

## **AN EMPIRICAL REVIEW OF FACTORS AFFECTING REVENUE COLLECTION IN NAIROBI COUNTY, KENYA**

**Patrick N. Ngicuru**

MBA Student, Faculty of Commerce, Department Of Accounting  
Finance and Management Science, Egerton University, Njoro, Kenya  
[patrickngicuru@yahoo.com](mailto:patrickngicuru@yahoo.com)

**Monicah Muiru**

Lecturer, Faculty of Commerce, Department Of Accounting  
Finance and Management Science, Egerton University, Njoro, Kenya  
[mshirom@yahoo.com](mailto:mshirom@yahoo.com)

**M Irene Riungu**

Lecturer, Faculty of Commerce, Department Of Accounting  
Finance and Management Science, Egerton University, Njoro, Kenya  
[iriungu@yahoo.com](mailto:iriungu@yahoo.com)

**Adam Shisia** 

Lecturer, School of Business and Economics, Machakos University, Machakos, Kenya  
[adamshisia@gmail.com](mailto:adamshisia@gmail.com)

### **Abstract**

*The introduction of county governments with the adoption of the new constitution has brought with it challenges in administration of these new institutions. This is particularly the case with revenue collection in the county governments whereby the revenue collected has in many times been below the projected figures. The purpose of this study was to establish the factors affecting revenue collection in Nairobi City County Government. The specific objectives of the study were to: establish effect of revenue diversification on revenue collection, establish the effects of administration on revenue collection, assess the effects of tax structure on revenue collection and find out how different forms of revenues affects revenue collection. The study*

*adopted a descriptive research design. The study population comprised of a total of 340 members and a sample size of 180 determined by using the Fischer's formula. Data collected was analyzed with the help of SPSS by both descriptive and inferential statistics. The study found that revenue diversification strategies increases the amount of revenue collected, with a good tax administration practices like competent staff and adoption of latest technology, the amount of revenue collected will increase. The study recommends the use of latest technology, and competent staff, and more innovations for diversified sources of revenues in Nairobi City County.*

*Keywords: Kenya, Tax Structure, Nairobi County, Forms of Revenues*

## **INTRODUCTION**

The fundamental sources of own revenue for urban areas are normally property taxes, business licenses, market fees and different user charges. They can possibly give dependable revenue if all around managed, yet practically speaking all have genuine limitations. For property tax, the primary drawbacks incorporate powerless ability to actualize exact valuation practices; poor methods of collection; absence of clear possession titles; and absence of political backing for enforcement. Business licenses make high consistence costs because of complex techniques; may not reflect capacity to pay; give chances to rent seeking; and are regularly ineffectively controlled, so they produce little revenue. User fees may empower productive utilization of public sector resources; additionally experience the ill effects of defects such as inequitable burdens on low income users, insufficient accumulation and billing plans, low quality administrations and persistent imperviousness to payment. Nonetheless, experience additionally indicates open doors for change, including streamlining strategies for property valuation and upgrading aptitudes; making business permit frameworks easier, more transparent and successful, for instance by presenting single business license frameworks; and enhancing consistence in paying user fees for instance through shared private water taps in informal settlements (Fjeldstad, and Heggstad, 2013).

Key issues influencing voluntary compliance and social collaboration incorporate trust of citizens in others, and the apparent reliability of government. Local governments have tried different things with an assortment of alternatives to enhance collection of tax including outsourcing accumulation to central government, private specialists and semi-private partners, for example, market cooperatives. For instance, in Tanzania accumulation of property taxes, market fees and different duties have been outsourced to a scope of different specialists. The confirmation is uncertain in the matter of whether outsourcing has prompted better revenue

organization; notwithstanding, it can build up a stage from which future change can be encouraged. Achievement relies on upon the nature of local government administration, the degree of political backing for change, and the procedure transparency. Evaluating revenue potential can be an issue: in the event that this is thought little of, it can bring about a specialist catching a disproportionate amount of revenue gathered (Fjeldstad, 2006).

### **Public Finance under the Devolved System of Government in Kenya**

The Constitution of Kenya, 2010 and the Public Finance Management (PFM) Act, 2012 have tied down public finance on the standards of responsibility and clear fiscal reporting. Section twelve on Public Finance addresses the financing of the elements of the two levels of Government towards an impartial society based on account openness, responsibility and public interest in financial matters. The Constitution further creates new institutions with changing forces and obligations over the administration of public finances administration at both levels of government. They incorporate the Commission on Revenue Allocation (CRA), with the duty to make suggestions on the criteria for fair sharing of national revenue; the workplace of the Controller of Budget to supervise the usage of the national and county spending plans; and the Auditor-General to review the accounts of all substances supported from public assets, including National and County Governments.

Alongside the division of responsibilities between the National and County Governments, the Constitution further presents fiscal equality in the spending procedure where three arms of Government, that is the Judiciary, Executive and Legislature get ready individual spending plan different to the past. The implementation true test of the decayed administration framework lies in strict devotion to the set up public finance and administration frameworks (PFM Act, 2012). Under the Financial Aspect of Devolution, there are rules that apply and funds obtained by counties must follow guidelines indicated by the current Kenyan Constitution; (a) The Power to Raise Revenue. A county can create revenue through taxation article 209(3). It might impose property rates, entertainment taxes and any other tax that it is approved to administer by an Act of Parliament. (b) Collecting of Revenue in the new constitution, it is indistinct how revenue generated will be gathered. Organization of revenue includes the accumulation of taxes once they have been resolved. Under the old constitutional framework, local authorities should gather their own taxes. Experience shows that huge numbers of them had no ability to release this capacity. With the new constitution, it is still a subject of level headed discussion whether the KRA will gather revenue in the interest of the counties or whether it should help the counties in building their own abilities to gather their own particular revenue. (c) The ability to spend

revenue. The county governments can raise and spend what they raise. Be that as it may, what the national government collects is to be shared among the two levels of government.

Article 202 accommodates the idea of evenhanded shares. The article requires that revenue raised by the national government be shared evenhandedly between the national and county governments. The county governments may likewise be given extra portions from the national government's offer of revenue. These extra revenues might be given restrictively or unequivocally (Kramon and Posner, 2011).

Article 203 gives a detailed standard to be followed in vertically deciding the fair shares of both the national and county governments from one perspective; and evenly among the 47 counties. This standard joins the standards of financial balance which must be followed while deciding the shares. Collection of revenue in Nairobi City County has been challenging due to the perception in the public that there is decreased revenue alongside increased service demands (Lagomarsino, Garabrant, Adyas, Muga&Otoo, 2012). Many services go undelivered allegedly due to insufficient funds to cater for the said services just like other Local Governments therefore failing to meet their legal obligations. Many studies have been carried out in the country to improve local participation in developmental matters and governance to the people as well as financial management in order to put available revenues into better use. However, there is lack of enough studies to assess issues affection revenue collection in local Governments and this scenario therefore informs this study to investigate factors affecting revenue collection in the Nairobi City County with a view to identify the causes and gaps and take corrective measures to avert the same. This in turn offered additional contribution to already complete studies in revenue mobilization and its uses in Local Governments.

### **Purpose of the Study**

The main objective of this research was to examine effect of selected factors affecting revenue collection in Nairobi city county government

## **LITERATURE REVIEW**

### **Theoretical Review**

#### ***Portfolio Theory***

As indicated by portfolio theory, diversification lessens risk or variability, given that different stocks in an investment portfolio don't move in the very same direction or the price changes of different stocks are not exactly flawlessly related (Zigrand, 2010). There are two sorts of risks we have to recognize: unique (unsystematic risk) and market risk (systematic risk). The unique risk comes from the antagonistic conditions that encompass a specific organization or industry.

This risk can be wiped out by diversification. In any case, the market risk can't be disposed of through diversification and it originates from the vast hazards which influence all organizations. For a very much broadened portfolio, the main thing that matters is the risk that financial specialists can't dispose of – the no diversifiable ones. Since a solitary security's commitment to the (market) risk of the entire portfolio relies on upon how touchy the security is to the market developments (measured by beta), the risk of an all-around expanded portfolio equals the average beta of the securities included in the portfolio” (Fustey, 2011).

In the event that the portfolio risk is driven by the betas of each different security, it suggests that diversification can't just wipe out the stand-alone risk, additionally adjust the market risk of the portfolio by changing the mix of different securities. With regards to government finance, the possibility of revenue diversification is like investment diversification. We may consider the different revenue sources or tax bases as an administration's investment portfolio and every tax as one of the securities in the Portfolio.

### ***Resource Based View Theory***

Resource Based-View (RBV) was brought about by Penrose (1959) who recommended that an association ought to be considered as a collection of physical and HR bound together in an authoritative structure. Hafeez, Malak, and Zhang (2007), viewed resources as physical resources and intellectual resources; Physical resources, for example, plant and hardware are effectively recognizable because of their substantial presence (Hafeez et al., 2007).

Administration Control, or simply "Control", is characterized as, formal, data based schedules; frameworks and structures that administration uses to keep or change designs in the different exercises of the of the association, fundamentally those exercises that bolster administration choice procedures and activities while actualizing business strategy (Wade & Hulland, 2004). As per Hoopes, Madsen and Walker (2003), also calls for further empirical support for resource construct view in light of association strategy; suggestions from a resource (and ability) point of view on associations value creation and aggressiveness through value processing, innovations, control systems, organizing resources and compensation policies. Dominant part of SMEs in developing economy can't contend in a successful route because of their inner resource gap (UNIDO, 2003). In this case resource based view theory could be used in this study in that government institutions require adequate resources in tax administration.

### ***Optimal Taxation Theory***

The standard theory of optimal taxation argues that a tax framework ought to be chosen based on a social welfare capacity subject to an arrangement of requirements. The literature on

optimal taxation commonly regards the social planner as utilitarian: that is, the social welfare capacity depends on the utilities of people in the general public. In its most broad investigation, this literature utilizes a social welfare work that is a nonlinear capacity of individual utilities. Nonlinearity takes into consideration a social planner who inclines toward, for instance, more equivalent circulations of utility. The social planner thinks exclusively about normal utility, suggesting a social welfare work that is straight in individual utilities (Mankiw, Weinzierl, and Yagan, 2009).

If the social planner is permitted to be unconstrained in picking a tax framework, then the issue of optimal taxation turns out to be too simple: the optimal tax is just a singular amount tax. All things considered, if the economy is portrayed by a representative purchaser, that buyer is going to pay the whole tax bill of the administration in some structure. Missing any market defect, for example, a prior externality, it is best not to misshape the decisions of that purchaser by any stretch of the imagination. A singular amount tax achieves precisely what the social planner needs (Lederman & Sichelman, 2013).

As indicated by Hebert (2014) the social planner needs to grasp heterogeneity in taxpayers' capacity to pay. In the event that the planner could watch contrasts among taxpayers in inherent capacity, the planner could again depend on single amount taxes, however now those singular amount taxes would be dependent upon capacity. These taxes would not rely on upon any decision an individual makes, so it would not misshape motivating forces, and the planner could accomplish balance with no proficiency costs.

Chittenden, Foster and Sloan (2010) noted that Adam Smith's wealth of nations discusses what taxation should be all about. He discussed four principles of optimal taxation which are: Equity aspect- which means that the time manner and quantity of tax payment should be clearly defined; tax should be paid in the proportion of the tax payer's ability; that tax should be collected in a time and manner that is most convenient to both the tax payer and the collector and that administrative cost should be kept as low as possible.

## **Empirical review**

### ***Revenue Diversification***

The application of different sources of revenues ensures the predictability and stability of sources of revenue in public finance. It also well gives the implication that no one source of finance has control or is relied upon at the expense of other sources of finance. This ensures that there is continuity in the service delivery in the public sector as income flow is consistent (Oates, 2005).

Expanding the revenue sources has the advantage of accommodating new growing spending requirement of a local government in terms of new judicial regulations, political actions and ever changing economic cycle in a government. To cope with these emerging challenges therefore a diversified and broad base of revenue source should be established (Hendrick, 2002).

However other scholars such as Carroll (2009) argue that having a diversified revenue structure has the effects of huge costs associated with their administration and therefore costly to the government. This negatively impacts on the fiscal performance of county government where money is rather taken to administration of the tax system itself and not bringing more funds to the county government to meet their budgetary requirements.

Ebrill, Stotsky and Gropp (2001) established the positive impact of revenue diversification on fiscal performance. In this study the researchers uses quantitative data in revealing the results that revenue diversification through ensuring that there is no source of public revenue that is relied on primarily on the expense of the other forms of revenue has positive impact which they measured using revenue adequacy, efficiency and equity in delivering of services at the county government and level of spending. Other study by Yan (2008) on effect of revenue diversification in fiscal performance established that revenue diversification has the effect of ensuring efficiency in the county government. The result of the study indicated that revenue diversification ensures a stronger financial stand and therefore better financial performance.

### ***Effects of Administration on Revenue Collection***

Mwachiro (2013) carried out a study on the internal controls in operation at Kenya Revenue Authority with a view to establish whether such internal controls have produced any meaningful results in increased collected revenue. The research was conducted using both quantitative and qualitative approaches. The data collected was analyzed and findings revealed that the five components of control environment, risk assessment, control activities, information and communication and monitoring must be available for internal controls to work. The study established that weak internal controls encourage collusion to fraud, loss of revenue and embezzlement of collected revenue. The study therefore concluded that internal controls do function although with hiccups and that there is a significant effect between internal controls and revenue collection in KRA.

Abiola and Asiweh (2012) did a study on the effect of Tax Administration on Government Revenue in a Developing Economy, a Case Study of Nigeria. The reason for the study was to build up Nigeria Tax organization and its ability to lessen tax avoidance and produce revenue for advancement longing of the people. The study made utilization of 121 online survey



questionnaires containing 25 pertinent questions. Distinct insights were utilized to examine 93 usable reactions. The study found in addition to other things that expanding tax revenue is an element of viable enforcement strategy which is the immaculate duty of tax organization. Nigeria needed enforcement hardware which would incorporate in addition to other things, satisfactory labour, PCs and successful postal and communication frameworks. The study has clear commonsense ramifications for tax experts and governments strategy developers in developing nations specifically.

Aruwa and Suleiman (2008) also carried out a study on the Administration and Problems of Value Added Tax in Nigeria. The study broke down the importance and the issues of Value Added Tax (VAT) in Nigeria. Three research questions were detailed for the study. A survey of VAT capable Nigerian associations, FIRS staff and the public was led to pick up bits of knowledge into the way VAT is directed, its pertinence in revenue era, investment funds and utilization of customers and the issues upsetting its effectiveness. Both primary and secondary data were used and descriptive statistics as tool for analysis. The survey demonstrated that a greater part of the Federal Inland Revenue Service (FIRS) staff viewed that they are not sufficiently prepared officially to handle VAT operations; VAT capable organizations have improper learning of VAT operations, the administration at the three levels in Nigeria have raised generous revenue from VAT. However it has been underutilized because of high rate of tax avoidance, absence of record keeping by business endeavors, utilization of inadequate FIRS staff and low VAT training is found among the VAT capable associations and the public. It was found that these associations regard VAT as cost in opposition to desires.

Proof from the way VAT revenue is being shared among the three levels of government in Nigeria proposes that this revenue is being re-infused into the economy through public consumption. Governments ought to consider procedures for securing proper treatment of VAT by the VAT capable associations while finding a way to guarantee that the VAT revenue is focused at sectors well on the way to improve the coincidental unfriendly impacts of VAT on purchaser welfare, generation, livelihood and income.

Local government authorities generally encounter challenges in collecting taxes, fees and charges. Therefore, there are numerous studies being done to discover answers for make tax collection more revenue profitable. Practices for local taxes collection range from situations where local government authorities gather the taxes themselves to situations where tax collection is outsourced to private specialists, semi-private accomplices and the central government. Market cooperatives and privately owned businesses also collect tax for the benefit of the local government (Fjeldstad, Chambas, & Brun, 2014).



Some taxes and fees are gathered by the administration and directed back to the local government. In Malawi the non-tax revenue is planned to be gathered by the central government, before the resources are redistributed to District Assemblies utilizing a formula affirmed by the Cabinet. A less common illustration is from Tanzania where the collection of property tax in Dares Salaam is left to the Tanzania Revenue Authority (Fjeldstad et al, 2014). In Tanzania, accumulation of an extensive number of local government revenue sources has been outsourced as of late. They incorporate private collection of property taxes in some urban committee; market fees in both provincial and urban committees; ranger service demands (until 2005) fundamentally in country boards; cess on certain agricultural items in rural councils; transport stand; and parking fees. In Mwanza City Council, for example, more than 33% of the collection's own revenues in 2006 were gathered by private operators.

A noteworthy challenge confronting privatized revenue collection in local government authorities is to survey the revenue potential for different tax bases. Generally, revenue evaluation is directed on a specially appointed premise, regularly in view of the earlier years accounted for collection. Considerable underestimation of the revenue potential may suggest that genuine collection by the operator is significantly higher than what is reflected in the agreement. Subsequently, there is a risk of winding up in a circumstance where the specialist keeps the generous segment of the revenues collected, which as of now is by all accounts the case in a few collections.

In a study from Uganda, Boex, and Martinez-Vazquez (2007), discovered considerable gaps between the local government appraisals of the revenue yields from local markets with the genuine revenue yield gathered by private operators. In six markets contemplated, the gaps (lost revenues) added up to somewhere around 25% and 74% of aggregate revenue collected in every market. In addition, the actual margins acknowledged by private specialists brought about by this undervaluation of market yields fluctuated around 71% and 97%. In this manner, it appears to be clear that instead of improving local revenue, the private tax collection framework in Uganda exchanges cash from standard and regularly poor provincial taxpayers and into the pockets of private tax specialists and their different partners. All things considered, 53% of all revenue gathered from sellers in the markets could be translated as immaculate redistributive transfer to individuals from the local elite.

Agyapong (2012) conducted a study to assess the viability of revenue activation systems of Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana, Kumasi Metropolitan Assembly (KMA) as a contextual analysis. The goal of the study was to turn out with methodologies that can help KMA to create enough Internal Generated Funds (IGFs) to meet its formative needs. Ranges considered under the difficulties that KMA faced included; lacking

IGFs, over dependence on District Assemblies Common Fund (DACF), defilement, powerlessness to give public needs, and so forth. The survey directed utilizing the staff and administration of KMA, tax payers and different partners in Kumasi uncovered that the infrastructural projects given by KMA are not satisfactory and do neither match revenue gathered nor their requests for improvement. KMA is legitimately and politically doing nothing to rouse the occupants to satisfy their financial commitments. There are such a variety of revenue spillages including KMA revenue collectors, senior officers of the Assembly and Assemblymen and ladies of the different Sub-metros. The conclusion drawn from the survey demonstrated that KMA is not adequately utilizing fiscal decentralization to enable itself under Local Government Act, Act 462 (1993) so far as that is concerned it has not grown new and practical methodologies to enhance its execution in revenue preparation.

The Assembly like numerous local authorities in Ghana had offered to over-dependence on the District Assembly Common Fund to meet its capital use. Another reality is that larger piece of KMA's IGFs goes into organization use. KMA certainly can't meet its socio-financial and political commitments to shoppers of public products and administrations in the city. It will keep on failing to fulfill its purchasers so far as it doesn't grow new systems and strategies to enhance its revenue activation. KMA likewise needs dependable information base on brokers that influence its spending detailing and implementation. Various proposals were made to KMA and these 4 suggestions recommended techniques be taken to enhance the revenue base of KMA. It is prescribed that KMA ought to attempt to take out debasement, set up dependable information base on properties and organizations, make use of utilization of relationship marketing to connect with partners through collections, courses, meetings, discussions, tax instruction and refinement to know the issues of payment of taxes, rates, and so forth and the difficulties in revenue accumulation. KMA ought to likewise put resources into shuttle transport, funeral services mortuary services and other beneficial endeavors.

### ***Tax structure on Revenue Collection***

Muriithi, and Moyi, (2003) in their study contended that the key goal of tax changes in Kenya was to guarantee that the tax framework could be saddled to relieve the never-ending fiscal imbalances. This will be accomplished through tax approaches expected to make the yield of individual taxes receptive to changes in national income. This study connected the ideas of buoyancy and elasticity to figure out if tax changes in Kenya accomplished these targets. Evidence suggests that changes positively affected the general tax structure and on the individual tax.

James and Nobes (2008) and Nightingale (2002), while citing (Adam Smith 1776), argued that a decent tax ought to have the characteristics of Efficiency, Equitability, Neutrality, Adaptability, and Simplicity. These standards still hold today and even go about as an aide for strategy definition. Notwithstanding, the capacity to accomplish all in a solitary tax approach is practically impossible; thus, Nightingale (2002) expressed that there is no good tax. This is on account that a productive tax may be not equal. As per Kvaal and Nobes (2013), a productive tax may not as a matter of course be viewed as reasonable and one that is viewed as impartial may not be effective.

Commonly, individuals abhor tax payment because of its impact on their income. Just a couple people are enthusiastic about paying tax. Tax strategy must be for the most part acknowledged by the general population on the fact that it must pick up consistence (Nightingale, 2002). This thus implies that a decent tax framework must be in consonance with (Adam Smith, 1776) gun of taxation cited in Nightingale (2002): Neutrality, Equitability, Productivity, Adaptability and Simplicity.

A nearer examination of a portion of the elements or explanations behind the uncooperative mentality of individuals towards taxation uncovers that the onus is on the inconveniences and multifaceted nature of tax approaches and organizations in the country. Most times, the imperviousness to taxation is fierce to the point that it could prompt social unrest. In Nigeria, the "Aba Women uproar of 1929" – the notable first British test amid the pilgrim period was provoked by the presentation of taxation by Lord Lugard, who was then the representative (Evans 2009). The women who felt persecuted by the acquaintance of tax brought with arms constraining the colonial administration to pull back the arrangement. In any case, aside from the south-eastern Nigeria, where this happened, the presentation of taxation in other parts of the nation denote the start of a formal tax framework in Nigeria. In the UK, the laborer's rebellion in the fourteenth century, the 1990 turmoil cause by the presentation of group charge are different case of incitements brought about by the presentation of taxation (Nightingale, 2002).

The probability of detection and penalties, complexity of tax systems and tax rates influence the viability of a tax framework. The more tax laws get to be complex, the lower the consistence levels. Transparency, reasonable and clear tax rules upgrade tax consistence (Chau & Leung, 2009). The complexity of tax laws makes it troublesome for common taxpayers to get it. In spite of the fact that taxes are not some portion of regular discussions, individuals will typically attempt to comprehend the commitments that they make to the legislature through the payment of taxes. At the point when attempting to bode well, they will assess the fiscal arrangement, the tax rates, the arrangement of public merchandise and benefits, and the

collaboration between themselves as taxpayers and the tax authorities. Toward the end of everything, the inspiration to go along or not go along creates and shapes their ensuing tax conduct (Chau & Leung, 2009).

Complex tax laws are a worry around the world. Tax laws have turned out to be complex to the point that even specialists, for example, bookkeepers, lawyers and tax officers experience issues in translating large portions of the administrative arrangements. Research led on the etymological investigation of tax laws observed that abnormal state reflection in the composed dialect consolidated with long and complex sentences brought about superfluous complexities making it troublesome for taxpayers to comprehend the laws. A few nations have endeavored to improve their tax laws yet without any result, for instance, New Zealand's tax laws were composed in disentangled English but they still confronted the same authoritative and consistence issues as before the rearrangements (Kirchler, 2007).

Doyle, Hughes and Glaister (2009) recommended that a complete transformation of the law and mix of particular guidelines into standards be connected as a measure to improve complex tax laws. Particular tax rules lead to innovative tax consistence as they permit taxpayers to make utilization of the accessible escape clauses inside those tenets through the development of complex business structures that are to a great degree hard to comprehend and assess by tax authorities. Frequently it is likewise difficult to distinguish whether such structures are legal or not in connection to the tax laws. At last, this prompts a feline and mouse legal drafting society of escape clause shutting and reviving as it is unimaginable for tax laws to cover every conceivable situation in an advancing domain. It is contended that principled trustworthiness of guidelines will take into consideration legal enforcement of the standards in connection to abnormal exchanges (Chau & Leung, 2009).

Throughout the years, researches have thought of different models with respect to taxes. The most famous ones are the monetary model and the normal model. The monetary models of tax rebelliousness accept that taxpayers settle on key choices. The balanced model underscores that taxpayers' nature is to carry on insincerely and consequently, control and discipline are measures to battle such practices (Kirchler, 2007).

For the most part, punishments are the overwhelming administrative measures in all tax laws. It was found that some methodologies inspecting tax frameworks for identifying techniques to enhance consistence are exclusively result situated without considering the human and social factors. It was likewise found that taking into account an expansive number of observational studies a lion's share of taxpayers are inherently legitimate and willing to pay their offer of taxes. In spite of the fact that taxpayers discover the tax laws intricate and despite the fact that they are not generally ready to pay for expert advice, it doesn't mean they will discover

forceful procedures to lessen their taxes inside the legal degree; rather, they will endeavor to get ready and document their tax returns effectively (Kirchler, 2007).

## **Forms of Revenues**

### *Property Tax*

Few fiscally noteworthy taxes are more fitting to local organizations than property tax. This is because of the way that genuine property is unmistakable, stationary, and a reasonable pointer of one type of wealth. Consequently, on a fundamental level, property tax is hard to maintain a strategic distance from and, if all around directed, it can speak to a non-distortional and very proficient fiscal device. Property tax is a local government tax, demanded predominantly in urban ranges. Just in Liberia the property tax is a national tax. Rural properties are regularly not taxed, despite the fact that property taxation is being reached out to country properties in South Africa under the terms of the Local Government; Municipal Property Rates Act 6 of 2004. Namibia presented an area tax on business agriculturists in 2004 as a measure to finance an area change program (Boadway, Chamberlain and Emmerson, 2010).

Property tax revenue accounts for under 0.5% of GDP in numerous African nations. In the 1990s, property taxes represented 40% of all sub-national taxes in developing nations (Bird and Slack 2002: 6), yet less in most African nations. For example, property tax represented 10–30% of "own" revenues in urban boards in Tanzania (Stewart, Brown and Cobham, 2009), and around 20% in metropolitan committees in South Africa (Bahl & Smoke, 2003). In Ghana property tax accounts for around 14% of the aggregate revenues of local collections, a normal of 6.1% in local chambers in Sierra Leone, and under 10% in The Gambia (normal for the period 2006 - 2008). In Liberia, where local collections are not permitted to gather revenue, property tax accounts for around 1% of aggregate revenues of the central government (Alm, 2013).

There are various requirements that can clarify why property tax is modest collected in African nations: (a) With the special cases of Botswana, Namibia and South Africa, property markets are not all around created; (b) property registers and valuation rolls are regularly obsolete or not set up; (c) regulatory limit and hardware are frequently constrained; (d) the tax base is for the most part contracted by broad legal exclusions; and (e) absence of political backing to implement the property tax and political obstruction in revenue collection (Van Sittert, and Swart, 2008). Mikesell (2002) contends that the reasons are extensively more political than monetary. In the first place, the trouble and cost of directing an evenhanded property tax is misrepresented by those more acquainted with income and utilization taxes than with property taxation. Second, in numerous nations, the property tax has effective political adversaries. The tax hits individuals with wealth collections specifically, the genuine properties to be taxed are

clear to all, and the duty itself is obvious. Individuals with significant property riches more do not have impressive political influence that influence to frustrate taxes that point specifically at their possessions. Low use of property and area taxation mirrors the achievement of the resistance of the rich and effective to measures which hurt their interests. The outcome is that taxes are paid on a base that frequently looks to some extent like the genuine level of property estimations (Moran, 2008).

At the point when local governments oversee the tax, they are in charge of keeping up property and possession records, deciding taxable property estimations, ascertaining and disseminating property tax bills, overseeing receipt payment, and applying tax enforcement against non-payers (Bird, (2007). In different cases, local governments have a say in the decision of the tax rate, while the organization of the tax are performed by the national revenue power. In a few nations, for case in Malawi, property valuation is done by the central government, while local authorities set rates and handle collection. West African French-speaking nations all in all depend on the customary French model, in which the property tax is planned and regulated by the central government, though Anglophone African nations, except for Liberia, depend on local organization. This is normally suggested that burdens that taxes ought to be regulated by the administration that is qualified for their revenue (Mikesell, 2007).

Property estimation is the most well-known type of property tax in all Anglophone nations, despite the fact that their ability to execute exact valuation practices regularly is unobtrusive. Accessibility of pertinent property registers and information is for the most part constrained, aside from in South Africa. Valuation rolls, on the off chance that they exist, are ordinarily obsolete. Absence of qualified value's to get ready or keep up valuation rolls is likewise a test, again with South Africa as an exemption (Kloeden, 2011). Endeavors to address these setbacks are reflected in a discernible move far from depending on the central government valuation workplaces to plan valuation rolls (e.g. in Lesotho, Malawi, Mauritius, Swaziland, South Africa, Uganda, and Zambia). A few nations, for example South Africa and Uganda, have presented 'mass valuation' as another option to discrete valuations of individual properties or are thinking about this (e.g. Kenya). In any case, outside quality control as to valuation rolls is for all intents and purposes non-existent. Just the new South African enactment accommodates clerical oversight with respect to the adequacy, consistency and use of city valuations (Kälin, 2005).

There is generally a distinction between imposing tax on buildings or land. Since land in numerous African nations is claimed by the state, regularly just structures are incorporated into the property tax base. This applies to Tanzania, Ghana, Mozambique and Sierra Leone. Kenya is the main African nation with land esteem tax, while South Africa has a uniform, capital worth



tax. Nigeria is unique by having formally appointed the power for property tax enactment to the 36 state governments, leaving the different ranges in Nigeria with different ways to deal with evaluating property tax (McCluskey, 2008).

### *Business Licenses*

The standard systems for preparing revenues from organizations have been through authorizing. Despite the fact that the first aim was administrative, local business authorizing has progressively turned out to be essentially a revenue source in many spots. Regularly, business licenses produce somewhere around 5% and 30% of local government own revenues in urban councils. In numerous nations, notwithstanding, the framework has been entirely inadmissible, regularly very unjust, and has forced gigantic costs on business, while creating generally minimal expenditure. In Uganda, for example, a typical grumbling from little and medium-sized undertakings has been that they don't comprehend what to pay, where and to whom. The administrative parts of the permit framework have been to a great extent relinquished. What's more, poor strategy plan and frail organization imply that permit scope; appraisal, collection, and enforcement rates are low, prompting poor revenue era (Chesbrough, 2003).

Local business taxes are for the most part demanded in one of two ways: (an) either as a settled sum, which more often than not differs by size, or area of the business, or (b) as a rate of turnover or benefits. Surveying turnover or productivity, be that as it may, is troublesome both in connection to little organizations, which regularly don't keep up legitimate records and to huge organizations with different premises crosswise over different purviews. In this manner, local business taxes regularly utilize intermediaries for turnover or productivity, for example, the measure of premises, kind of business, and number of representatives and introduced power (Bird, 2006).

Acquiring a permit regularly includes different visits to different workplaces, now and then more than a few days, with related travel costs. Inability to give the right permit receipts may bring about conclusion of the premises. Subsequently, the framework is regularly filled with rent looking for and defilement. In addition, poor organization frequently implies that numerous organizations are excluded in the permit framework because of absence of appropriate business registers (Price, and Forrest, 2012). Besides, powerless financial administration will frequently infer that collection and enforcement arrangements are infrequently implemented. This disintegrates the tax base and brings imbalances into the framework. Subsequently, numerous current business permit frameworks crosswise over Africa contain genuine imperfections. These include: high consistence costs to organizations, because of different permitting and complex strategies; tax structures that are muddled and don't reflect capacity to



pay; a procedure stacked with ineffectual administrative prerequisites, which give chances to rent looking for; poor organization and avoidance, which lessen the tax base and produce imbalances; and a revenue source that creates moderately little income for local governments (Margolis, 2014).

#### *User Fees – Linking Payment and Service Delivery*

Taxes are not the best instrument for coordinating interest and supply of public administrations. Better connections can be accomplished through cost-recuperation charging frameworks, which tie the sum paid transparently to the sum expended. By giving a more straightforward connection between citizens' commitments and administration conveyance, such instruments may get to be viable intends to recuperate the costs of administration arrangement, and to advance productivity in the utilization of the administration. Subsequently, most observers contend that user fees ought to assume a noticeable part in local government finance (Fjeldstad, 2006).

As per Wachs (2006) the principle financial method of reasoning for user charges is not to create revenue, but rather to energize the productive utilization of resources inside the public sector. At the point when appropriately composed, user charges give data to public sector suppliers on how much customers will pay for specific administrations and by guaranteeing that the public sector supplies are esteemed by subjects. Free or financed administrations may bring about overconsumption of such administrations. In addition, it might demonstrate hard to focus on the recipients of free administrations.

User charges for exchanging administrations, including water, power, sewage, and strong waste evacuation, are significant sources of revenue in urban regions in Southern Africa, particularly in Namibia and South Africa (Fjeldstad and Geisler, 2005). They include that administration charges water and power supplies are critical. This revenue is created by an extra charge added to the expense of the utilities that the local authorities normally purchase from the utility organizations, or, if the power itself delivers the utility, added to the expense of creating it. As per Fjeldstad, Chambas and Brun (2014), around a fourth of the power circulating authorities in South Africa raise generous revenues from the surpluses earned from their deals.

An extensive offer of these revenues is utilized to take care of the expense of giving the administration. Be that as it may, in a few regions a significant surplus is left for general local government purposes. Consequently, the tax part of the user expense is covered up for ratepayers, and the genuine level of local government taxation is not transparent for nationals. The responsibility ability of the local revenue framework is in this way undermined. In addition,

since the customer price of the administration (for instance, power) is exaggerated by the measure of the verifiable tax, this may affect monetary proficiency.

In Namibia, the larger part of town committees are not deciding their levies as per an affirmed duty approach of cost recuperation (Fjeldstad, Chambas and Brun, 2014). Henceforth, a few exchanging administrations, including water dispersion, are worked with huge misfortunes in various local authorities. The circumstance is declined by an expanding number of exceptional indebted individuals in numerous local authorities, that is, buyers who don't pay for fundamental administrations because of different reasons, including reasonableness. Encounters from South Africa and Namibia demonstrate that there are various evident requirements on user charges and different method for cost recuperation. These emerge from value contemplations (i.e. capacity to pay), collection and charging strategies, the nature of the administrations given, and diligent imperviousness to pay. These lessons point to the way that managing the approach issue of revenue upgrade requires some comprehension of the variables fundamental the individual's choice whether to pay or sidestep paying administration charges (and taxes) (Al-Fuqaha, 2013).

An expanding measure of confirmation recommends that the rate of commitment to a public decent is influenced by elements, for example, subjects' trust in others and the dependability of the administration (Welch, Hinnant and Moon, 2005). They recommend that without trust there is little premise for social co-operation and intentional consistence with laws and directions that could possibly profit everybody. Specifically, three measurements of trust appear to influence residents' consistence: (1) trust in the local government to utilize revenues to give expected administrations, (2) trust in local governments to set up reasonable methodology for revenue collection, and (3) trust in different natives to pay their offer. The bigger the part of the local population that is not paying, the lower is the apparent risk of being arraigned. This affects the individual ratepayer's view of the believability and dependability of the revenue organization. In addition, the disposition of local political leaders concerning payment is by all accounts imperative, for instance, by legitimizing non-payment through their own particular conduct. This proposes there are reasons and extension for advancement.

As indicated by Egidario (2011) the issues of non-payment ought to consequently be assaulted on a few fronts, including administration delivery, better organization and payment plans, and group association. To accomplish this, inside and out learning and information are required on payment levels for every ward, the extent of city accounts conveyed, the number and sort of objections got, living conditions for the poorest sections of the population, including the elderly and unemployed. Natives ought to be urged to report defaults, for example, spilling taps or streetlights not working. The brief change of such grievances may persuade individuals

that the region implies business. Besides, natives' inclusion in recognizing issues and setting needs may persuade a more prominent feeling of group contribution. At first, it may be fitting to connection payment specifically to obvious changes in administrations. At last, the co-operation between local government authorities and group leaders in setting shared objectives may be a vital trust-upgrading gadget.

### *Excise Taxes*

As indicated by Kippra, (2005) exercise taxes are collected on (imported) oil products and additionally utilization of spirits and beer, cigarettes, matches, and tobacco. Prior to the Tax Modernization Program (TMP), extract taxes had been collected at particular rates, however direct to high expansion actuated a change to a promotion valorum premise.

### *Revenue Collection*

Developing effective ways in revenue collection has been an important matter in tax and revenue collection. Awitta, (2010) argues that the advent of new instruments to help businesses work more efficiently affects the way taxes and revenues are collected. KRA embarked on extensive implementation of various revenue collection strategies in its operations. This was to significantly enhance revenue collection in all Departments.

Implementation of innovative revenue collection strategies was supposed to improve its organization structures, training, manpower planning, developing teamwork among management and staff, new approaches to reward management and adaptation of total quality management. The influences of various revenue collection strategies on revenue collection have not been investigated. The purpose of this study was to examine the effectiveness of revenue collection strategies at KRA in Nairobi.

Heller (2005) argues that resource availability is an important issue in revenue mobilization. According to him, three interrelated issues are involved. The first issue deals with the distribution of taxation and expenditure under centralization or decentralization alternatives. That is, who collects what and get what is a matter of concern. Another issue identifies with the level of financial self-governance of local government versus reliance on central exchanges. The last one raises an issue of effectiveness of whether decentralization builds the aggregate sum of resources activated for public consumptions. Ultimately, the circulation of revenue sources and consumption duties between levels of government is with the end goal that local public uses have a tendency to surpass own-source revenues.

The overwhelming dependence of local government upon central exchanges implies that their level of financial self-governance has a tendency to be entirely restricted. Heller (2005)

further contends that while the effect of decentralization on revenue rising is dubious; the most significant proof proposes that administration structure and public resource activation have little to do with each other.

As per a site report United Nations Development Program (UNDP)(2008), there are two potential sources of revenue for local government, taxation and user charges. As per the study, consideration is paid to the structure of local frameworks of taxation and the bases which have a tendency to be depended upon; the utilization and propriety of local cost recuperation; and the handy requirement confronted in revenue collection. The study takes note of that there are minimal successful and wide base tax handles accessible to governments in developing nations and that regardless of the level of government to which these taxes are doled out; frequently their bases are constrained and their collection wasteful. The study further talks about that for different reasons, hypothetical and political, local tax bases have a tendency to be more constrained and divided than those abused by the inside. Moreover, regulatory shortcomings seem to undermine the local tax push to a degree more noteworthy than that endured by the middle. The study finds that practically speaking user charges imposed on a utilization bases, have not been generally used at the local level.

Heller (2005), in his contention on the fundamental basic theory of taxation as referred to in the site report UNDP (2008) says that tax bases which are unevenly appropriated between localities, for example, those on common resource and exchange are unseemly contender for decentralization as a result of their repercussions for value. In the perspective of Heller (2005), income redistribution and adjustment are inside the best possible area of the national government and that localities ought not to try to advance these goals through such means as corporate and individual income taxes.

The site likewise referred to Francis and James (2003) who says that institutional, political, authoritative, auxiliary and social imperatives describe the tax frameworks of developing nations at both national and local level. Francis and James further expresses that, handy hindrances which hinder productive revenue collection and cause significant revenue deficiencies are in no way, shape or form unconventional to local government additionally an issue at the national level. According to Francis and James, staff competence, well- defined tax legislation, and effective means of enforcement constitute the best way to mitigate these challenges. Whether central or local governments' ability to carry out their responsibilities to the citizenry or not is dependent on the availability of financial resources to management.

## METHODOLOGY

### Research Design

The study used a descriptive research design since the study intended to accumulate quantitative information on factors affecting revenue collection in county governments in Kenya. According to Sekaran (2006), descriptive research design is non-exploratory in that it manages the connections between non-controlled variables in a characteristic as opposed to lab setting. Since the occasions or conditions have already happened, the researcher chose the significant variables for an analysis of their connections. The study considered this design appropriate since it supports application of stratified random sampling technique to obtain information from few respondents in order to have a general view of revenue collection in county governments in Kenya.

### Study Population

According to Kothari (2004), population is a well-defined set of people, elements, services and events, a group of things or households which are being studied. The study population comprised of 340 staff working as; 12 chief officers, 144 technical staff (finance), 56 technical staff accountant) and 128 members of County assembly. The list containing the number of employees in the various levels was obtained from the Nairobi county Human Resource department whereas the list for members of county assembly was obtained from Nairobi City county government. The study population is as shown in Table 1.

Table 1: Study Population

<b>Staff</b>	<b>Size</b>
Chief officers	12
Technical staff (accountant)	56
Technical staff (finance)	144
Members of County assembly	128
<b>Total</b>	<b>340</b>

Source: Nairobi City County (2016)

### Sampling Design

The study used stratified random sampling technique to select a sample drawn from the different levels in Nairobi City County Government. The various categories included the Chief Officers; technical staff (finance and accounting) and Members of County Assembly. Stratified random sampling is considered appropriate since it gives every respondent in the target population an equal chance of being selected as a study respondent and thus it has no bias and eases generalization of the gathered findings. Stratified random sampling was used to group

the staff in the county government in three categories. Simple random sampling was then used to select the population from each stratum. The sample size was determined using Fischer's formula for 95% confidence interval (Dahoo et al, 2003);

$$n = \frac{Z^2 p \cdot q}{d^2}$$

Where; n = sample size for infinite population

Z = 1.96 (at 95% Confidence level)

p = estimated proportion of population (0.50)

q = 1-p

d = precision of the estimate at 5% (0.05)

The sample size was;

$$n = \frac{(1.96)^2 \times 0.50 \times 0.5}{(0.05)^2}$$

$$n = \frac{0.4609}{0.0025} = 384$$

The adjusted sample size for the finite population of 340 respondents will be;

$$n^1 = \frac{1}{1/n + 1/N}$$

Where; n<sup>1</sup> = adjusted sample size

n = estimated sample size for infinite population

N = Finite population size

$$n^1 = \frac{1}{1/384 + 1/340} = 180 \text{ respondents}$$

Table 2: Sample Size

Staff	Strata Size	Sample Size/Strata
Chief officers	12	6
Technical staff (accountant)	56	30
Technical staff (finance)	144	76
Members of County assembly	128	68
<b>Total</b>	<b>340</b>	<b>180</b>

### Data Collection Instruments

The researcher used primary data sources. Primary data source was gathered using a semi-organized questionnaire. The questionnaires ordinarily have composed inquiries that the respondents answer directly to the questions being investigated. The questionnaires were

utilized as a part of this study since they offer a viable strategy for gathering data from an enormous extent of reactions before they are quantitatively investigated. Moreover, questionnaires as data collection technique are the most broadly perceived system in various social studies (Brace, 2008). Further, the use of questionnaires enhances the expository system, as the data that is amassed utilizing the instruments will be changed over into quantitative data easily (Backlund and Suikki, 2005). The questionnaire contained both open and close-ended inquiries.

### ***Validity of Data***

According to Field (2009), validity is pertinent to determine the precision of the estimation scales with a specific objective to evaluate the degree to which proposed constructs have been captured, that is, to examine the validity of the instrument. Validity of research instruments guarantees a logical help of the findings arising from data collection instruments.

A pilot study was embraced to pretest data collection instruments for validity and reliability. According to Sekaran (2006), a pilot study is important for testing the validity and reliability of data collection instruments. Pilot study is consequently directed to recognize shortcoming in design and instrumentation and to give exact data to determination of a sample (Cooper and Schindler, 2003). Validity alludes to the degree to which an instrument measures what should gauge. Data need to be solid as well as genuine and precise (Dempsey, 2003). Here, construct validity was tested. Pilot study was done using staff in various levels of the institutions where the staff were relied upon to tick if the item in the questionnaire addresses to the factors affecting revenue collection.

### ***Data Reliability***

The study aimed at measuring the reliability of the research instrument. In carrying out the task Cronbach alpha was used in determining reliability level. Data reliability is the measure of the degree to which a research instrument yields consistent result or data after repeated trials (Kothari, 2006). Cronbach alpha ( $\alpha$ ) is the basic formula for determining the reliability based on internal consistency (Kim & cha, 2012). Constructs used in this study were tested for internal consistency reliability using Cronbach alpha ( $\alpha$ ) test as depicted in table 3. According to (Malhotra, 2008) the standard minimum value is 0.7. Cooper and Schindle, (2006) accepted an alpha of 0.8. The study adopted a composite Cronbach's alpha that exceeded the cut-off value of 0.70. The measures consisted of items with response options ranging from 1 ("no extent") to 5 ("very great"). The table below shows the reliability results.



Table 3: Cronbach Alpha Coefficient for the Variables

Variable	Cronbach's Alpha	No. of Items	N
Revenue diversification	0.726	3	59
Tax administration	0.727	5	60
Tax structure	0.862	4	62
Forms of Revenues	0.742	3	61
Revenue collection	0.841	2	62

### Data Analysis and Presentation

The utilization of close end and open end questions contributed towards gathering of both quantitative and subjective data. Descriptive analysis technique was connected to break down quantitative data where data was scored by calculating the mean, percentages and standard deviations. This was done using Statistical Package for Social Sciences (SPSS, Version 21) software. SPSS was viewed as proper since it permits the researcher to take after clear arrangement of quantitative data analysis systems that lead to increased data validity and reliability and exhibited the relationship between the research variables.

Qualitative data was drawn from open-ended questions in the questionnaire. This was analyzed through summarizing the set of observations drawn from the respondents using content analysis. Common set of observation was assigned numerical value and entered into the SPSS computer system. The analyzed findings were then presented inform of tables. Qualitative data was drawn from open-ended question in the questionnaire. This was analyzed through summarizing the set of observations drawn from the respondents using content analysis. Regression analysis and covariance analysis was applied to show the relationship between the research variables.

The study used the following regression model:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where:

Y= Revenue collection

$\beta_0$ =Constant

$\beta_1, \dots, \beta_4$ = Coefficient of the variables

$X_1$ =Revenue diversification

$X_2$ = Administration

$X_3$ =Tax structure

$X_4$ = forms of revenue

$\varepsilon$ = Error term

## EMPIRICAL RESULTS AND DISCUSSIONS

### Revenue Diversification

The study sought to establish the effect of revenue diversification on revenue collection in Nairobi County government. In carrying out this task the study used a Likert scale of 1 to 5 where 1 = not at all, 2 = little extent, 3 = moderate extent, 4 = great extent and 5 = very great extent to rate the extent to which the respondents agreed with statements on revenue diversification provided. The study findings on the number of revenue sources of income indicate that the majority of the respondents agreed that the number of revenue sources had great effect on revenue allocation forming 38.2% (60) followed by those who said it had a moderate extent at 32.5% (51), very great extent at 29.3% (46) while there were no respondents on low extent and no extent at all. On policies, the majority identified great extent at 56.7% (89) followed by those who identified a very great extent at 26.8% (42) while 16.6% (26) said the extent was moderate. Results on restrictions indicate that the majority identified a great extent forming 52.2% (82) followed by a very great extent at 31.8% (50) while moderate extent formed 15.9% (25) of the total responses. The results are shown in table 4 below.

Table 4: Revenue Diversification

	Cases									
	Not at all		Low extent		Moderate extent		Great extent		Very great extent	
	f	%	f	%	f	%	f	%	f	%
Number of revenue sources of income	0	0	0	0	51	32.5	60	38.2	46	29.3
Policies	0	0	0	0	26	16.6	89	56.7	42	26.8
Restrictions	0	0	0	0	25	15.9	82	52.2	50	31.8

The study findings are as similar to the one posited by Oates (2005) that the utilization of various sources of revenues guarantees the consistency and stability of sources of revenue in public finance. It also gives the suggestion that nobody has control upon to the detriment of different sources of finance. This guarantees the coherence in the administration in the public sector as salary stream is predictable. Hendrick (2002) includes that extending the revenue sources obliges new developing spending prerequisite of a local government as far as new legal controls, political activities and constantly changing financial cycle in an administration. To adapt to these rising difficulties in this way an expanded and wide base of revenue source ought to be built up.

## Tax Administration

The study sought to establish the effect of tax administration on revenue collection in Nairobi County government. In carrying out this task the study used a Likert scale of 1 to 5 where 1= not at all, 2 = little extent, 3 = moderate extent, 4 = great extent and 5 = very great extent to rate the extent to which the respondents agreed with statements on tax administration provided. The study findings indicate that the majority identified a great extent in competence of staff forming 42.7% (67) of the responses, followed by very great extent at 29.3% (46) while moderate extent formed 28.0% (44) of the responses. On the availability of computers, the majority identified great extent forming 55.4% (48) of the responses, followed by very great extent at 30.6% (48) while moderate extent formed 14.0% (22) of the responses. On the use of a third party to collect revenue, the majority identified its effect to be very great forming 59.2% (93) followed by great extent at 25.5% (40) while 15.3% (24) formed moderate extent. Finally, on the availability of postal and communication system, the majority identified moderate extent forming 43.9% (69) followed by very great extent at 29.3% (46) while great extent formed 26.8% (42) of the responses. Table 5 below gives a summary of the study findings on tax administration.

Table 5: Tax Administration

	Cases									
	Not at all		Low extent		Moderate extent		Great extent		Very great extent	
	f	%	f	%	f	%	f	%	f	%
Competent staff	0	0	0	0	44	28.0	67	42.7	46	29.3
Availability of computers	0	0	0	0	22	14.0	87	55.4	48	30.6
Availability of postal and communication system	0	0	0	0	69	43.9	42	26.8	46	29.3
Use of a third party to collect revenue	0	0	0	0	24	15.3	40	25.5	93	59.2
Tax education	0	0	0	0	24	15.3	42	26.8	91	58.0

The study findings are backed by Abiola and Asiwah (2012) when they conducted a study on the effect of tax administration on government revenue in a developing economy, a contextual investigation of Nigeria. The motivation behind the study was to establish Nigeria tax administration and its ability to lessen tax avoidance and create revenue for improvement of development in its population. The study made utilization of 121 online overview polls containing 25 pertinent inquiries. Distinct measurements were utilized to analyze 93 usable reactions. The study found in addition to other things that expanding tax revenue is an element of successful

enforcement strategy which is the unadulterated obligation of tax administration. Nigeria needed enforcement hardware which could incorporate in addition to other things, sufficient labor, PCs and compelling postal and correspondence framework.

### Tax Structure

The study sought to establish the effect of tax structure on revenue collection in Nairobi County government. In carrying out this task the study used table of means and standard deviations to help interpret the results. A Likert scale of 1 to 5 was used where a mean of 0-0.9= not at all, 1-1.9= little extent, 2-2.9 = moderate extent, 3-3.9 = great extent and 4-5= very great extent to rate the extent to which the respondents agreed with statements on tax structure provided. The results are presented in table 6 below. According to the findings, the effect of flexibility on revenue collection had a mean of 4.0127 implying that the majority of the respondents identified flexibility to have a very great extent on revenue collection. The respondents also said equitability had a very great extent effect on revenue collection with a mean of 4.1465. Similar results were obtained on neutrality and simplicity with means of 4.1146 and 4.0446 respectively. The standard deviations as shown in table 6 below were small showing that the respondents did not have varied opinions on the responses obtained.

Table 6: Tax Structure

	N	Mean	Std. Deviation	Variance
Flexibility	157	4.0127	.72490	.525
Equitability	157	4.1465	.66809	.446
Neutrality	157	4.1146	.61984	.384
Simplicity	157	4.0446	.83470	.697

James and Nobes (2008) and Nightingale (2002), support the study findings when they posited that a good tax system ought to guarantee greatest revenue accumulation and have the characteristics of equitability, efficiency, neutrality, flexibility. These standards still holds today and even go about as an aide for formulating policies. The multifaceted nature of tax frameworks, likelihood of identification and punishments and tax rates influence the adequacy of a tax framework.

### Forms of Revenues

The researcher sought to establish the effect of tax structure on revenue collection in Nairobi County government. In carrying out this task the researcher used table of means and standard deviations to help interpret the results. A Likert scale of 1 to 5 was used where a mean of 0-0.9=

not at all, 1-1.9= little extent, 2-2.9 = moderate extent, 3-3.9 = great extent and 4-5= very great extent to rate the extent to which the respondents agreed with forms of revenues used. Table 7 below gives the results of the study. The findings of the study indicate that property tax and business license had a mean of 3.389 and 3.7834 respectively indicating that the majority of the respondents identified the two forms of revenue to have a great effect on revenue collection. Service charge had a mean of 4.2994 implying that most respondents said it had a very great effect on revenue collection. The standards deviations were small showing minimal variations of responses from the study respondents.

Table 7: Forms of Revenues

	N	Mean	Std. Deviation	Variance
Property tax	157	3.7389	.70843	.502
Business license	157	3.7834	.69169	.478
Service charge	157	4.2994	.70224	.493

The findings of the study are supported by Alm (2013) when he concluded that property tax revenue represents under 0.5% of GDP in numerous African nations. In the 1990s, property taxes represented 40% of all sub-national taxes in developing nations (Bird and Slack 2002). In Ghana property tax represents around 14% of the aggregate revenues of nearby congregations, a normal of 6.1% in local councils in Sierra Leone, and fewer than 10% in The Gambia (normal for the period 2006 - 2008). In Liberia, where local councils are not permitted to gather revenue, property tax represents around 1% of aggregate revenues of the focal government. This implies property tax has not been gathered to the normal level however can contribute a lot of revenue to government.

### Revenue Collection

The study sought to establish revenue collection in Nairobi County government. In carrying out this task the study used a Likert scale of 1 to 5 where 1= not at all, 2 = little extent, 3 = moderate extent, 4 = great extent and 5 = very great extent to rate the extent to which the respondents agreed with statements on tax administration provided. The study findings shown in table 8 below indicate that the majority identified service charge to have a very great effect on revenue collection forming 43.9% (69) of the responses, followed by great extent at 42.0% (66) while 14.0% (22) identified service charge to have moderate extent. On payments being made on time, the majority identified a moderate extent at 43.3% (68), followed by great extent at 42.7% (67) while very great extent had 14.0% (22) of the responses.

Table 8: Revenue Collection

	Cases									
	Not at all		Low extent		Moderate extent		Great extent		Very great extent	
	f	%	f	%	F	%	f	%	f	%
Payments are made on time	0	0	0	0	22	14.0	66	42.0	69	43.9
Amount Collected	0	0	0	0	68	43.3	67	42.7	22	14.0

Similar studies by Masogo (2013) uncovered that in county governments projects are actualized by utilizing distinctive sources of funds. The funds might be gotten from own source revenue accumulation of the county, some might be acquired from central government while different funds are gotten from development partners.

### Hypotheses Testing

This research started with a hypothesis that there is no statistically significant effect of selected factors affecting revenue collection on revenue collection in Nairobi city county government. In this study, chi-square analysis was conducted to test for the influence of factors of revenue on revenue collection. The test of significance was tested at the 5% level of significance. Findings are as illustrated in tables below.

Table 9: Test of Hypothesis on revenue diversification

	Pearson Chi-Square	Sample size (n)	Degrees of freedom (df)	Sig. (1-sided)
Revenue diversification	0.585	157	156	0.027

Table 9 gives the chi-square test results. The table indicates that, the Pearson chi-square testing the relationship between revenue diversification and revenue collection had a value of 0.585 which is significant at the 5% level as the asymptotic significance (1-sided) indicate a value of 0.027 which is less than 0.05 the critical value at the 5% level in a 1-tailed test. Thus the results present sufficient evidence of rejecting the Null Hypothesis and therefore the study concludes that, revenue diversification had a significant effect on revenue collection.

Table 10: Test of Hypothesis on Tax Administration

	Pearson Chi-Square	Sample size (n)	Degrees of freedom (df)	Sig. (1-sided)
Tax administration	1.125	157	156	0.013

From the table 10 also, the chi-square test of significance for the relationship between the tax administration and revenue collection showed a coefficient of 1.125 with 156 degrees of

freedom and a significance value of 0.013 which is less than 0.05. Therefore, the findings give evidence of the relationship between tax administration and revenue collection in Nairobi city county government.

Table 11: Test of Hypothesis on Tax Structure

	Pearson Chi-Square	Sample size (n)	Degrees of freedom (df)	Sig. (1-sided)
Tax structure	.301	157	156	0.020

Similarly from the table 11 testing the relationship between tax structure and revenue collection, the findings showed evidence of rejecting the null hypothesis suggesting that there is a significant relationship between the two variables. This is as illustrated by the chi-square test results showing a chi-square coefficient of 0.301 with 156 degrees of freedom and a p-value of 0.020 which is below 0.05.

Table 12: Test of Hypothesis on Forms of Revenue

	Pearson Chi-Square	Sample size (n)	Degrees of freedom (df)	Sig. (1-sided)
Forms of revenue	0.241	157	156	0.042

From table 12, a significant relationship was also present between forms of revenue and revenue collection in Nairobi city county government. This as shown in Table 12 had a chi-square coefficient of 0.241 with 156 degrees of freedom and a significant value of 0.042 which is less than 0.05. Therefore this gives evidence of existence of the relationship between forms of revenue and revenue collection

Hypothesis: There is no statistically significant effect of selected factors affecting revenue collection on revenue collection in Nairobi city county government

### Regression Analysis

In this study, a multiple regression analysis was conducted to test the relationship among variables (independent variables; revenue diversification, tax administration, tax structure and forms of revenue collected and the dependent variable; revenue collection).

Table 13: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.772 <sup>a</sup>	.727	.709	.61863

a. Predictors: (Constant), Revenue diversification, Tax administration, Tax structure, Forms of revenue



As illustrated in table 13 above the predictor variables (Revenue diversification, Tax administration, Tax structure, Forms of revenue) explain 77.2% of the variation in revenue collection. This is as given by the R coefficient with a value of 0.772. Thus, based on this coefficient, other factors that were not considered in this research contribute to 22.8% ( $1 - 0.709 = 0.228$  expressed as percentage) of the variability in revenue collection in the county. From the table also, the results presented are 70.9% reliable as indicated by the Adjusted R square coefficient. This shows that, had the study been conducted using the entire population rather than a sample or could the sample have been altered to replace some of respondents not selected, the results would have a variance of 29.1% ( $1 - .709$ ) from the current results.

Table 14: Revenue collection ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.237	4	7.059	18.446	.000 <sup>b</sup>
	Residual	58.170	152	.383		
	Total	86.408	156			

a. Dependent Variable: Revenue collection

b. Predictors: (Constant), Revenue diversification, Tax administration, Tax structure, Forms of revenue

As illustrated in table 14 above, the significance value in testing the reliability of the model for the relationship between Revenue diversification, Tax administration, Tax structure and Forms of revenue with revenue collection in the county government of Nairobi was obtained as 0.000 which is less than 0.05 the critical value at 95% significance level. Therefore the model is statistically significant in predicting the relationship between dependent (revenue collection) and independent variables of the study (Revenue diversification, Tax administration, Tax structure and Forms of revenue). The F value from the table is 18.446 indicating a significant model for the relationship as given by the regression coefficients. This shows that the overall model was statistically significant and reliable in explaining the influence of the predictor variables to the revenue collection in the county government of Nairobi.

Table 15: Regression Coefficients for revenue collection

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.885	.589		11.689	.000
	Revenue diversification	.584	.076	.569	7.686	.003
	Tax administration	.695	.079	.685	2.208	.008
	Tax structure	.659	.086	.632	2.850	.019
	Forms of revenue	.687	.064	.622	4.465	.000

a. Dependent Variable: Revenue collection

The findings shown in table 15 indicate that all the variables had a positive and significant influence on service delivery. According to the results, revenue diversification had a significant

influence on revenue collection as shown by the coefficient ( $B = 0.584$ ,  $t = 7.686$ ,  $p > 0.03$ ). Tax administration also showed a significant influence on revenue collection with the coefficients ( $B = 0.695$ ,  $t = 2.208$ ,  $p > 0.008$ ) indicating a positive effect on revenue collection. Tax structure as well showed a significant influence with a coefficient of ( $B = 0.659$ ,  $t = 2.850$ ,  $p > 0.019$ ) showing a positive and significant relationship. Similarly, forms of revenue indicated a significant positive influence with coefficients ( $B = 0.687$ ,  $t = 4.465$ ,  $p > 0.000$ ).

The study used the following regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

$Y$  = Revenue collection

$\beta_0$  = Constant

$\beta_1, \dots, \beta_4$  = Coefficient of the variables

$X_1$  = Revenue diversification

$X_2$  = Administration

$X_3$  = Tax structure

$X_4$  = forms of revenue

$\varepsilon$  = Error term

Therefore;

Revenue collection =  $6.885 + 0.584$  Revenue diversification +  $0.695$  Tax administration +  $0.659$  Tax structure +  $0.687$  Forms of revenue +  $.589$

### Diagnostic Tests

The researcher conducted a multicollinearity test. The researcher made further attempt to minimize and/or avoid Common Method Variance (CMV) problem in the study. The precautions taken in designing the questionnaires (i.e. use of multi-item scales) as well as identifying different respondents for the independent and dependent variables, as already done, are preliminary mechanisms to minimize this problem. In addition to these precautions, the data is further tested or checked for CMV problem before commencing data analysis. The study therefore adopted collinearity analysis to test for collinearity issues, which might have arose during the study. According to the findings in table 16 below, the spread of the VIF values is very low (less than 2.5), indicating that there were no major problems in the study.

Table 16: Test of Multicollinearity Coefficients

Model		Collinearity Statistics	
		Tolerance	VIF
1	Revenue diversification	.896	1.116
	Tax administration	.434	2.303
	Tax structure	.418	2.391
	Forms of revenue	.979	1.021

a. Dependent Variable: Revenue collection

Table 17: Multicollinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant	Revenue diversification	Tax administration	Tax structure	Forms of revenue
1	1	4.913	1.000	.00	.00	.00	.00	.00
	2	.039	11.259	.01	.53	.00	.00	.23
	3	.033	12.167	.01	.33	.17	.06	.09
	4	.009	23.722	.40	.12	.47	.26	.33
	5	.006	28.177	.58	.01	.36	.68	.35

a. Dependent Variable: Revenue collection

The diagnostics test as given by VIFs and Eigen values in this case indicate no major collinearity problems in the data alongside other diagnostic tests hence revealing no such severity. In addition to the findings in Table 16 and Table 17, the overall evidence from the collinearity diagnostics conducted in this study indicates that collinearity has not caused problems for the study and that the existence of low level collinearity cannot make the result statistically different in any way. Therefore there is no significant collinearity in the data set that could hinder regression analysis as provided in the methodology.

## POLICY RECOMMENDATIONS

The study recommends that since revenue diversification was found to be having an effect on revenue collection in Nairobi County. The county administrators and the members of county representatives' need to come up with more areas/ channels where revenues can be gotten from in order to increase the amount collected in the county.

The study further recommends that ways be improved where the tax administrators and staff are trained on how they can improve their education on tax matters in order to increase on the amount of tax that that can be collected in the county. It is recommended that county governments should create competitive terms for their employees in order to attract skilled and competitive employees. More so, county governments should organize workshops and seminars as part of in-house training with the aim of imparting skills in their workforce he study

also recommends that enough facilitation in terms of equipment such as computers need to be added in the county government in order to obtain maximum tax from the county.

The study also recommends that the tax structure be designed in such a way that it fulfills all the canons of a tax system such that it is equitable, neutral, simple in its administration, economical while collecting.

The study finally recommends that since different forms of revenue have different effect on revenue collected the county government need to understand where most of its revenue comes from and maximize avenues to ensure that maximum revenues are obtained in that form of tax. This could be in form of adding more resources in terms of staffs and equipment working in that line to ensure that enough revenues can be obtained from that form of tax.

## RECOMMENDATIONS FOR FURTHER STUDIES

The study recommends that the findings in this study be generalized to other counties across the country for decision making purposes on factors affecting revenue collection. The study also recommends that another study be conducted on the financial strategies to counter the low revenue collected in Nairobi county government.

In addition to the above recommendations, the researcher recommends for another study on factors affecting revenue collection using a different methodology i.e. different research instrument to be used such as interview schedule that would help in obtaining in-depth suggestions from key informants.

Finally the study recommends that another study be carried out this time to find out the other factors affecting revenue collection since that factors involved in the study could only explain 77.2% on the factors affecting revenue collection in Nairobi City County. Given the inevitability of human error, the study may be repeated to revise any errors.

## REFERENCES

Abiola, J., & Asiweh, M. (2012). Impact of tax administration on government revenue in a developing economy-a case study of Nigeria. *International Journal of Business and Social Science*, 3(8).

Agyapong, P. K., & Sirbu, M. (2012). Economic incentives in information-centric networking: Implications for protocol design and public policy. *IEEE Communications Magazine*, 50(12).

Alm, J., Leguizamon, J. S., & Leguizamon, S. (2014). Revisiting the Income Tax Effects of Legalizing Same-sex Marriages. *Journal of Policy Analysis and Management*, 33(2), 263–289. <https://doi.org/10.1002/pam.21740>

Aruwa, P., & Suleiman, A. S. (2008). Accounting Research and the Development of Accounting Profession in Nigeria

Boadway, R., Chamberlain, E., & Emmerson, C. (2010). Taxation of wealth and wealth transfers. *Dimensions of tax design: The Mirrlees review*, 737-814.

- Bahl, R. W., & Smoke, P. J. (Eds.). (2003). Restructuring local government finance in developing countries: lessons from South Africa. Edward Elgar Publishing.
- Bird, A. (2007). Perceptions of epigenetics. *Nature*, 447(7143), 396-398.
- Boex, J., & Martinez-Vazquez, J. (2007). Designing intergovernmental equalization transfers with imperfect data: Concepts, practices, and lessons. In *Fiscal Equalization* (pp. 291-343). Springer US.
- Chau, G., & Leung, P. (2009). A critical review of Fischer tax compliance model: A research synthesis. *Journal of accounting and taxation*, 1(2), 34.
- Chittenden, F., Foster, H., & Sloan, B. (2010). Taxation and Red Tape: The cost to British business of complying with the UK tax system.
- Carroll K (2009) Outsider, insider, alongside: Examining reflexivity in hospital-based video *International Journal of Multiple Research Approaches* 3(3): 246–263.
- Cooper, D. R., & Schindler, P. S. (2006). *Marketing research* (p. 261). New York: McGraw-Hill/Irwin.
- Cooper, D. R., Schindler, P. S., & Sun, J. (2003). *Business research methods*.
- Chesbrough, H. (2003). The logic of open innovation: managing intellectual property. *California Management Review*, 45(3), 33-58.
- Dahoo, P. R., Hamon, T., Negulescu, B., Rocher, P., Tessier, M., Wack, A., & Thomas, L. (2004). Evidence by spectroscopic ellipsometry of optical property change in pulsed laser deposited NiO films when heated in air at Neel temperature. *Applied Physics A*, 79(4-6), 1439-1443.
- Dempsey, H. A. (2006). *Big Bear: The end of freedom* (Vol. 12). University of Regina Press.
- Doyle, E. M., Hughes, J. F., & Glaister, K. W. (2009). Linking ethics and risk management in taxation: Evidence from an exploratory study in Ireland and the UK. *Journal of Business Ethics*, 86(2), 177-198.
- Fjeldstad, O. H. (2006). *Local Revenue Mobilization in Urban Settings in Africa*. Chr. Michelsen Institute.
- Fjeldstad, O. H. (2013). *Taxation and Development: A review of donor support to strengthen tax systems in developing countries* (No. 2013/010). WIDER Working Paper.
- Fjeldstad, O. H. (2006). *Local Revenue Mobilization in Urban Settings in Africa*. Chr. Michelsen
- Fustey, A. A. (2011). Why Is Financial Market Volatility Increasing. *Index Wealth Management'*, Advisor Perspective, 1-3.
- Egidario, B. A. (2011). *Housing Transformation and its Impact on Neighbourhoods in Selected Low-Income Public Housing Estates in Lagos, Nigeria* (Doctoral dissertation, Covenant University).
- Ebrill, L., Stotsky, J., & Gropp, R. (2001). Revenue Implications of Trade Liberalisation<sup>1</sup>. *Small States in the Global Economy: Background Papers Presented to the Commonwealth Secretariat/World Bank Joint Task Force on Small States*, 44, 343.
- Hafeez, K., Malak, N., & Zhang, Y. (2007). Outsourcing non-core assets and competences of a firm using analytic hierarchy process. *Computers & Operations Research*, 34(12), 3592-3608.
- Hendrick, R. E., Klabunde, C., Grivegne, A., Pou, G., & Ballard-barbash, R. (2002). Technical quality control practices in mammography screening programs in 22 countries. *International Journal for Quality in Health Care*, 14(3), 219-226.
- Hoopes, D. G., Madsen, T. L., & Walker, G. (2003). Guest editors' introduction to the special issue: why is there a resource-based view? Toward a theory of competitive heterogeneity. *Strategic Management Journal*, 24(10), 889-902.
- James, S., & Nobes, C. (2008). *The Economics of Taxation 2008/2009*. 933-943.
- Kramon, E., & Posner, D. N. (2011). Kenya's new constitution. *Journal of Democracy*, 22(2), 89-103.
- Kothari, C. R. (2004). *Research methodology: methods and techniques*. New Age International.
- Kramon, E., & Posner, D. N. (2011). Kenya's new constitution. *Journal of Democracy*, 22(2), 89

- KIPPRRA (2005). "Tax Compliance Study." Draft report.
- Kim, L & Cha, J. W., (2012). U.S. Patent No. 8,176,057. Washington, DC: U.S. Patent
- Lagomarsino, G., Garabrant, A., Adyas, A., Muga, R., & Otoo, N. (2012). Moving towards universal health coverage: health insurance reforms in nine developing countries in Africa and Asia. *The Lancet*, 380(9845),
- Lederman, L., & Sichelman, T. M. (2013). Enforcement as Substance in Tax Compliance
- Mankiw, N. G., Weinzierl, M., & Yagan, D. (2009). Optimal taxation in theory and practice. *The Journal of Economic Perspectives*, 23(4), 147-174.
- MicroRNA miR-21 overexpression in human breast cancer is associated with advanced clinical stage, lymph node metastasis and patient poor prognosis. *Rna*, 14(11), 2348-2360.
- Mwachiro, K. (2013). Invisible: stories from Kenya's queer community.
- Fjeldstad, O. H., Chambas, G., & Brun, J. F. (2014). Local government taxation in Sub-Saharan Africa: A Review and an agenda for research. CMI Working Paper.
- James, S. and Nobes, C. (2008) *The Economics of Taxation*, 8th ed, Birmingham. Fiscal Publications.
- Kvaal, E., & Nobes, C. (2013). International Variations in Tax Disclosures. *Accounting in Europe*, 10(2), 241-273.
- Kirchler, E. (2007). *The economic psychology of tax behaviour*. Cambridge University Press.
- Kloeden, P. E., & Rasmussen, M. (2011). Non autonomous dynamical systems (No. 176). *American Mathematical Soc.*
- Malhotra, N. K. (2008). *Marketing research: An applied orientation*, 5/e. Pearson Education India.
- Mikesell, J. L. (2002). Tax expenditure budgets, budget policy, and tax policy: Confusion in the states. *Public Budgeting & Finance*, 22(4), 34-51.
- Muriithi, M. K., & Moyi, E. (2003). Tax reforms and revenue mobilization in Kenya (Vol. 131). Nairobi, Kenya: African Economic Research Consortium.
- Moran, N. A., McCutcheon, J. P., & Nakabachi, A. (2008). Genomics and evolution of heritable bacterial symbionts. *Annual review of genetics*, 42, 165-190.
- McCluskey, G., Lloyd, G., Kane, J., Riddell, S., Stead, J., & Weedon, E. (2008). Can restorative practices in schools make a difference?. *Educational Review*, 60(4), 405-417.
- Moran, B. I. (2008). *Capitalism and the Tax System: A Search for Social Justice*. SMUL Rev.
- Margolis, M. J. (2014). *So You Want to Be a Landlord*. Trafford Publishing.
- Nightingale, K. (2002). *Taxation: theory and practice*. Pearson Education.
- Oates, W. E. (2005). *On the nature and measurement of fiscal illusion: A survey*. Department of Economics, University of Maryland.
- Price, J., & Forrest, J. (2012). *Practical aviation security: predicting and preventing future threats* Butterworth-Heinemann.
- Sekaran, U. (2006). *Research methods for business: A skill building approach*. John Wiley & Smith, A. (1776). *The wealth of nations*. New York: The Modern Library
- Stewart, F., Brown, G. K., & Cobham, A. (2009). The implications of horizontal and vertical inequalities for tax and expenditure policies. Centre for Research on Inequality, Human Security and Ethnicity
- UNIDO (United Nations Industrial Development Organization). *Building the capacity of the People's Republic of China to implement the Stockholm Convention on POPs and develop a National Implementation Plan*, GEF-1412, UNIDO/GEF/WB; 2003
- Van der Watt, L. M., & Swart, S. (2016). The Whiteness of Antarctica: Race and South Africa's Antarctic History. In *Antarctica and the Humanities* (pp. 125-156). Palgrave Macmillan UK.

Wade, M., and Hulland, J. "The Resource-Based View and Information Systems Research: Review, Extension, and Suggestions for Future Research," MIS Quarterly (28:1), 2004, pp. 107-142

Wildeman, R., & Jogo, W. (2012). Implementing the Public Finance Management Act in South Africa: How Far are We?. African Books Collective. Texas Study Commission on Transportation Finance. Santa Monica, CA.

Welch, E. W., Hinnant, C. C., & Moon, M. J. (2005). Linking citizen satisfaction with e

Wachs, M. (2006). A Quiet Crisis in Transportation Finance. Testimony Presented Before the

Wade, M., & Hulland, J. (2004). Review: the resource-based view and information systems

Yan, L. X., Huang, X. F., Shao, Q., Huang, M. Y., Deng, L., Wu, Q. L., ... & Shao, J. Y. (2008).

Yan, W. (2008). The impact of revenue diversification and economic base on revenue stability:

Zigrand, J. P. (2010). What do network theory and endogenous risk theory have to say about the effects of central counterparties on systemic stability?. Banque de France, Financial Stability Review, 14, 153-160.