WHO FOOTS THE TAX BILL? TAX BURDEN ANALYSIS IN KENYA

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AUTHOR'S DECLARATION

I, the undersigned MARTA MATOSEK hereby declare that I am the sole author of this thesis. To the best of my knowledge this thesis contains no material previously published by any other person except where due acknowledgement has been made. This thesis contains no material which has been accepted as part of the requirements of any other academic degree or non-degree program, in English or in any other language.

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ABSTRACT

Equity and fairness are one of the principles for designing well-functioning tax system. The issue of tax burden distribution in developing countries, although crucial for ensuring sustainable development, is still under-researched. It is of particular importance to Kenya, where almost a half of the population lives below the poverty line, while the tax to GDP ratio of 21% is one of the highest in the Sub-Saharan Africa.

This thesis will seek to answer the question of how the tax burden is distributed amongst the different income groups in Kenya. To this end, the study will examine to what extent the main income and consumption taxes (PAYE, corporation tax, VAT and excises) achieve progressivity of their effective tax burden. The study reveals that on the overall level, the tax system in Kenya is designed to be progressive. However, some of the tax reliefs on PAYE and corporate tax, as well as increases in VAT for certain goods and services in 2013 may imply regressive effects on the effective income tax burden and effective taxable consumption. Furthermore, this study seeks to propose enhanced approaches to tax incidence analysis in the backdrop of limited statistical data and provide further recommendations for the research and government data provision.

KEY WORDS: tax burden, tax incidence, progressive taxation, Kenya, PAYE, VAT, corporation tax, excise

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LIST OF ABBREVIATIONS

CIT – Corporate Income Tax

ES -Economic Survey

FDI - Foreign Direct Investment

FY – Financial Year

GDP – Gross Domestic Product

GoK – Government of Kenya

GVA – Gross Value Added

IEA – Institute of Economic Affairs

IMF – International Monetary Fund

KIHBS - Kenya Integrated Household Budget Survey

KNBS – Kenya National Bureau of Statistics

Ksh – Kenyan shilling (currency)

LPG – Liquid Petroleum Gas

MTEF - Medium Term Expenditure Framework

OECD – Organization for Economic Cooperation and Development

PAYE – Pay As You Go

p.a. – per annum, annually

PIT – Personal Income Tax

RARMP - Revenue Administration Reform and Modernization Program

REA – Rural Electrification Authority

SA – Statistical Abstract

SAP - Structural Adjustment Program

VAT – Value Added Tax

WTO – World Trade Organization

WMS - Welfare Monitoring Survey

INTRODUCTION

Taxation is one of the eldest institutions, and is increasingly considered as "one pillar of an effective state" that "may also provide the basis for accountable and responsive democratic systems" OECD (2008, 9). The fiscal contract between the taxpayer and the government is a litmus test connecting rights and responsibilities of both. Consequently, aside from a mandate for efficient and effective revenue mobilization, taxation is also expected to ensure fairness in distributing tax burden according to the taxpayers' ability to pay (vertical equity), and amongst the taxpayers in similar circumstances (horizontal equity) (OECD 2014).

In the recent decades there has been ongoing a vivid debate on what types of taxes constitute the optimal, most effective and equitable tax mix for developing countries (Tanzi and Howell 2000, Bird and Zsolt 2011, Diamond and Saez 2011). As a result of changing global and regional economic conditions after the oil crises of the 1970s, Kenya, alongside other developing countries, embarked upon expansionary tax policy, mobilizing public revenues from indirect taxation such as Value Added Tax (VAT) and direct taxes on labor in the form of Pay as You Earn (PAYE) income tax. Simultaneously, many taxes on capital in Kenya, and in the region have been consistently reduced in order to boost the country's competitiveness in attracting increasingly mobile foreign capital and Foreign Direct Investment (FDI), as well as to ensure alignment with the international trade agreements. It was argued (Saez 2002) that this shift resulted in taxation becoming more regressive, as higher tax burden was placed on low income groups with higher propensity to consume, while effective tax rate of those with high disposable income were decreased through tax incentives on savings and capital investments.

These considerations are at the heart of tax burden or tax incidence analysis – the study of who bears the economic burden of tax and how such burden impacts on the distribution of welfare in the society (Metcalf and Fullerton 2002, 1). The tax burden studies are of particular importance in

developing countries, where economic inequalities within the populations are often significant and can impede long term economic and social development. Although tax incidence analysis are becoming increasingly available for developed countries (Barrios et al 2014), they are still scarce in developing countries due to the limitations or lack of statistical data. In Kenya, a country with one of the highest tax to GDP ratios in Sub-Saharan Africa at around 21% and with almost a half of the population living below the poverty line, the tax incidence analyses are very limited due to the scarcity of statistical data. Therefore, further research is required to update previous results through the use of the most recent data, improved methodologies, and in the light of tax reforms in Kenya in the last few years.

Thesis Objectives and Methods

In the backdrop of these considerations and challenges, this study will seek to answer the following research question: how is the tax burden currently distributed in Kenya across various income groups? In order to answer this question, the author will examine the extent to which the tax regime in Kenya can be considered as progressive, i.e. placing higher tax burden on higher income groups while minimizing tax burden on taxpayers with less disposable income.

This research highlights that the overall tax burden in Kenya is progressive, thus confirming the previous analysis in the field (Wanjala et al 2006). However, the rationalization of VAT in 2013 as well as regressive effect of excise on cigarettes might place higher effective tax burden on low income households, while corporate tax reliefs might decrease to a larger extent the effective tax burden of the foreign and big corporations, rather than that of the small or domestic businesses. Nevertheless, provision of further, disaggregated data by the Government of Kenya on direct and indirect tax revenues from all income groups would be necessary in order to fully realize the patterns of tax incidence in Kenya.

The methods used for this study include qualitative and quantitative analysis. The Excel spreadsheets are utilized as the main analytical software to compute effective tax burden on

incomes and consumption. The analysis will incorporate the key income taxes (PAYE and corporation tax) and consumption taxes (VAT, and excise), which made up for almost 75% of the total tax revenue in 2014 (KNBS 2015). As the direct data on the tax expenditure per income groups is not available, the research will be supported with analytical strategies including extrapolation of the data, using proxy methods as well as usage of the available data on the economic activities, incomes, and household expenditure. The main data used for this research is derived from statistical surveys issued by the Government of Kenya, amongst others the Economic Survey (ES) (KNBS 2015), Statistical Abstract (SA) (KNBS 2014), Kenya Integrated Household Budget Survey (KIHBS) 2005/2006 and Welfare Monitoring Survey (WMS 1997), as well as other surveys and data available from the Kenyan National Bureau of Statistics (KNBS).

The study will contribute to the current fiscal policy literature in three ways. Firstly, it will seek to provide an updated qualitative and quantitative account of tax incidence, measured by effective tax rates (effective tax burden) in Kenya, using some of the most recent statistics as well as considering the most recent legislative changes. Secondly, new methodologies and approaches will be proposed to analyze tax burden in the context of scarce or limited statistical data. Finally, this thesis will provide some recommendations on further tax incidence research as well as on statistical requirements in Kenya.

The study will proceed as follows: the first chapter will provide an overview of the literature on tax incidence and various approaches to its measurements. The second chapter will outline the key reforms of the tax policy in Kenya since the independence in 1963, complimented with socio-economic and political economy background. The main tax burden analysis of PAYE, corporate taxes, VAT and excise taxes will be conducted in Chapter three, followed by the conclusions and recommendations.

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CHAPTER 1. LITERATURE REVIEW

The study of tax burden plays a crucial role in fiscal analysis as it touches a variety of cross-cutting issues and academic fields, including economics, public finance, social justice and equity. The concept of tax burden have been developed and operationalized over time alongside the development of the world affairs, major tax and economic legislations, social and intellectual movements as well as technological innovations and improvements in data collection (Atrostic et al 1991).

This section will lay out the theoretical dimensions of the research by first defining the basic concepts and placing the discussion on the tax burden within several strands of academic research, namely - economic, public finance as well as historical and political economy. The following section will review theoretical and empirical literature on tax burden in developing countries and specifically, in Kenya. Finally, the last section will outline several empirical approaches to measuring the tax incidence and will present the methodological framework for this study.

1.1. Tax Burden – Concepts and Perspectives

Tax burden is generally defined as a ratio of total local and state taxes to the personal income (Reed and Rogers 2006) and is commonly used in studies on the effects of tax on economic growth and equity. Entin (2004, 2) provides more detailed definition of tax burden as a measure of "changes in people's after tax incomes after all the economic adjustments to the tax have occurred *across all affected markets* [original emphasis] as consumption behavior, resource use, and income shifts to their new patterns". It is important to distinguish between tax burden and statutory tax incidence. Statutory tax incidence is the legal liability for paying taxes while tax burden refers to 'ultimate tax burden' or 'economic incidence' (Fullerton 1993, 1). Therefore, in this research the terms 'tax burden', 'economic tax incidence' and 'tax incidence' will be used interchangeably in reference to the ultimate tax distribution across various income groups, measured by effective tax rates paid by these groups.

In microeconomics, the tax incidence is observed through the shifts in supply and demand behaviors that affect the prices in the markets (Mankiw 2011, 127-131). The extent to which the tax burden falls either on the consumer, labor or capital depends on the elasticity of their demands and supplies. If the demand for end product is relatively inelastic i.e. the product cannot be substituted easily with another one, then larger tax wedge[1] will fall on the consumer. In case when the demand for good is more elastic - the product is easily substituted with another one - the tax wedge will have larger effect on the supply side i.e. capital and labor (Mankiw 2011, 131).

Furthermore, from the macroeconomic perspective, the optimal tax theory seeks to provide an aggregate framework for optimal taxation. The theory posits that the "tax system should maximize a social welfare function subject to a government constraint, taking into account that individuals respond to taxes and transfers" (Diamond and Saez 2011). This definition indicates the core problem of the optimal tax theory: the classical trade-off between equity and efficiency.

The main discussion that divides the scholars is the issue of using direct (income taxation) or indirect (consumption) taxes such as VAT and excises to achieve the optimal tax mix. The income tax contains two components; labor tax that is most commonly known as a PAYE, and the capital tax that can include corporation tax, withholding tax, dividend tax etc. Since the labor tax gives rise to the disincentive on savings, the traditional neoclassical theory claims that taxing income entails higher welfare and efficiency costs. As the disincentive on saving is absent in the consumption, the consumption taxes are recommended as the most efficient and ensuring minimum economic distortions (Tanzi 2000, 305-6). On the other hand, Saez (2002) argued that in the long run indirect taxes are suboptimal, causing regressivity and some economic distortions due to the preferential capital taxation. He further claimed that the income redistribution should be achieved solely with direct progressive income tax.

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[1] Tax wedge – deviation from economic equilibrium price as a result of taxation, which results in consumer paying more and supplier receiving less

From the public finance perspective, however, the issue of optimal taxation and therefore, the right tax burden is not only the matter of efficiency as often emphasized by the economic models and studies on this matter. Taxation is one of the most pervasive policy instruments and therefore, its design should take into consideration not only efficient mobilization of revenue, but also the key social objectives, including equity and sustainability on the one hand, and neutralizing negative externalities, while subsidizing positive externalities through the provision of public services on the other. Traditionally, equity in taxation is defined through horizontal and vertical equity. The horizontal equity assumes that those in similar circumstances and with similar capacity to pay should be taxed on the same level. On the other hand, vertical equity posits that there should be difference amongst taxpayers in different economic circumstances (Bird and Zolt 2003). This thesis will mostly focus on assessing the implications of tax on vertical equity, through measuring effective tax burden across taxpayers with different disposable incomes.

Furthermore, from a historical and political economy perspective, the study of tax burden reveals even more subtle and more pervasive dimension. It is not only the measure of efficiency and equity but also a litmus test for measuring stability of the state apparatus, its institutions and their interactions with the citizens. As the historical evidence suggests, placing disproportionately high tax burden on social groups that were unable to pay the tax bill, mounted with lack of the rulers' accountability for spending become an igniting point for societal unrests and revolutions, as it was the case for the French Revolution (McPhee 2002). On the other hand, strong states with robust institutions, capacity to tax equitably, and accountability of ruling elites are more likely to deliver economic development and public services to the societies they govern (Acemoglu 2010).

1.2. Tax Burden Literature in Developing Countries

There is a limited theoretical and empirical literature on the tax burden in developing countries, however in the recent years a growing number of scholars are looking at the distributional effects of the tax reforms that swept the developing countries since the 1980s.

There were several studies undertaken in developing countries during 1960s and 1970s that were calculating average tax rates by income level and across income groups, however their reliability is questionable due to the limited statistical data (Gemmell and Morrissey 2005). Jimenez (1986) reported in his study the overall tax incidence from a number of developing countries. He claimed that, despite some evidence of progressive taxation in South American states existed, the combined effects of tax burden in many countries was regressive or U shaped (regressive at the lower income levels and progressive further up the income scale).

More recently Gemmell and Morissey (2005) provided a review of economic tax incidence in developing countries of some selected taxes, including trade taxes, excises and income taxes after the reforms of the 1980s and 1990s. Although they claimed that the tax reforms did not have any adverse or regressive effect on the poor and low income groups, the evidence remained inconclusive as some regressive taxes (export taxes) of the past were replaced with consumption and sales taxes. Furthermore, there was still insufficient empirical evidence of the effect of consumption taxes on the lowest income groups. Meanwhile, other empirical studies on the developing countries examined the economic tax incidence of a specific tax, for instance, fuel or income tax (Baer W., Galvão 2008, Blackman et al 2010).

In Kenya, tax incidence studies are limited in terms of quantitative analysis as well as availability of statistical data to use for such analysis. Several studies are devoted to the overall tax architecture and tax reforms in Kenya (Karingi et al 2004, Karingi and Wanjala 2005, Moyi and Ronge 2006) as well as to the performance of specific taxes, for instance an excise tax (Okello 2001). However, research on the tax incidence or distributional impacts of taxes have remained scarce.

One of the very few studies in the field was conducted by Wanjala et al (2006), who evaluated the tax incidence of personal income tax and VAT on genders in Kenya. Consequently, the study by Wanjala et al (2006) guided this thesis project in terms of methodologies to analyze some of the taxes. For instance, some important data was extrapolated from above mentioned research for the

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purpose of this thesis. Nevertheless, some of the methodologies offered by Wanjala et al (2006), particularly the calculation of income tax burden on income groups, were considered in this thesis as not sufficiently rigorous. Therefore, the author sought to improve some of the methodologies offered by Wanjala et al (2006) through utilizing additional data available from the statistical publications of the Government of Kenya (GoK).

1.3. Measures of Economic Tax Incidence

The most common approach to evaluate distribution of the tax burden is through assessing its 'progressivity' or 'regressivity'. A tax is deemed progressive when tax burden increases with the rise of the income, while it is considered regressive when the tax burden decreases as the taxpayer's income rises (Morrissey 2013). Other measures can include comparing pre- and post-tax income distributions by using the Lorenz curve or other curves that provide representations of inequality in income distribution before and after tax incidence (Gemmell and Morrissey 2005, 133-136).

There are several indicators that can help in analyzing the incidence of a given tax:

- **A given tax to GDP ratio/ share of a given tax in the total tax revenue** –This measure allows for assessing aggregate contribution of the tax in a country's tax revenue mix (OECD 2000). However, it does not provide any information on how the incidence of such tax is distributed amongst the taxpayers with varying income.

- **Nominal tax rates** - also called 'headline' or statutory tax rates. The nominal tax rates can vary significantly for different income groups in case of personal tax or businesses in case of corporate tax. Rate schedules may be flat i.e. the same on all the income classes, or graduated, i.e. increasing or decreasing with the increase of income. Nominal tax rates can be very useful in detecting progressivity or regressivity of the tax, yet they might fail to present the complete picture of taxation as they might be offset by a variety of tax reliefs and tax credits on different income classes (OECD 2000, 7).

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- **Effective tax rate** – it measures tax burden on the population disaggregated into income groups (by income brackets, deciles or quartiles) after the tax reliefs are deducted. The data is first collected on wages, salaries of households in each group as well as their capital income (dividends and interest rates), tax reliefs and expenditures by commodity. The tax burden can then be determined from analysis of differences in the aggregate value of taxes paid within each category (Fullerton 1993). This measure is more precise than the previous one as it indicates the 'real' tax rate after reliefs and exemptions are accounted for. The effective tax rate will be used in this thesis to measure the tax progressivity or regressivity of the taxes in question. For the purpose of this thesis the terms 'effective tax rate' and 'effective tax burden' are used interchangeably.

1.4. Analytical Framework

This study will draw on theoretical concepts related to the tax burden as well as the empirical methodologies presented in the previous sections of this chapter. To this end, the author will analyze the progressivity of PAYE employment income tax, corporation tax, VAT and excise, measured by the effective tax rates of these taxes.

The PAYE is the key direct tax, and therefore, it places a tax burden on income. The VAT and excise are the consumption taxes and they have impact on expenditure capacities of various income groups. Furthermore, considering that 69% of Kenyan population lives in the rural areas (KNBS 2013), this study will also take into account the differences in expenditure patterns and discrepancies in purchasing powers of urban and rural populations.

Corporation tax is not always included in the tax incidence analysis (for instance Wanjala et al 2006) as it refers to the tax burden on capital, rather than on labor. However, the author included corporate tax incidence in the study for several reasons. Firstly, it is one of the main tax revenue sources, contributing over 20% of the total tax revenue in Kenya (KNBS 2015). Secondly, equalizing top personal and corporate income tax rates in Kenya is claimed to have some impact

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on how the tax incidence has changed between labor and capital (Moyi and Ronge 2006). Consequently, the recent changes in corporate tax effort in Kenya might have some implications on the tax incidence. The analysis of the above mentioned tax types will include the following aspects:

- Regulatory Framework and legal basis of the given tax type;

- Tax burden trends over the time. Past and most recent changes to its tax base, tax rates and tax reliefs up to now; implications of the tax regulations for progressivity and regressivity of taxes;

- Tax burden analysis, indicated by progressivity or regressivity of the effective tax rates. The tax graduation patterns will be measured through the effective rates of the income taxes (PAYE and corporation tax) and effective tax burden on household expenditure of the urban and rural population in the case of the consumption taxes (VAT and excise). More detailed discussion on the methodological approaches and computations for each tax type is available in Chapter 3 and in Appendices.

Although this study will seek to apply the same framework for all taxes at hand, there are certain limitation to this study. Firstly, due to lack of a systematized data, the incidence of various taxes across income groups is measured by utilizing varying units, such as quartiles, deciles and income brackets. Secondly, due to the limitations of a statistical data on taxation in Kenya, this study is utilizing indirect methods for data extrapolation and proxy variables. Lastly, some of the data in this study was extrapolated from surveys that were conducted several years ago. As a consequence, the analysis may not fully represent some of the current economic and social trends. Nevertheless, given the importance of providing an updated analysis of a tax burden in Kenya in the light of the recent legislations and changes in tax collection efforts, this study can be considered as necessary.

The next chapter will describe the recent reforms of the fiscal policy in Kenya since independence and delineate features of the political economy and socio-demographic environment that can have implications for the tax incidence in Kenya nowadays.

CHAPTER 2. FISCAL ENVIRONMENT IN KENYA

More than 50 years since gaining independence from the British Crown in 1963, Kenya is still a low income country with complex reality, struggling to overcome ethnic divisions and aspiring to achieve middle-income status in 2030. After economic slowdown due to the global financial crisis in 2008-2010, Kenyan economic performance is improving and is expected to grow by 6-7% in 2015-2017(CIA World Factbook 2015). Kenya's GDP in 2014 stood at USD55.23 bn (Ksh 5,357bn) (KNBS 2015, 22) and was largely based on services (53% of GDP) and agriculture (29.3% of GDP) (CIA World Factbook 2015).

Yet, despite recent strong economic performance, Kenya faces serious challenges of widespread poverty and inequalities. According to 2009 estimates (KNBS 2013), 45.2% of the 44mn population of Kenya lives below the poverty line. Moreover, Kenyan labor market struggles with very high unemployment rate of 40% (CIA World Factbook 2015). Economic poverty is further coupled by regional and ethnic strife, discrepancies in rural and urban incomes and high HIV/AIDS incidence. Amid the political violence of 2008 and increasing security concerns after Westgate (in 2013) and Garissa (in 2015) terrorist attacks, Kenya's security and political climate remain volatile.

In the backdrop of these socio-economic developments, there is a strong case for ensuring better provision of public services backed up by a robust and sustainable resource mobilization that can deliver some distributional effects of incomes. This chapter will outline the main developments in fiscal reforms in Kenya since the independence and present the main political, economic, social and demographic characteristics that may affect the tax policy, and consequently, the tax incidence in Kenya.

2.1. Tax Reforms and Economic Performance

The decades following the independence of 1963 had witnessed profound reforms in Kenya's fiscal policy and economy. One of the main characteristics distinguishing today Kenya from other

Sub-Saharan countries is its high tax to GDP ratio at over 21%. Moreover, unlike many others countries in the region, Kenya is able to finance a majority of budget expenditure from tax revenue, while foreign donor financing covers a minor share of the government budget. Nevertheless, Kenya is still facing many of the challenges prevalent in Sub-Saharan Africa, amongst others, weak tax administration, enforcement and compliance, and low responsiveness of the tax system to economic circumstances (Karingi and Wanjala 2005).

Until the early 1970s there were no significant reforms in place and the country maintained the tax system inherited from the British colonial regime. No significant fiscal issues were present during this period as the economic conditions were favorable, allowing the current and development expenditure between 1964 and 1977 to be financed mainly from the tax revenues. Until 1972, the country witnessed significant growth rate of an average 6-7%, low inflation and viable balance of payments with steadily increasing foreign reserves. Substantial achievements in living standards were also achieved (IMF 1995).

The tax reforms of in Kenya from the 1970s onwards were undertaken in response to changing global, economic circumstances and in order to enhance revenue mobilization capacity. The international energy crises in the beginning of the 1970s had a very negative impact on the fiscal balances for the oil importing countries like Kenya. In an attempt to counterbalance growing fiscal deficit and spiraling debt, the Kenyan government replaced the existing consumption taxes with sales tax in 1972/73 fiscal year (Waris et al 2009). In the view of Karingi and Wanjala (2005), the sales tax set the stage for the future shift in fiscal policy of reliance on direct taxes towards indirect taxation as the major source of the development finance.

Nevertheless, Karingi and Wanjala noted (2005) that, albeit with a varying success, the tax system in Kenya after the independence was also used to address the issue of inequality. The Personal Income Tax (PIT) featured very high top marginal rates, with the top rate of 65% between 1974 and 1989 and as many as eight tax brackets (Figure 1). Moreover, the differential treatment of the

domestic and foreign companies represented inward looking policies, aiming to support development of domestic equity (Karingi and Wanjala 2005).

1974–81		1982-85	
Annual taxable income (Kshs)	Rate (%)	Annual taxable income (Kshs)	Rate (%)
1–24,000	10	1–30,000	10
24,001–48,000	15	30,001–60,000	15
48,001–72,000	25	60,001–90,000	25
72,001–96,000	35	90,001–120,000	35
96,001–120,000	45	120,001–150,000	45
120,001–144,000	50	150,001–180,000	50
144,001–192,000	60	180,000–240,000	60
Over 192,000	65	Over 240,000	65

Figure 1. PIT progressivity in Kenya
Source: Karingi and Wanjala (2005)

Further fiscal reforms of this period included introduction of 20% withholding tax on non-residents entrepreneurs, new tax on sales and property, taxes on shares, and increasing sales taxes from 10 to 15%, as well as excise duties from 50 to 59% (Karingi and Wanjala 2005). Such reforms were also a result of increasing tax competition in the region of East Africa, after the East African Community had been dissolved in 1977(Waris et al 2009).

In the mid-1980s, tax reforms formed a part of Structural Adjustment Programmes (SAP). These were the agreements signed between GoK and International Financial Institution (IMF and World Bank) that required Kenya's economic restructuring for release of emergency loans to deal with the aftermath of both oil shocks (Muriithi and Moyi 2003, 3). As a result of such agreements, the GoK adapted Tax Modernization Programme and Budget Rationalization Programme in 1986, and in 1987 correspondingly. The main elements of the Tax Modernization Programme in this phase included raising and maintaining revenue to GDP ratio at 24% by 1999/2000, broadening the tax base, rationalizing tax structure to ensure its equitability, reducing and rationalizing tax rates and tariffs, reducing trade taxes as a part of international trade agreements and increasing taxes on

consumption while incentivizing savings and investment through lower taxes and reliefs (AfDB 2010, vii)

Despite numerous reforms of the previous decades, the economic and fiscal situation in Kenya were deteriorating in the late 1980s and early 1990s. The tax revenues were falling, compounded with increasing poverty and shrinking formal economy. To counteract this trend, the VAT was introduced in 1990 and Kenya Revenue Authority (KRA) was established in 1995 as an autonomous body responsible for tax collection in order to boost tax collection effectiveness and efficiency (KRA website).

In the early 2000s the economic recovery was the top priority of the Kenyan government. The targets of reforms in that decade included maintaining stable macroeconomic framework, promoting savings and investments and improving fiscal compliance. In 2004/05 Revenue Administration Reform and Modernization Program (RARMP) was launched to improve fiscal capacities of the Kenya Revenue Authority through a series of IT systems introductions and employment reforms (KRA Website). Four years later the budgeting, fiscal policy and public expenditure were further integrated into the long term development plans through launching Vision 2030 - the Kenya's long term development strategy, whose three main goals were achieving high growth, achieving equity and poverty reduction, and good governance (Waris et al 2009).

Despite some slowdown in 2008-2010 due to the global financial crisis, Kenyan economy managed to grow steadily throughout the 2000s, and is expected to reach 6-7% in 2015-2017 (CIA World Factbook). The encouraging economic performance allowed for the tax revenues to grow to the record values of Ksh 945,245mn in FY2013/2014, and prompted the KRA to set up a record tax revenue target of over Ksh 1 trillion in FY2014/2015 (KNBS 2015). Notwithstanding the nominal tax revenues growth since 2000s, the tax revenue to GDP ratio remained stable at around 20-22%, with the 2014 tax revenues standing at 21.1% of the GDP. Nevertheless, Kenya's tax system had

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been assessed as performing better than other countries in the Sub-Saharan Africa in the past three decades, where the average tax to GDP stands at around 17% (AfDB 2010).

2.3. Political Economy and Socio-Demographic Environment

Tax policy and their resource maximizing and distributional objectives are not formed in isolation to the political economy and institutional features of the country. In particular, the discussion of tax progressivity is often at risk of being stifled in the policy process as the top decile can affect political elites and prevent tax reforms that would affect them negatively (Tanzi 2000, 300). Oftentimes, the top earners in developing countries comprise a significant share of the political elites, who are also engaged in economic activities. Thus, efforts in ensuring more progressive taxation of income or capital can be affected by the interests of the political elites.

While pragmatic political economy choices of the GoK in the first decade of independence ensured prudent fiscal performance and some tax redistribution of income, however political challenges of the 1980s and 1990s often inhibited the effect of those reforms (Waris et al 2009). The rampant cases of corruption and patronage in Kenya, emerging in the backdrop of economic and fiscal crisis since the 1970s, resulted in failure of the political leaders to sustain fiscal contract with the citizens, who "seem to have lost trust in government institutions as impartial public service providers" (Miruka, 2010 in AfDB 2010, 8). Furthermore, with the lift of restrictions on public servants' involvement in private business in 1971, the political elites took advantage of tax exemptions in trade to siphon off billions of shillings in corruption scandals and conspiration schemes during the 1980s and 1990s (AfDB 2010).

Moyi and Ronge (2006, 5) highlighted that Kenya's unfriendly political economy 'is not amenable to rational tax policy', which in the effect may prevent major reforms. They argued that this posed significant difficulty to the imposition of taxes on wealth and property as their enactment was prevented by influential political elites who possess such wealth and property. Some of the proposals that would be more progressive and targeting high income earners, for instance a tax on

sale of houses by individuals (capital gains tax), a rise in tax on fortified wines or enacting tax on entertainment and house allowances of constitutional offices were subsequently rejected in 2006 (Moyi and Ronge 2006, 5).

Furthermore, unfavorable economic conditions of the last decades contributed to increasing level of poverty and inequalities, which persist until today and have serious implications for equitable revenue mobilization. According to the 2009 estimates (KNBS 2013), 45.2% of the population lives below the poverty line, down from 46% in 2005/2006. While the majority of population (69%) live in the rural areas, they control only 45.5% of consumption expenditure (KNBS 2013). Therefore, it can be noted, that the GoK's move away from direct income taxation towards indirect taxation of consumption, in order to maintain competitiveness for the investment, can have significant implications on the expenditure capacities of the poor.

Poverty and inequalities can have a long term negative implications on the capacity of the government to raise taxes and deliver public services. In the backdrop of the economic volatility and challenges of social underdevelopment and erosion of 'fiscal contract' in the 1980s and 1990s, Kenya witnessed significant proportion of its population sliding out of the tax net. According to the Kenyan Institute of Economic Affairs, in 2010 the underground economic activities in Kenya stood at 34.3% of the GDP, with 77% of employment performed outside of the formal sector (IEA 2012a, 1).

Finally, the AIDS/HIV is a public health problem, affecting a significant share of the Kenyan population, and it has particular impact on adults in the working age. According to the 2013 estimates by UNAIDS, up to 6.6% of adult population aged 15 to 49 years old is living with HIV/AIDS, which accounts for 1.4 mn of adults in Kenya (UNAIDS). The pandemic has a profound effect on the overall economy, puts further pressure on public health, but also has consequences on the tax capacity of the state. It reduces consumption of households dependent

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for subsistence on the adults with HIV/AIDS as well as it causes loss of the productive labor force.

To sum up, the tax burden in Kenya is a function of social needs, potentials and limitations, competing economic considerations requiring tradeoffs between taxation that is equitable and taxation incentivizing economic efficiency and foreign investment. At the same time, the fiscal policy is a result of political choices made by the ruling elites, who may be influenced by the interest of the top income groups, and become resistant to placing more progressive tax regulations in the pursue of equity. Having these considerations in mind, the next chapter will explore and evaluate the economic tax incidence of selected taxes in Kenya.

CHAPTER 3. TAX INCIDENCE ANALYSIS

This chapter will aim to answer the main research question of the thesis, namely, how is the tax burden distributed in Kenya across income groups. To this end, the income taxes (PAYE and corporation tax) and consumption taxes (VAT and excise) will be evaluated for the progressivity or regressivity of their effective tax burdens. Each tax will be first introduced with a presentation of legal framework and the recent changes to the nominal rates and tax reliefs, followed by the analysis of their effective tax burden.

3.1. PAYE

Income tax is a direct form of taxation and generally refers to a levy on a business income, employment income, rent income, dividends, interests and pensions (Karingi 2001). This section will analyze one type of income tax that is also known as a Pay As You Earn (PAYE). Under this method, the employer is required to recover the value of income tax from employees' income on behalf of the Kenyan Revenue Authority. This income is taxed in full as no expenses can be deducted from it. The PAYE and personal income tax on small enterprises are charged at the same graduated scale, however, the tax bases differ for each. This section will omit analysis of small business income tax, which is evaluated in the next section together with the corporation tax.

In Kenya, the PAYE income tax in 2014 was estimated to be the main source of tax revenue, accounting for 27% share of the total tax revenue, followed by VAT on imports and domestic products standing at 26%, and corporate income taxes accounting for 21% (Figure 2). From 2010 until 2014, the PAYE revenues showed steady growth, increasing from Khs 144,268mn to Ksh 299,768mn in 2014, which signifies a rise from 23 to 27% of the total tax revenue between these years. This trend might be a result of improvements in trade and consumption in Kenya as the domestic and global demand recovered from the recent global economic crises. Furthermore, since 2013, a steady growth have been observed in the average nominal wages in Kenya. Although the nominal wage rises were partly caused by inflation, the economy witnessed almost 12% increase

in the formal employment between 2010 and 2014. Lastly, modernization in Kenya Revenue Authority and run down of its fifth Corporate Plan (2012-2015) to improve performance of KRA might have boosted the recent compliance efforts.
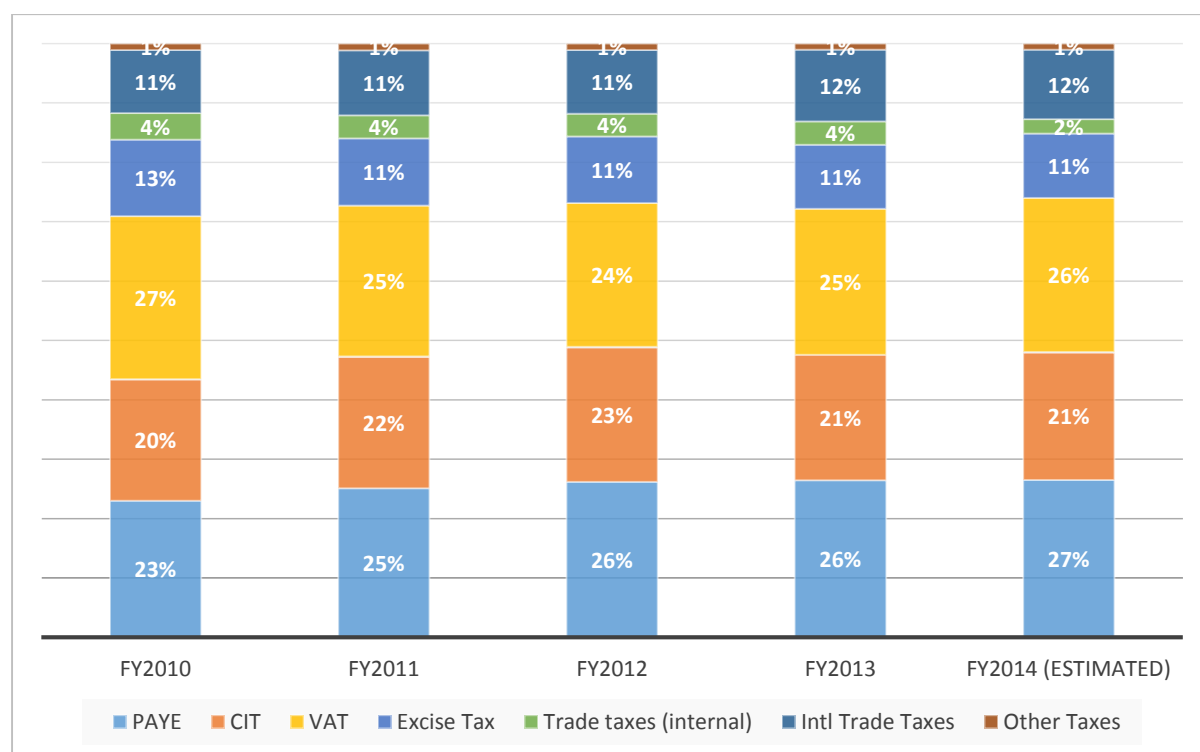
Figure 2. Tax Revenue Shares for 2010 – 2014, percentage
Author's compilation, Source: ES2015

The income tax in Kenya is governed by the provisions of the Income Tax Act (Cap. 470 – Laws of Kenya), enacted in 1974. This legislation replaced prior East African Management Act 1958, which was in force in Kenya, Uganda and Tanzania, until the breakup of the East-African Community (KRA 2014, 1). Since the onset of the Tax Modernization Programme in the 1980s, as mentioned in the Chapter 2, the personal income tax was subject to reforms and rationalization. While in the late 1980s the personal income tax was levied at eight different marginal rates ranging from 10 to 65% (refer to Figure 1, Chapter 2), further years saw a gradual reductions of the top rate down to 45% in 1990, 35% in 1996 and 30% in 2000, since when it stabilized (Eissa and Jack 2009).

The current income tax in Kenya is designed in a progressive manner, with the rates steadily increasing for higher income thresholds. As of 2015, the tax rates fall within the following tax brackets (KRA 2014):

Tax Bracket	Tax base	Top income in the Tax Bracket (in Ksh)	Tax rate
1	the first KShs 121,968	121,968	10%
2	The next KShs.114, 912	236,880	15%
3	The next KShs.114, 912	351,792	20%
4	Next KShs.114, 9120	466,704	25%
5	Above KShs. 466,704	466,704+	30%

Figure 3. PAYE Tax Rates and Brackets
Adapted from: KRA website
Nominal values per annum

As the Figure 3 shows, the tax rates are increasing by 5 percentage points for each tax bracket, thus ensuring progressivity of the taxation.

Personal tax relief is one of the measures to decrease a tax burden of the lowest income groups as it allows larger number of individuals to exit a tax net. The tax reliefs were in place in Kenya since FY1981/82, when the reliefs were set at Ksh1800 per annum (p.a) for married couple, single relief of Ksh600 and special single relief of KHs 820 for single with children. Since then, the relief threshold was increased on annual or biannual basis. In FY1996/97 a uniform personal relief was introduced with no distinction of a marital status of a taxpayer. The current tax relief at the rate of Ksh13,944 p.a. or Ksh1,162 per month was introduced in FY2004/05, which replaced the previously lower tax relief of Ksh 12672 p.a. As Wanjala et al argued (2006), such measures resulted in removing some discriminatory element of taxation that previously had placed greater tax burden on singles and single families with children.

PAYE Tax Burden Analysis

Due to the lack of a specific data on tax revenue distribution across different income groups, the author had used several data sets from the Statistical Abstract (SA) 2014 (KNBS 2014), and Economic Survey (ES) 2015 (KNBS 2015) to estimate the tax burden by calculating the effective tax rate for various income groups (Figure 4). The author analyzed tax burden for 2013 as some indicators were not available for 2014.

C1	C2	C3	C4	C5	**C6**
Annual Income Brackets, Ksh p.a.	No. employees in formal sector	Average wages for income brackets, Ksh p.a.	Average taxes per person, Ksh p.a.	Income tax bracket	**Average Eff. Tax Burden**
0-119,999	19,053	119,999	0	10%	**0.0%**
120,000-179,999	59,095	159,904	3,943	15%	**2.5%**
180,000-239,999	214,667	223,396	13,467	15%	**6.0%**
240,000-299,999	426,890	291,011	26,316	20%	**9.0%**
300,000-359,999	449,247	324,909	33,095	20%	**10.2%**
360,000-599,999	570,709	501,856	77,746	30%	**15.5%**
600,000-1,199,999	462,092	857,942	184,571	30%	**21.5%**
1,200,000+	63,965	1,389,183	343,944	30%	**24.8%**
Total	2,265,718				

Figure 4. Estimated Effective Tax Burden in 2013, by income group, per annum
Author's computations, source: ES 2015, SA2014

The first two categories (C1 and C2) in the Figure 4 are derived from the SA (KNBS 2014), Table 188; 'Distribution of Wage Employment by Sex and Income, Monthly groups, 2010-2013'. The average wages for income brackets (C3) is aggregated from all the sectors, which are derived and computed from the Table 4.7.; 'Average Wage Earnings per Employee, 2010-2014, (Ksh per annum)' from the ES 2015 (KNBS 2015, 75). The average taxes per person (C4) and the average effective taxes (C6) are computed by the author, based on the data in the Figure 3. Appendix 1 provides detailed account of the methodology applied for calculating the effective tax burden.

In order to calculate average incomes in different income groups in 2013, the author had collected data on the average nominal wages in all the industries of private and public sector in 2013 and allocated them to the given income groups (Figure 4). As the lowest average wages in all the

industries were starting from the second income tax bracket of 15%, for the lowest annual income bracket the author had assumed the maximum income of Ksh119,999 p.a.

Based on the average wages in each income group (C3), and the income tax brackets for those wages (C5), the author had computed the average taxes per person in each income group (C4). For instance, the second income bracket (up to Ksh179,999 p.a.) average tax per person was calculated as follows: [(121968*0.1)+(159904-121968)*0.15)-13944], while the tax for the top income group (Ksh1,200,000 p.a. and above) was the following: [(121968*0.1)+((236880-121968)*0.15)+((351792-236880)*0.2)+((466704-351792)*0.25)+((1389183-466704)*0.3))-13944]. Finally, the average effective tax burden, or average effective tax rate (C6) was calculated for each income group.

From the above computation it can be concluded that the effective tax rates of PAYE imply progressive taxation. The lowest income earners, with wages up to Ksh 119,999 p.a. do not pay taxes because the tax value is below the relief of KSh 13,944 p.a [(119,999*0.1)-13,944]. The effective taxes paid by the higher income groups are steadily increasing from 2.5% for those earning on average Ksh 159,904 p.a., until 24.8% for the top earners. Furthermore, on the aggregate level, the largest contributions to the income tax revenue come from the individuals earning between Ksh 300,000-1,200,000 p.a. as a result of a high tax wedge on the income as well as due to the high number of formal sector workforce in these groups compared to the lower income groups. Therefore, it can be stated that the PAYE system in Kenya is designed to be progressive. In fact, a significant share (62%) of the workforce in the official economy earns between Ksh 300,000 and Ksh1.2mn p.a., and is therefore subject to the tax of 20%, 25% or the top rate of 30%. However, there is a lack of available data on the nominal tax revenues coming from those groups and consequently – the tax compliance of those groups and their tax burden.

Nevertheless, the effective progressivity of the overall taxation on high income households is difficult to judge as it would require analysis of aggregate income and consumption taxes as well

as tax reliefs on capital to be considered. The overall progressivity might be affected by the aggregate distribution of tax reliefs on savings and investment. Based on the analysis of the list of the tax reliefs in Kenya (KRA 2014), it emerges that all reliefs available to individual taxpayers, except for the personal tax relief, are targeting higher income earners as they are given to incentivize investment and savings. Such reliefs include tax exemptions on premiums for life insurance, reliefs and deductions on interest paid on mortgage, deposits on Saving Plans, exemptions on housing bonds and pensions. In order to understand how such tax reliefs are impacting the aggregate tax incidence, it would be recommendable for the Government of Kenya to provide data on how the real tax revenues and tax reliefs are distributed across different income groups.

Furthermore, the progressivity of tax system only captures patterns in the formal employment. However, with the 77% of the labor being employed in the shadow, untaxed economy (IEA 2012) and 45.2% of the population living below the poverty line (KNBS 2013), there is a plausible possibility that shadow economy to some extent allows for progressivity of the tax system.

Finally, while acknowledging its limitations, the above mentioned method for computing the effective income tax rates can serve to improve the precision of analyzing tax burden in Kenya. Due to the lack of availability of more precise statistical data, the above analysis is only limited to indicating the potential progressivity of the Kenyan tax system through calculating effective tax rates. These limitations resonate within the previous research by Wanjala et al (2006, 23-4), who used the top margin income for every income bracket to estimate the tax payable and effective tax burden of each income group. Their approach resulted in overestimation of the tax payable in the all the income groups except for the top income bracket with the tax rate of 30%, for which the tax was not captured (underestimated) due to the unspecified top income above Ksh30,000 per month. Although this thesis was partly based on the approach by Wanjala et al (2006), it sought to propose more precise methodology. It was achieved by finding the mean wages for each income

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group, which were derived of the average wages in all sectors in a given year. Consequently, this study minimizes overestimations and underestimation encountered in Wanjala et al (2006) to more manageable proportions and therefore, it can be claimed as more precise, given the available statistical data.

3.2. Corporate Tax

Corporate tax, together with taxes on small businesses registered by unincorporated individuals (Personal Income Tax), is another form of a direct income tax. They are levied on the company profits or small business earnings. Both taxes will be analyzed together because they are lumped together in the national statistics under a category "income tax from corporations (other income tax)" (KNBS 2015).

While the Personal Income Tax is generally levied on self-registered businesses and individual entrepreneurs at the tax rates and tax brackets identical to the PAYE system, the corporate income tax is levied at a flat rate of 30% of profits for domestic firms and 37.5% for international corporations (KRA website). Moreover, lower rates are set for companies enlisted on Nairobi Stock Exchange in order to encourage listing. The corporate tax, alike the PAYE system, has its legal base in Income Tax Act, Cap 470, which defines and determines details of its rates, base and reliefs (Karingi et al 2004).

Although corporate taxes make up 21% of the overall tax revenue in 2014 (see Figure 2), their share in the tax revenue is volatile, depending on the economic conditions of the country. In the mid-1990s to the early 2000s, the corporation tax revenues declined from 25% to 16% of the total tax revenues. This decline was attributed to poor economic performance, stringent measures in bad debts provisioning in the banking sector and high interest rates leading to the increasing cost of doing business. Since the 2000s, the economic performance of Kenya has steadily improved, resulting in as high as KSh 299,768 mn being collected in corporation tax in 2014 (Figure 5).
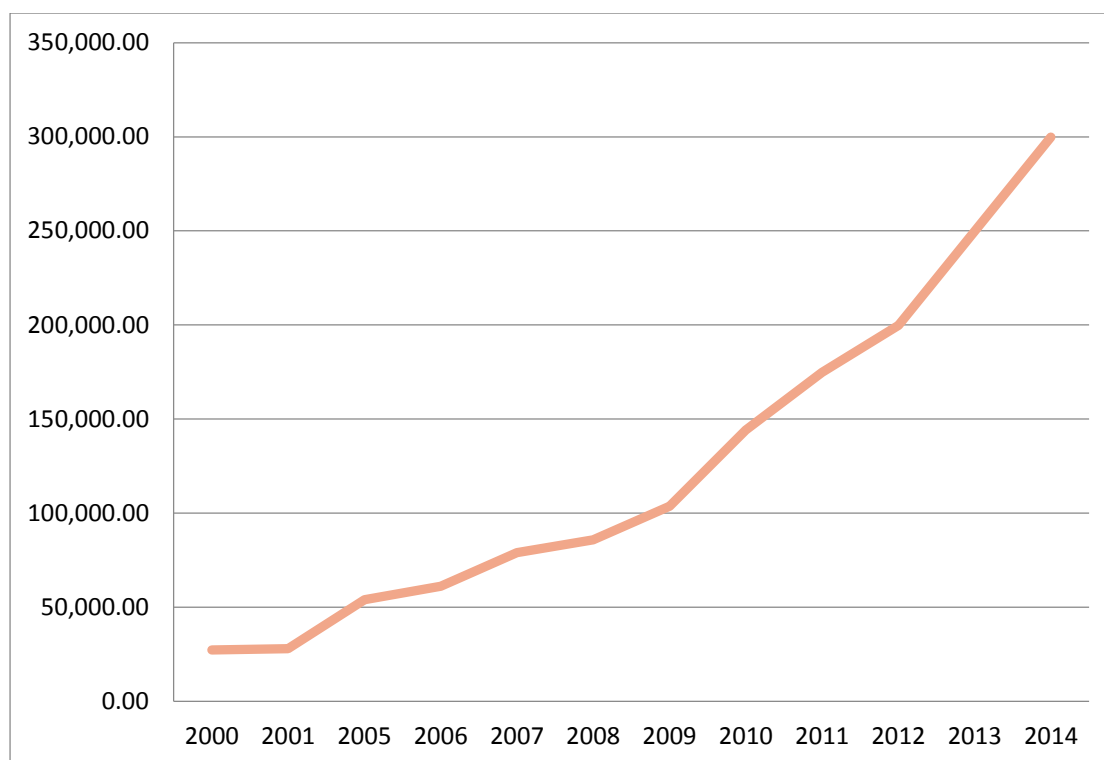
Figure 5. Corporate Tax Revenues 2000-2014; (Ksh million)
Author's compilation, source: multiple ESs, KNBS

The Corporation tax rates varied and had been amended several times over the last decades. In FY1973/74 the rates for local companies were 45%, while they stood at 47.5% for foreign companies. Subsequently, the rates for local companies were reduced to 42. 5% in 1989/90, and further lowered to 40%, 37.5%, 35% in FY 1991/92, 1992/93 and 1997/98 respectively. The corporate income tax rate stabilized at 30% in 2001/2002, with newly listed companies being offered lower tax rate on 27% and 25% the following year 2002/2003. The corporate tax for foreign companies was decreased to 42.5% in 1989/90 and further to 40% in 1997/98 and 37.5% in 2000 (Karingi et al 2004, KRA website).

As previously noted in the Chapter 2, since the 1980s, the Kenyan government implemented multiple reforms of a tax system, with the purpose of enhancing its competitiveness for the foreign direct investment (FDI) and capital inflow. The main fiscal incentives and reliefs for the corporations include tax holidays, tax credits, investment allowances, accelerated depreciation, expansion allowances and exemptions from import and export tariffs. The financial and regulatory

incentives provided more favorable regulatory environment for the investment through subsidies, grants and loan guarantees as well as provision of infrastructure and training.

As a result of the policy incentivizing FDI and capital inflow, the tax incentives in Kenya target mainly foreign companies, for instance, through 10 years corporate tax holidays and 25% corporate tax rates on profits in export processing zones (EPZ) in Kenya. Currently, there are around 40 EPZ in place, with over 70% of their output being exported to the USA under African Growth and Opportunity Act (AGOA) (IEA 2012b). While the tax incentives can be considered as a policy tool for attracting FDI, they might have distortionary effect on the investment, promoting short-term rather than long term investment projects. Furthermore, from the tax incidence point of view, they confer greater benefit to highly profitable foreign firms that would have made the investment even when no incentives were offered (Moyi and Ronge 2006). Consequently, it can be also suggested that such reliefs reduce progressivity of the corporate taxation through decreasing effective tax burden on numerous large, foreign corporations and placing effectively greater tax burden on the local companies. Such practices may also have an impact on the overall corporate tax collection effort. According to the study by Institute of Economic Analysis (2012b), Kenya has forgone the cumulative 21.10% of its corporate tax revenue between 2003 and 2009 as a result of investment incentives.

Corporate Tax Burden Analysis

Similarly to the PAYE, the GoK does not provide disaggregated data on the tax revenues by the turnover of companies nor any other indicator of corporation tax burden. Furthermore, the Economic Survey 2015 lumps both corporation tax and enterprises tax together under a category: 'Income tax from corporations (other income tax)', therefore rendering it difficult to analyze what shares of this categories belong to the corporate tax and 'other income tax'. Nevertheless it can be noted that Kenya's corporate taxpayers are mainly large and medium-size companies. According to the KRA website (2010 data), there are over 1100 institutions registered at the Large Taxpayer

Office (a branch of KRA, operating since 1998 to provide efficient services to the largest companies), as well as initial 580 taxpayers registered in a Medium Taxpayer Office established in 2010.

Despite these limitations, the study will seek to analyze the aggregate tax burden by finding the effective tax rate on the corporations. This can be computed from the gross profit of the private sector. As data on the gross profits of the private sector in Kenya is not available, this study will seek to find it by using methodology offered in Karingi et al (2004), as well as it will compare the computations for effective corporate tax burden in 2013 with the results derived for 2000 and 2001 from Karingi et al (2004) (see Appendix 2 for details on methodology). The study by Karingi et al (2004) measured the tax capacity, i.e. the tax potential of a country based on its socio-economic and technological environment and tax effort, i.e. the extent (percentage rate) to which this potential is translated into the revenue. Although some other studies (Waris et al 2009) assumed constant tax efforts in Kenya and extrapolated the tax efforts for 2001 from Karingi et al (2004) to the FY2007/8, the author of this thesis chose to assume that the tax efforts, and consequently, the effective corporation tax burden have improved since 2001 (Figure 6).

	2000	2001	**2013**
Private Sector Gross Profit	262,435	265,878	**1,018,459**
Potential Revenues @30% Corporation Tax Rate	78,731	79,763	**305,538**
Actual Tax Collection	27,359	28,044	**199,717**
Effective Tax Burden/Rate	**10%**	**11%**	**20%**

Figure 6. Effective Corporation Tax Burden in 2000, 2001 and 2013 (Ksh million, percentage)
Source: Author's computation, ES 2015, SA 2014, Karingi et al 2004

The Figure 6 represents effective corporation tax burden calculations for 2013 as compared to 2000 and 2001. The data indicates that the effective corporation tax rate in 2013 achieved 20%, which represents a double of the rate in the early 2000s. This is a positive development, which might have been helped by the fiscal reforms undertaken in the last two decades, including modernization of KRA to boost its collection capacities, increased compliance audits of the corporations, establishing Large Taxpayers Office and Medium Taxpayer Office to facilitate tax

collections from the corporations. Furthermore, favorable macroeconomic environment of 2013 might have had a considerable effect on the improved tax collection performance.

Yet, this analysis provides further interesting points. While the improvements in the effective tax burden on corporations is notable, the tax revenue is still considerably lower than the potential tax revenue at the standard 30% rate imposed on the domestic companies. Taking into account the fact that foreign companies are charged at 37.5% corporation tax, it is plausible that many corporations in Kenya might be taking advantage of tax neutralization strategies through possible tax reliefs, tax holidays, tax breaks, transfer pricing and other legal or less legal procedures. Moreover, although the Kenyan fiscal system sought to equalize the top labor income and domestic corporate rates to minimize economic distortions due to shifting incomes between labor and the capital by large taxpayers, and to ensure optimal tax collection, in fact, lower effective tax rates on capital (20%) in Kenya may incentivizes shifting of incomes to capital for tax neutralization purposes.

Although there is no disaggregated data available on the effective tax rates on domestic and foreign companies, the tax relief analysis in the previous section may indicate that it is the foreign companies that are more likely to harness generous fiscal reliefs as they can be established in EPZ. Furthermore large corporations with considerable capital can enjoy a number of other investment incentives such as Investment Tax Credits, which further decrease the effective tax burden. This would imply that the larger effective tax burden is placed on domestic companies, especially the small and medium enterprises (SME) who are not able to take advantage of investment incentivizing tax reliefs. Moreover, while the corporation taxes are levied on the flat rate, it would be also interesting to see how the effective tax burdens are disaggregated by the size or turnover of the company, and whether such tax incidence does not create economic distortions, such as crowding out of small, domestic businesses. Thus, it would be recommended for the GoK to

provide disaggregated data on tax revenues not only by domestic and foreign companies, but also by their turnover/size.
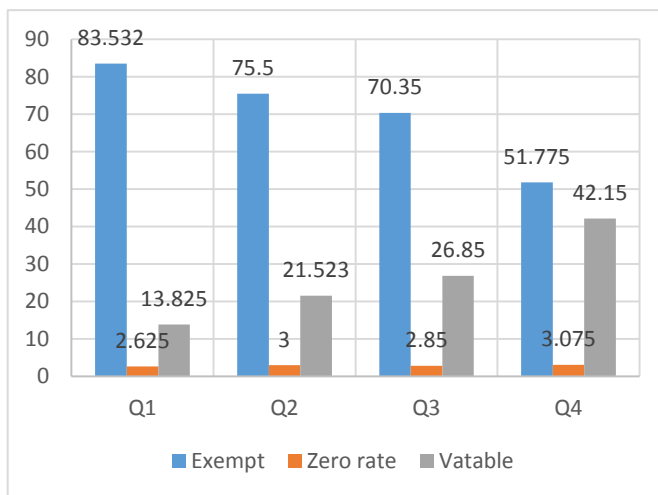
3.3. VAT

Value added tax is a multistage consumption tax that is levied on added value at all the stages of the production and distribution chain. In Kenya, the VAT had been introduced in January 1990 to replace sales tax, which was in operation since 1974. The VAT is charged on supply of taxable goods and services into Kenya (KRA website). It is collected by the traders, who are obliged to register for VAT with the KRA once their annual sale turnover reaches Ksh 3mn p.a.

The main legislation on VAT is Value Added Tax Act, Cap.474 and recently introduced Value Added Tax Act 2013. The first VAT Act Cap 474 introduced the rates of 12% on some strategic products and services (energy and petroleum), 16% for consumption goods and services, zero rates and exemptions for basic consumption such as vegetable, bread, rice etc. The main objective of the VAT Act 2013 was rationalizing and reducing number of goods and services that are exempt or zero rated, abolition of VAT remission, application of standard rate of 16% for all goods and services for which VAT applies (KPMG 2013).

VAT exemptions and zero rates were replaced in VAT Act 2013 with 16% rate on selected products and services, including: medical equipment including equipment for disabled, books, newspapers, computers and software, mobile phones, processed milk and cooking gas. Also, concessionary tax of 12% on electricity, diesel and fuel oil, that was intended to cushion domestic consumption against the global fluctuations in energy costs, was replaced with the standard 16% rate. Exemptions and zero rates remained on the basic necessities such as basic foodstuff (fruits, vegetables, flour, unprocessed milk and meat, rice, maize etc.), medical and pharmaceutical products, and educational, medical and financial services (KPMG 2013, Ernst&Young 2014).

VAT Tax Burden Analysis after VAT Act 2013

Wanjala et al (2006, 27) provided more detailed analysis of the VAT tax incidence on expenditure quartiles and genders. The analysis reveals that the overall VAT is progressive as a result of exemptions and zero rating of the basic commodities (Figure 7). The expenditure of the 1st quartile (Q1) is in 84% exempt and at 2% zero rated, while only the remaining 14% of the consumption is VAT-able. At the same time, the exempt consumption is steadily decreasing in the following quartiles, reaching the lowest level of 55% in the 4th quartile (Q4). Simultaneously, the VAT-able consumption rises in each group to achieve the level of 42% of consumption expenditure in the 4th quartile.

This section will examine impact of some of the changes to the VAT regime in the light of its incidence on the income groups[2], measured by expenditure quartiles as well as by location (rural or urban).

Figure 7. VAT Tax Burden, % expenditure by quartile
Adapted from: Wanjala et al 2006, WMS 1997
1Q – first quartile, 2Q – second quartile etc.

One of the significant changes in VAT Act 2013 was the removal of electricity supply to the domestic sector and zero rate for cooking gas (LPG) from the list of zero rated products. This will have a direct effect on the households that are utilizing these forms of energy. According to the author's computation of the data derived Wanjala et al (2006) (based on Welfare Monitoring Survey 1997), raising tax on electricity from 12% to 16% will have a particularly significant effect on households expenditure in the 4th quartile in both rural (4QR) and urban areas (4QU) (Figure 8,

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[2] Since the expenditure distribution in Wanjala et al (2006) is treated as a proxy for income distribution, this thesis will also treat the 'expenditure groups' as equivalent to 'income groups'.

see Appendix 3 for more details). As a result, the effective tax expenditure on electricity consumption will increase from 0.16% to 0.22% of the total consumption, and from 0.29% to 0.39% in the rural and urban areas respectively.
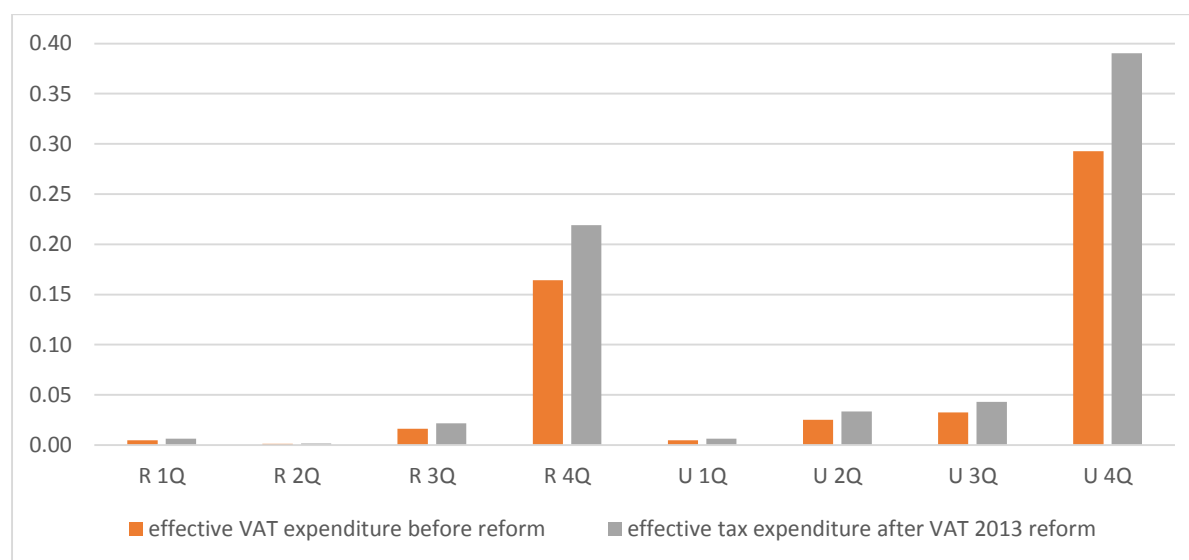

Figure 8. Effective % expenditure on electricity VAT tax, urban and rural populations, by quartiles
Author's computation, adapted from: Wanjala et al 2006, WMS 1997
R-Rural; U- Urban; 1Q – first quartile, 2Q – second quartile etc.

Nevertheless, it should be noted, that since the WMS in 1997, Kenya have undergone significant electrification program under the Rural Electrification Authority (REA). According to the most recent data from the Economic Survey 2015 (KNBS 2015, 192), the number of customers connected to electrification under the program rose by 16.5% from July 2013 to July 2014 to stand at 528,552, with 45% growth in the number of units of electricity sold. Furthermore, the REA have also been removed from the list of zero rated organizations in Vat Act 2013, which renders its purchases more costly (KPMG 2013). As a result of these changes, it can be argued that, firstly, the rural household under this program might face higher expenditure on electricity. Secondly, the removal of REA from zero-rated organizations can limit the reach of the program.

Similarly, the cooking gas (LPG) that was previously at zero rate, will now be rated at 16%. This will considerably affect urban populations, where, according to the recent survey by Kenyan

Bureau of Statistics, over 12% of the urban population is consuming cooking gas as opposed to only 0.6% of the rural population (KNBS 2013).

In contrast, revoking zero-rate on computers, software and mobile phones might have a larger impact on the Kenyan populations. According to the report by Communication Authority of Kenya, mobile phones coverage stands at 86.2% of the whole population above the age of three (KNBS 2015), while the Internet penetration in the same population stood at 42.2% in 2014 (KNBS 2015). Moreover, around 61 out of 100 inhabitants of Kenya utilize mobile financial service providers such as M-pesa, to which subscriptions more than doubled since 2010 (KNBS 2015). M-pesa is a mobile financial service provider, launched by Vodafone in 2007 in Kenya, which is offering an alternative to formal banking in a number of developing countries with limited reach of formal banking. Since its inception in 2007, M-pesa achieved a remarkable success in Kenya. According to the study by Jack and Suri (2009), M-pesa is used by both, urban and rural households alike for a variety of services such as sending and receiving remittances, savings and money transfers. Considering the use of mobile phones by majority of population for not only communication but also financial services, it can be argued that replacing zero-rate with 16% rate on mobile phones can have some effect on household expenditure in both, urban and rural areas.

Some of the food products removed from the zero rate or exemptions lists included processed milk, and, after corrections, baby food (Ernst&Young 2014). According to the WMS 1997 (in Wanjala et al 2006), processed milk stands at 2% of the expenditure on consumption in the urban areas and at 1.5% in rural areas. Therefore it can be argued that replacing a zero tax rate with 16% tax will have slightly higher impact on urban populations, albeit insignificant one. Similarly, placing a 16% tax on baby food will have some impact on a small proportion of the urban populations, where the aggregate expenditure on baby food takes trace proportions, while in the rural ones it is almost nonexistent (WMS 1997 in Wanjala et al 2006).

Analyzing the tax exemptions incidence can also be helpful in providing a better picture of tax progressivity. Tax exemptions were retained in VAT Act 2013 on basic foodstuff including vegetables, fruits, maize, rice, bread, unprocessed meat and milk, flour etc. Food items take the largest part of the expenditure in the lowest quartiles of 42.22% and, 48.78% of household expenditure in rural (R1Q) and urban areas (R1U) respectively. Therefore, maintaining tax exemptions will benefit more significantly the populations in the first income quartiles (Figure 9, Appendix 3).
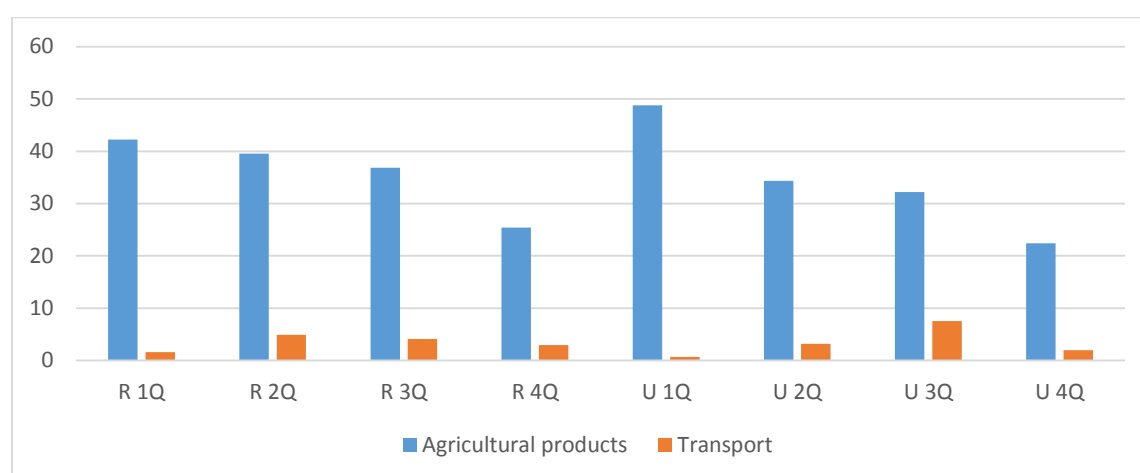
Figure 9. Tax exempt expenditure of urban and rural populations, % of total expenditure, by quartiles
Source: Wanjala 2006, WMS 1997
R-Rural; U- Urban; 1Q – first quartile, 2Q – second quartile etc.

Tax exemptions will also remain on financial services, insurance and passenger transportation. The data from WMS 1997 (in Wanjala et al 2006) suggests that financial services are used to a larger extent by the highest quartiles in both urban and rural areas, therefore the high income groups will benefit the most from the exemption. On the other hand, retaining exemptions on transportation is more likely to benefit second and third quartiles in both rural and urban settlements (Figure 9).

3.4. Excise

Excise is a levy applied to the production or sale of domestic or imported goods on ad valorem or specific rates. They are usually imposed on products and services with low price elasticity of

demand and income elasticity of demand greater than unity (Karingi et al 2004). Such taxes have often discriminatory intent to tax non-necessary products such as cosmetics, jewelry and fur, or serve in order to discourage consumption or minimize negative externalities of consumption of harmful substances such as alcohol or nicotine. While they are characterized by high rates and low administration costs, they serve the governments as a good source of revenue. According to Karingi et al (2004, 14-15), excise can have a positive effect on improving vertical equity of the tax system as excisable goods are consumed in more quantities by higher income individuals. In Kenya, excise tax laws are specified in the 5th Schedule of the Customs and Excise Act Cap 472 of the Laws of Kenya (KRA Excise Duty Brochure)

Excise Burden Analysis

In Kenya, excise tax is levied on alcoholic beverages, tobacco products, petroleum products, mineral water, cosmetics and jewelry. The main excises revenues in 2014 were raised from excises on beer, cigarettes, wines and spirits, and mineral water respectively (KNBS 2015, 104). The rates for each item either as a percentage of the excisable value or at a nominal rate per unit (ad valorem duty rate). For instance, excise on beer stands at Ksh45 per litre, while excise on cigarettes is levied at different levels, depending upon the type of cigarettes (plain, soft cap, hinge lid) (KRA Excise Brochure).
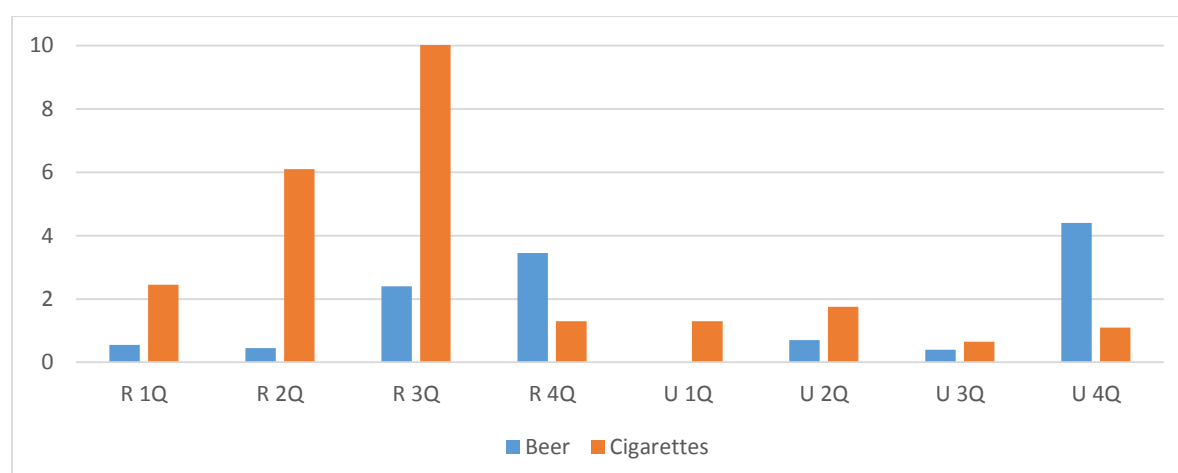

Figure 10. Excisable expenditure of urban and rural populations on beer and cigarettes, % of total expenditure, by quartiles

Source: Wanjala et al 2006
R-Rural; U- Urban; 1Q – first quartile, 2Q – second quartile etc.

Figure 10 shows that progressivity through excise tax is not fully achieved for all types of the excisable items. The expenditure on beer reaches progressivity in both, rural and urban areas, where the lowest quartiles expenditure on beer is below 1% while it ranges between 2 and 5% of expenditure in the top quartiles. However, the expenditure on cigarettes reveals different pattern. While on average the 1st, 2nd and 3rd quartiles in rural areas spend between 2 to 10% of their disposable income on cigarettes, the top quartile in rural areas and in all quartiles in the urban areas devote only up to 2% of their expenditure on cigarettes (see Appendix 3 for details).

The differences in the progressivity of those two items can be explained by higher income elasticity of demand on alcohol. Consequently, the recent rise in consumption of alcohol in Kenya is attributed to a continuous growth of a middle class with more disposable income (Euromonitor 2014). The regressivity in the expenditure on cigarettes can be explained by inelasticity of cigarette demand to price and the fact that it can be considered as inferior good, i.e. of which consumption decreases with increase of income, as it is not symbolic of a higher social status and higher disposable income (Okello 2001).

These results carry out important implications on an excise burden. Firstly, it can be claimed that excise taxes on beer and other alcoholic drinks reveal progressive tax burden tendency, and therefore can serve as an item of which rates can be further increased to achieve improved progressivity. On the other hand, any increase of excise on cigarettes might have some regressive effect, placing higher burden on lower income groups. Although it can be argued that the main objective in the case of excises on alcohol and cigarettes is to discourage consumption, the tax incidence analysis may provide an insight into how invasive can be raising excises no these items for the disposable income of household in the lowest quartiles.

ANALYSIS AND CONCLUSIONS

The government of Kenya has made a considerable progress since the independence in 1963 in reforming the tax system to ensure equitable and efficient revenue mobilization through taxation. This study sought to evaluate the progressivity of the tax burden in Kenya by analyzing effective tax rates on both, the income and consumption taxes. This thesis highlights that the overall fiscal policy design in Kenya represents progressive characteristics, placing higher tax burden on taxpayers with higher disposable income. However, several important points emerge from the separate analysis of the effective income tax rates on PAYE and corporation taxes on the one hand, and the effective tax burden on consumption expenditure of VAT and excises on another.

This study highlights that the PAYE tax is designed in a way to place a higher tax burden on high incomes taxpayers, and simultaneously, it gives a standard individual tax relief, thus decreasing the tax wedge on salaries in the lower income groups. Furthermore, it can be claimed that around 62% of the workforce in the official economy earns between Ksh 300,000 and Ksh 1.2mn p.a. (KNBS 2014) and as a result, is subject to the tax of third, fourth and the highest fifth tax bracket of 20%, 25% or 30% respectively.

The corporation tax regime in Kenya underwent numerous reforms and rationalizations in response to the global and regional economic trends, and was used by the GoK not only as an instrument for revenue mobilization, but also for attracting foreign capital and FDI. Although as high as 37.5% corporate tax rate is placed on the foreign companies, and 30% on the resident companies, this study argues that the estimated effective corporation tax burden in Kenya stands at 20% of the corporate profits. Considering that generous tax incentives are given to foreign corporations established in EPZ and to the companies providing high scale investment, there is a plausible possibility that such fiscal policies decrease to a larger extent the tax burden of large and foreign companies, rather than that of the small and medium domestic enterprises. However, scarcity of data on effective tax burden paid by foreign and resident companies, disaggregated by

their size/turnover does not allow for making more conclusive statement on the corporate tax burden.

Indirect taxation, of which the most common forms are VAT and excises, is often perceived as regressive, placing higher tax burden on lower income groups, whose propensity to consume is higher than in the case of high earners. However, it can be argued that the overall consumption taxes in Kenya are designed in order to exclude population with the lowest disposable income from the tax net. The progressivity of the VAT is achieved through exemptions for basic necessities such as fruits, vegetables, flour, rice, medicines, and mosquito nets etc., which form a significant share of the lowest expenditure quartiles expenditure in both rural and urban areas. Nevertheless, some of the VAT exemptions may benefit to larger extent households with the highest disposable incomes from urban centers (financial services, solar panel installation) or a middle income groups (transportation of passengers).

The VAT Act 2013 had simplified and standardized the tax system by removing the concessionary tax rate of 12% on some energy related products, as well as reducing number of items exempt or zero-rated and placing them under standardized, 16% VAT rate. This study indicates that overall tax increases on electricity, infant foods, books and newspapers since 2013 had greater impact on the highest two quartiles of the population, particularly those living in the urban areas.

Nevertheless, some of the increases can be felt by the majority of the population. For instance, replacing tax exemptions with 16% VAT tax on mobile phones can affect populations in rural and urban areas, because a large majority (83%) of the population has access to the mobile phones, and 61% of the total population uses financial mobile phone services (KNBS 2015). As there is no up to date study available on expenditure by income groups on communication and IT in Kenya, such study would be recommendable for more detailed tax incidence analysis.

Furthermore, this research analyzed the incidence of excise on beer and cigarettes, the top two excisable products consumed in Kenya in 2014. The study suggests that the beer excise reveals

more progressive patterns, due to the high income elasticity of demand for this product. Therefore, the excise on beer will place a higher burden on households with more disposable income, particularly in urban areas. On the other hand, cigarette expenditure patterns tend to be higher in rural areas in the 1st, 2nd and 3rd quartile, while it tends to be lower in the highest quartiles. Therefore, the cigarette excise has more invasive effect on the incomes of the least affluent households.

Finally, this study also sought to propose few innovative methods and improve existing approaches for calculating tax burden, for instance of the PAYE (Wanjala et al 2006), as well as to update the research on effective corporation tax burden (Karingi 2004). Due to the scarcity or imprecision of the data, this study cannot provide conclusive statement on the tax incidence. However it can provide an insightful approximation of the tax incidence in Kenya, employing the most recent data available and improving the previous research wherever possible.

Recommendations

It would be highly recommended for the GoK to collect and provide data on PAYE tax revenue as well as any on tax reliefs and exemptions, disaggregated by income groups (quartiles or other measures). Furthermore, detailed and up to date studies would be required on consumption patterns on specific VAT-able, VAT exempt and excisable products and services as well as on savings and investments (and their forms) by the said income groups. Finally, data on corporation tax revenues from foreign and domestic companies, disaggregated by size/turnover would allow for drawing more precise picture on effective tax burden of the said companies. Such data would be very insightful not only for further tax incidence research, but also for assessing the current industrial and economic strategies for the sustainable socio-economic development in Kenya.

Appendix 1. PAYE – Average Effective Tax Burden for 2013, Computations

	C1	C2	C3	C4	C5	C6
	Annual income brackets, Ksh	No. employees in formal sector	Average wages for income brackets, Ksh	Average taxes per person, Ksh	Income tax bracket	**Average Effective Tax Burden**
	0-119,999	19,053	119,999	0	10%	**0.0%**
	120,000-179,999	59,095	159,904	3,943	15%	**2.5%**
	180,000-239,999	214,667	223,396	13,467	15%	**6.0%**
	240,000-299,999	426,890	291,011	26,316	20%	**9.0%**
	300,000-359,999	449,247	324,909	33,095	20%	**10.2%**
	360,000-599,999	570,709	501,856	77,746	30%	**15.5%**
	600,000-1,199,999	462,092	857,942	184,571	30%	**21.5%**
	1,200,000+	63,965	1,389,183	343,944	30%	**24.8%**
	Total	2,265,718				

Figure 11. Estimated Effective Tax Burden in 2013, by income group, per annum, computations
Author's computations, Source: ES 2015, SA 2014

The author had used the following computations to find Average Effective PAYE Tax Rates:

I. Category 1 (C1 -Annual income bracket) and Category 2 (Number of employees in the formal sector) were taken from Statistical Abstract (SA) (KNBS 2014), Table 188, 'Distribution of Wage Employment by Sex and Income, Monthly groups, 2010-2013'. The monthly wages were multiplied by 12 to find the annual wages;

II. C3 is a value approximated by the author through merging data from several statistical tables in three stages. First, the average wages in all sectors of the economy were derived from Table 4.7. 'Average Wage Earnings per Employee, 2010-2014, (Ksh per annum)' from ES2015 (KNBS 2015, 75). Secondly, the average wages for each sector were allocated within the appropriate annual income brackets (C1). Third, the mean values were computed from the average wages allocated for each income bracket. As the lowest average wages in all the industries were starting from the second income tax bracket (120,000-179,999), for the lowest income bracket the author had assumed the maximum income of Ksh119,999;

III. The Income tax brackets (C5) were assigned for each C3, based on the Figure 3. PAYE Tax Rates and Brackets (page 21);

IV. Average taxes per person were calculated (C4). For the second income bracket (up to Ksh179,999), the average taxes per person were calculated as follows:
[(121968*0.1)+(159904-121968)*0.15)-13944], while the taxes for the top income group (Ksh1,200,000p.a. and above) were the following:
[(121968*0.1)+((236880-121968)*0.15)+((351792-236880)*0.2)+((466704-351792)*0.25)+((1389183-466704)*0.3))-13944];

V. Average effective tax rates (C6) = Average taxes per person (C4)/ Average wages for income brackets (C3).

Appendix 2. Effective Corporation Tax Burden in 2013, Computations

		2000	2001	2013
A	Gross Value Added (GVA)	740,625.50	816,178.00	2,839,419
1	Net Material Consumption	55,221.50	66,673.00	173,808
2	Investment	20,387.00	20,729.00	552,249
3	Wages	291,332.00	347,332.00	737,666
4	Indirect Taxes	111,250.00	115,566.00	307,034
B=SUM(1,2,3,4)	Total cost of GVA	478,190.50	550,300.00	1,788,998
C=A-B	Gross Profit	262,435.00	265,878.00	1,018,459
D	Potential Revenues @30% rate	78,730.50	79,763.40	305,538
E	Actual Collection	27,359.00	28,044.00	199,717
F=E/C	Effective Tax Burden/Rate	10%	11%	20%

Figure 12. Effective corporation tax burden – computations, (Ksh millon)

Source: Author's computation, ES 2015, SA 2014, Karingi 2006

The categories A and 1-4, B-E for 2000 and 2001 were taken from Karingi 2006, category F was calculated from the data above. The data for 2013 were calculated by the author, based on various data tables in Economic Survey (ES) 2015 and Statistical Abstract (SA) 2014, as follows:

    I.   Gross Value Added (A) was derived from the SA2014, Table 25, 'Annual Production Accounts by Industry 2009-2013'in Ksh Millions), the gross value added were calculated for all of the sectors excluding public sectors (Public Administration and Defence, Education, Health and Social Work);

    II.   Category 1- Net Material Consumption was taken from Karingi 2006 for 2000-2002. Because such category does not exist in the statistical accounts of Kenya, as a proxy for the net material consumption, the author used consumption of fixed capital (Table 35. 'National Disposable Income and Saving, 2009 – 2013' from SA2014) at the 75.1% contribution of the private sector in GDP for 2013 (Table 28b, 'Gross Domestic Product by Sector, 2009 - 2013' SA2014, calculated share of the private sector in GDP contribution);

    III.   Similarly, in category 2 Investment, the data for 2013 was derived from gross capital formation (Table 32.a 'Gross Fixed Capital Formation, 2009 – 2013', SA2014);

    IV.   Wages for 2013 were derived from Table 25 'Annual Production Accounts by Industry 2009-2013'in Ksh Millions, from SA2014 (compensation of employees' for all of the sectors excluding public sectors; Public Administration and Defence, Education, Health and Social Work);

    V.   Indirect taxes (4) were taken from ES 2015, Table 6.4. 'National Government Gross Receipts on Recurrent Account, 2010-2015', and discounted at a 75.1% contribution of the private sector to GDP in 2013;

    VI.   Total Cost of GVA (B) is the sum of 1-4, thus the Gross Profit (C) = A-B

    VII.   Category D – potential taxes collected at the minimal corporation tax of 30% (minimum rate paid by both domestic and foreign companies)= C*30%

    VIII.   Actual corporation tax revenues are taken from Table 6.4. (see point V)

    IX.   Effective corporation tax burden= effective tax rate (F)=E/C.

Appendix 3. Tables of VAT-able, VAT Exempt and Excisable Consumption

	Rural				Urban			
	R 1Q	R 2Q	R 3Q	R 4Q	U 1Q	U 2Q	U 3Q	U 4Q
Electricity expenditure	0.04	0.01	0.14	1.37	0.04	0.21	0.27	2.44
effective VAT expenditure before reform	0.00	0.00	0.02	0.16	0.00	0.03	0.03	0.29
effective VAT expenditure after VAT 2013 reform	0.01	0.00	0.02	0.22	0.01	0.03	0.04	0.39

Figure 13. Effective % expenditure on electricity tax, urban and rural populations, by quartiles
Author's computation, adapted from: Wanjala et al 2006, WMS 1997
R-Rural; U- Urban; 1Q – first quartile, 2Q – second quartile etc.

	Rural				Urban			
	R 1Q	R 2Q	R 3Q	R 4Q	U 1Q	U 2Q	U 3Q	U 4Q
Agricultural products	42.25	39.53	36.83	25.41	48.78	34.32	32.23	22.44
Transport	1.63	4.9	4.12	2.93	0.71	3.23	7.55	2
Financial services	0.05	0.27	0.2	2.03	0.04	0.27	0.165	1.76

Figure 14. Tax exempt expenditure of urban and rural populations, % of total expenditure, by quartiles
Author's computation, adapted from: Wanjala et al 2006, WMS 1997
R-Rural; U- Urban; 1Q – first quartile, 2Q – second quartile etc.

	Rural				Urban			
	R 1Q	R 2Q	R 3Q	R 4Q	U 1Q	U 2Q	U 3Q	U 4Q
Beer	0.55	0.45	2.4	3.45	0	0.7	0.4	4.4
Cigarettes	2.45	6.1	10.25	1.3	1.3	1.75	0.65	1.1

Figure 15. Excisable expenditure of urban and rural populations on beer and cigarettes, % of total expenditure, by quartiles
Author's computation, adapted from: Wanjala et al 2006, WMS 1997
R-Rural; U- Urban; 1Q – first quartile, 2Q – second quartile etc.

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