1643	1	
X2	-0.0517	-0.34338719	1

MNE 3

	Y	X1	X2
Year	Revenue	Related Party Sales	Related Party Expenses
2010	2,943,656,000	-	- 84,401,973
2011	4,078,043,000	-	- 115,244,273
2012	7,123,267,000	-	- 96,885,549
2013	5,638,577,000	-	- 122,610,665
2014	5,969,974,000	-	- 136,415,398
m	5,150,703,400	-	- 111,111,572
δ	1,644,832,110	-	20,648,089

Standardised data (x* = (x-m)/δ)

	Y	X1	X2
Year	Revenue	Related Party Sales	Related Party Expenses
2010	-1.341807098	-	1.293562718
2011	-0.652139749	-	-0.200149337
2012	1.199249205	-	0.688975253
2013	0.296609968	-	-0.556908351
2014	0.498087674	-	-1.225480283

Transactions Management fees

Regression Analysis = Y = βc + β1X1 + β2X2

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9228
R Square	0.8516
Adjusted R Square	0.7031
Standard Error	0.5449
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	3.406202909	1.70310145	5.73630785	0.148449273
Residual	2	0.593797091	0.29689855		
Total	4	4			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.8654	0.2437	- 0.0000	1.0000	- 1.0485	1.0485
X2	- 0.3886	0.2724	- 1.4265	0.0042	- 1.5609	0.7836

Model **Y = 0.8654 - 0.3886X2**

Correlation Analysis

	Y	*X1*	*X2*
Y	1.0000		
X1	-	1.0000	
X2	- 0.3886	-	1.0000

MNE 4

	Y	X1	X2
Year	Revenue	Related Party Sales	Related Party Expenses
2010	168,682,275	-	-105,842,423
2011	135,560,433	-	-75,489,609
2012	2,081,603,000	254,649,000	-221,434,000
2013	2,165,477,000	163,242,000	-157,843,000
2014	2,249,351,000	71,835,000	-94,252,000
m	1,360,134,742	97,945,200	-130,972,206
δ	1,104,416,064	110,326,810	59,083,783

Standardised data (x* = (x-m)/δ)

	Y	X1	X2
Year	Revenue	Related Party Sales	Related Party Expenses
2010	-1.078807621	-0.8877733	0.425324547
2011	-1.108797987	-0.8877733	0.939049503
2012	0.653257664	1.42036011	-1.531076522
2013	0.729201869	0.59184889	-0.45479135
2014	0.805146074	-0.2366623	0.621493823

	Transactions	Sales
		Purchases
		Management fees

Regression Analysis = Y = βc + β1X1 + β2X2

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9266
R Square	0.8585
Adjusted R Square	0.7170
Standard Error	0.5319
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	3.434066146	1.71703307	6.06796381	0.141483464
Residual	2	0.565933854	0.28296693		
Total	4	4			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.9121	0.2379	- 0.0000	1.0000	- 1.0236	1.0236
X1	0.2319	0.8564	2.7080	0.0114	- 1.3656	6.0037
X2	- 0.1622	0.8564	1.8935	0.0199	- 2.0632	5.3062

Model **Y = 0.9121 + 0.2319X1 - 0.1622X2**

Correlation Analysis

	Y	*X1*	*X2*
Y	1.0000		
X1	0.7777	1.0000	
X2	- 0.5829	- 0.9505	1.0000

MNE 5

	Y	X1	X2
Year	Revenue	Related Party Sales	Related Party Expenses
2010	906,613,000	135,642,000	726,850,000
2011	1,477,780,000	221,098,000	1,184,766,000
2012	2,423,560,000	406,986,000	-2,807,904,000
2013	3,975,519,000	132,750,000	-3,087,527,000
2014	6,486,364,000	1,605,532,000	-3,048,198,000
m	3,053,967,200	500,401,600	-1,406,402,600
δ	2,242,962,043	627,747,449	2,165,109,635

Standardised data (x* = (x-m)/δ)

	Y	X1	X2
Year	Revenue	Related Party Sales	Related Party Expenses
2010	-0.957374293	-0.581061063	0.985286179
2011	-0.702725757	-0.444929884	1.196784014
2012	-0.281060129	-0.1488108	-0.647311978
2013	0.410863752	-0.585668011	-0.776461558
2014	1.530296427	1.760469757	-0.758296658

Transactions Sales Purchases Royalties

Regression Analysis = Y = βc + β1X1 + β2X2

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.9416
R Square	0.8867
Adjusted R Square	0.7734
Standard Error	0.4760
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	3.546795782	1.77339789	7.82604318	0.113301055
Residual	2	0.453204218	0.22660211		
Total	4	4			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.3794	0.2129	0.0000	1.0000	-0.9160	0.9160
X1	0.6142	0.2700	2.2746	0.0151	-0.5476	1.7760
X2	-0.4804	0.2700	-1.7792	0.0217	-1.6422	0.6814

Model **Y = 0.3794 + 0.6142X1 - 0.4804X2**

Correlation Analysis

	Y	*X1*	*X2*
Y	1.0000		
X1	0.8410	1.0000	
X2	-0.7705	-0.4722	1.0000

MNE 6

	Y	X1	X2
Year	Revenue	Related Party Sales	Related Party Expenses
2010	1,745,807,000	1,745,807,000	-193,164,000
2011	1,920,544,000	1,920,544,000	-212,497,000
2012	2,071,511,000	2,071,511,000	-366,695,000
2013	2,317,560,000	2,317,560,000	-174,727,000
2014	2,420,985,000	2,420,985,000	-192,524,000
m	2,095,281,400	2,095,281,400	-227,921,400
δ	277,813,408	277,813,408	78,718,996

Standardised data (x* = (x-m)/δ)

	Y	X1	X2
Year	Revenue	Related Party Sales	Related Party Expenses
2010	-1.257946486	-1.257946486	0.441537645
2011	-0.628973963	-0.628973963	0.19594254
2012	-0.085562465	-0.085562465	-1.76289851
2013	0.800100333	0.800100333	0.675750491
2014	1.172382581	1.172382581	0.44966783

	Transactions	Sales	Purchases

Regression Analysis = Y = βc + β1X1 + β2X2

SUMMARY OUTPUT

Regression Statistics

Multiple R	1
R Square	1.0000
Adjusted R Square	1.0000
Standard Error	0.0000
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	4	2	1.62259E+31	6.16298E-32
Residual	2	2.46519E-31	1.233E-31		
Total	4	4			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.0092	0.0000	0.0000	1.0000	-0.0000	0.0000
X1	1.0000	0.0000	-	0.0003	1.0000	1.0000
X2	-0.0028	0.0000	0.1567	0.0089	-0.0000	0.0000

Model **Y = 0.0092 + X1 - 0.0028X2**

Correlation Analysis

	Y	*X1*	*X2*
Y	1.0000		
X1	1.0000	1.0000	
X2	0.1350	0.1350	1.0000

MNE 7

Year	Y Revenue	X1 Related Party Sales	X2 Related Party Expenses
2010	1,353,421,101	-	-49,715,881
2011	1,753,434,820	-	-120,080,316
2012	2,122,727,331	-	-169,818,187
2013	2,589,368,056	-	-212,674,344
2014	2,909,616,569	-	-242,028,873
m	2,145,713,575	-	-158,863,520
δ	625,003,087	-	76,402,600

Standardised data (x* = (x-m)/δ)

Year	Y Revenue	X1 Related Party Sales	X2 Related Party Expenses
2010	-1.267661698	-	1.428585394
2011	-0.627642909	-	0.507616283
2012	-0.036777809	-	-0.143380806
2013	0.709843663	-	-0.704306183
2014	1.222238752	-	-1.088514689

Transactions Royalties

Management fees

Regression Analysis = Y = βc + β1X1 + β2X2

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9887
R Square	0.9775
Adjusted R Square	0.9699
Standard Error	0.1734
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.9098	3.9098	130.0983	0.0014
Residual	3	0.0902	0.0301		
Total	4	4			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.0005	0.0775	0.0007	1.0000	-0.2467	0.2467
X2	-0.9887	0.0867	-11.4061	0.0014	-1.2645	-0.7128

Model **Y = 0.005 - 0.9887X2**

Correlation Analysis

	Y	*X1*	*X2*
Y	1.0000		
X1	-	1.0000	
X2	-0.9887	-	1.0000

MNE 8

Year	Y Revenue	X1 Related Party Sales	X2 Related Party Expenses
2010	933,027,000	-	-311,372,000
2011	1,146,630,000	-	-395,184,000
2012	810,252,000	-	-199,711,000
2013	840,092,000	-	-184,537,000
2014	825,369,000	-	-189,146,000
m	911,074,000	-	-255,990,000
δ	140,104,809	-	93,785,810

Standardised data (x* = (x-m)/δ)

Year	Y Revenue	X1 Related Party Sales	X2 Related Party Expenses
2010	0.156689839	-	-0.590515769
2011	1.681284184	-	-1.48416908
2012	-0.719618409	-	0.600080116
2013	-0.506635	-	0.761874314
2014	-0.611720614	-	0.712730419

Transactions — Rent and Royalties; Management fees

Regression Analysis = Y = βc + β1X1 + β2X2

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9604
R Square	0.9224
Adjusted R Square	0.8965
Standard Error	0.3217
Observations	5

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.6896	3.6896	35.6560	0.0094
Residual	3	0.310430161	0.1034767		
Total	4	4			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.0021	0.1439	0.0014	1.0000	- 0.4578	0.4578
X2	- 0.9604	0.1608	- 5.9713	0.0094	- 1.4723	- 0.4486

Model: **Y = 0.002 - 0.9604X2**

Correlation Analysis

	Y	*X1*	*X2*
Y	1		
X1	0	1	
X2	- 0.9604	0	1