

**EFFECT OF RENTAL INCOME TAX ON FINANCIAL PERFORMANCE  
OF REAL ESTATE SECTOR IN KENYA**

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## DECLARATION

I declare that this research project is my own original work and that it has not been presented to any other university or institution for academic credit.

Signed  .

Date 23/11/2021

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This research project has been presented for examination with my approval as the university supervisor.

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## ABSTRACT

This study examines the effect of rental income on the performance of Real Estate Sector in Kenya over the past decade. In the study, a time series data from the last decade was obtained from Kenya Revenue Authority, Hass Consult and World Bank Website. The main objective of the study is to establish the effect of rental income tax on financial performance of real estate sector in Kenya. The specific objective of the study is to establish the influence of rental income tax on the performance of real estate sector in Kenya, to determine the influence of technological advancement of the performance of real estates in Kenya, to obtain the impact of inflation, taxation rate and penalty on the performance of real estate performance in Kenya. A regression model was conducted to establish the relationships between independent and dependent variables. Findings revealed that rental income has a significant influence on the financial performance of real estate sector in Kenya. This after the p-value of the study indicated that is its 2.1% against the statistical significance level of 5%. According to the study, technological advancement was the main influencer in the performance of real estates in Kenya after the p-value indicated 2.7% against the statistical significance level of 5%. Further, the study revealed that inflation, penalty each had 2.7% against 5% statistical significance level of 5%. They contribute significantly to the performance of real estates in Kenya. However, the rate of taxation does not make any significant contribution to the performance of real estates in Kenya. This was occasioned by the fact that the rate of income taxation on rental was constant throughout the study. Therefore, the contribution of Taxation rate is nil. The study recommended that more study studies should be conducted to establish the contributions of technological advancement, inflation, penalties and fines on the performance of other branches of real estate. The study also recommended that technological advancement should be given a priority by the Taxation Authority (KRA) to continue boosting the Revenue in the economy.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Tax, as a term, has diverse definitions based on the context involved. Various authors have different definitions. The tax system is widespread and is constantly used in regulatory acts, Court Rulings, Scientific research, and mass media (Nazarov, 2016). In 2019, it contributed about 7% of Kenya's GDP in 2019 (Global News, 2020). According to Real Estate Annual Markets Review Note 2020, the performance of rental income on real estate recorded a 7.0% rental yield compared to 2020, when rental income to real estate performance was reduced by 6.1 %. However, in this study, taxation will be used in the context of the financial system. Sokova E.D (2007) defines tax as a constituent of financial systems public sector that includes all levies and fees and bodies' that organize their payments and tax control systems.

Hugh Dalton (2010) defined tax as a mandatory contribution imposed by public authorities for services provided. Akrani (2010) observed that tax is a compulsory payment levied by the government on individuals, businesses and companies to fund social goods and services.

Adam Smith outlined a lot of principles that are incorporated in forming a good tax system. The Canon of equity stipulates that tax payments should be made depending on the ability to pay. Tax payable should be a proportion of revenue earned depending on the state's protection an individual or company enjoys. The principle of certainty calls for fixed tax rates to ensure tax payers are aware of their obligations from the onset. The principle of convenience states that tax is payable when it's due. According to Adams



Smith, the last principle states that there should be an economy in tax administration. According to Akrani (2010), best practices require that the cost of collecting taxes should be low, to ensure the government can collect sufficient revenue.

Governments rely on taxes as their most potent fiscal policy instrument. Taxes influence the economy by determining the amount of resources that are available to the government. In Kenya, there are numerous types of taxes individuals or companies pay. Some of these taxes comprise of income tax, installment tax, advance tax, rental/residential income tax and value added tax (VAT). This study aims at establishing how Rental Income Tax influences the performance of Real Estates in Kenya. According to a report published by Globe Newswire on April 27, 2021, Real Estate contributed approximately 7% of Kenya's GDP in 2019 (Research and Markets, 2021). This is against a GDP growth rate of 5.4% in the same year (World Bank, 2020).

According to Knight Frank (2020), the real estate sector in Kenya experienced a lot of growth from the mid to late 2000s due to a rise in consumer demand. In the same report, only 20% of urban dwellers own residential houses, with the remaining 80% leaving in rental properties. Therefore, it is evident this sector is an important part of Kenya's GDP. In Kenya by Law, rental properties are subjected to a 10 percent withholding tax income on the gross rental income obtained.

### **1.1.1 Rental Income Tax**

Rental income tax is the tax levied on rental income from residential buildings. Berhane and Yesuf (2013) reported that property owners are mandated to declare all the income they derive from renting out property. Introduced in January 2016, it requires a 10% tax on the gross rent. According to the Finance Act 2015, the 10% tax must be paid by any

resident persons, that's individuals or entities that have earned income from the use of their residential property in the country.

The introduction of the rental income tax are part of KRA's efforts to increase tax compliance by landlords and property managers. Moreover, the tax is easy to compute due to the absence of deductions. Essentially, it is computed on the percentage of the gross rentals (KPMG, 2015). Moreover, the government provided an amnesty for unpaid tax accrued before 2014 in an effort to encourage compliance.

### **1.1.2 Financial Performance**

Fundamentally, financial performance measures how a company can generate revenue from the assets if they are subjected to a trade. Financial performance is also used to measure general wellness and health in terms of its financial strength. The financial performance is measured over time, and the performance is observed (Verma E.2020). The financial performance is measured in different ways, including revenue from activities or operations carried out by the business, the cash flow, the total unit of sales, and the operating income. Financial analysts carrying out financial performance analyses may also decide to look deeper into the business's financial health. As such, the deeper look will involve checking the financial statements, growth margins in terms of the growth rate, and any debt in terms of how it is declining. According to Brown (2006), other ways of assessing the performance of a business in terms of finances will include liquidity, debt payment capacity, and profitability. It will also include solvency plus financial efficiency.

Real estate experts who have been in the market for a long time may be able to make a profit out of a competitive business environment. However, the emergence of more new businesses dealing with real estate business has made the competition stiffer. According to Lewellen and Lewellen (2014), the real estate business in many countries is not organized, unlike other sectors. In the real estate business, the individual properties have unique features, and they cannot be transferred or exchanged, thus presenting a challenge to a buyer or an investor while making price evaluations and checking favorable investment options.

In the real estate business, it is paramount that an investor knows the specific market to purchase the particular property (Slack, 2010). If the buyer or investor is not well endowed with such knowledge and tactic, they can hire experts for help. Investors looking forward to making a good income stream from the rental properties should consider different factors such as the location and the current rates for the property under consideration. The property's location will be close to significant schools or other businesses to be considered worth buying.

Zouhar et.al (2021) reported that reforms to countries' tax policies and tax administration systems require an imposition of rental income tax. Besides contributing to economic growth, it promotes equity and increases public funds. As such, financial assistance packages require rental income tax reforms.

### **1.1.3 Real Estate Sector in Kenya**

The boom in the real estate sector is in response to growing consumer demand occasioned by an expanding middle class and high networth investors investing in commercial real estate such as shopping malls, hotels and office complexes. In addition, increased government infrastructure investment such as airports expansion, highways, urbanization and population growth have combined to increase demand for real estate properties. Cytonn Investments (2015) in its 2015 third quarter Real Estate Report indicated that the construction sector registered the highest growth at 14.1%, ahead of agriculture (7.1%) and financial services (10.1%).

Presently, housing demand in Kenya supersedes available supply, which has resulted in high real estate prices. Amondi (2016) reported that a survey by the Ministry of Land and Housing had found that the country only produces 30,000 units annually against the 200,000 demand. Moreover, an increase in construction costs has also pushed real estate prices up. According to Ngala and Byaruhanga (2020) the growing deficit in housing supply is a key driver of rising property prices.

According to the Kenyan Population and Housing Census report (2009), a majority of Kenya's population is young, with 42% below 14 years and 34% between 25 and 54 years. As this segment enters the workforce, the demand for urban housing is expected to rise. Mwangi et.al (2014) observed that a growing middle class is translating into increased demand for residential and retail properties. Investors are actively seeking alternative funding solutions to enhance their capacity to meet this growing demand.

Kenya Property developers and Hass Consultant report (2013) noted that the introduction of Income Real Estate Investment Trust by Stanlib and Development Real Estate Investment Trust by Fusion Capital aims to address this growing need. The Kenyan economic report (2015) noted that Centum and NSSF are relying on real estate investment trusts to meet their capitalization needs. The development of REITs has attracted a lot of institutional developers such as foreign venture capital firms, Saccos and private equity firms due to the high standards of transparency and ease of exit. Insurance firms and pension schemes have more than 16% of their portfolio in real estate (Knight Frank Economic Report 2011). For instance, Kahawa go down development involved a partnership between housing finance and landowners. Increased funding solutions are facilitating real estate growth.

## **1.2 Research Problem**

In 2015, Finance Act (2015) which roped in Residential Rental Income Tax, was introduced to improve Revenue Collections. In 2019, The Kenya Revenue Authority executed a Strategic Plan guided by its 7<sup>th</sup> Corporation Plan Themed “Revenue Mobilization through Transformation, Data-Driven, Decision-Making and Tax-Base Expansion” Both the Finance Act (2015) and KRA’s Strategic Plan had one core objective; to improve revenue collection to boost Gross Domestic Product so that Kenya should be able to finance its budget.

Tamale and Gathii (2021) reported on the spiraling debt levels in Kenya. Although the IMF declared Kenya as having a high fiscal risk due to its high external debts, it has continued to lend to it in light of COVID-19 associated economic pressure. Similarly, the Africa Sovereign Debt Justice Network has established that Kenya has a high risk of

suffering from its high debt distress. As such, it is concerning that the National Treasury continues to seek a debt ceiling increase from Parliament. Tamale and Gathii (2021) noted that the problem is being compounded by the fact that the rapid growth of foreign interest payments is outgrowing the value of exports, worsening the country's fiscal deficit. The Kenyan government has proposed fiscal consolidation while prioritizing social spending and seeking concessional finance. There is also a growing adoption of austerity measures aimed at minimizing social spending.

Because of the above, it is evident that Kenya's revenue collection is insufficient to fund Kenya's budget for the year a long time, whose aim is to provide public services to its citizenry. This inability to fund public services is happening despite major tax collection reforms to collect revenues to fund such programs. It can be concluded that Kenya Revenue has failed in its mandate to collect adequate revenue to fund government operations despite avenues of tax collection rental tax income included. The treasury and Kenya Revenue Authority have faced the same challenges for over a decade, even though several tax collection reforms have been made to boost revenue collection.

Property tax has been analyzed from an economic perspective. Interestingly, the vast literature on the subject has not translated to consensus on fundamental property tax issues. Essentially, there are three main concepts that have been identified in the literature review. First, the benefit tax view, which focuses on an analysis of benefits in favor of the property owners through the imposition of wealth taxes. B.W Hamilton (1975) developed the theory of approaching the local property tax as a tax on benefits. In contrast, the traditional tax theory notes that property tax is essentially a diversified capital tax.

Mieszkowski P. (1972) and H. J. Aaron (1975) developed this theory. The other theory is Aristotle's theory of property taxation. Aristotle highlighted the outside effect of taxing private property in the contemporary economy. In his book, “Politika”, he discusses the necessity for nations to have sufficient resources. In his view, resource availability provides an enabling environment for harnessing human creativity. In this regard, a nation could only be able to achieve democracy and stability when it has sufficient resources.

Locally, Moturi (2011) observed limited financial performance determinants in real estate development. The disposable income of the target market has been identified as the main determinant. Interestingly, it also established that the choice of a project's location had a negative correlation on the returns derived, which therefore implied that the project's location does not directly influence the financial performance.

In his study on the relationship between property prices and mortgage lending in Kenya, Muli (2011) established a positive and significant relationship between long-term mortgage credit rates and housing prices. In his study on the determinants of real estate prices in Nairobi, Julius (2011) found that employment growth and the level of money supply information influences real estate prices and shapes financial analysts understanding of the sector. In addition, an increase in interest rates have been found to translate to a reduction in real estate prices.

In light of the identified empirical reviews, there is a clear gap in understanding the effect of rental income on financial performance in Kenya's real estate sector. In this regard, the main research question is:

What is the effect of rental income taxes on financial performance in the real estate sector in Kenya?

### **1.3 Research Objective**

#### **1.3.1 General objective of the study**

To evaluate the effect of rental income tax on financial performance in real estate sector in Kenya.

#### **1.3.2 Specific objective of the study**

- i. To establish the influence of rental income on the financial performance of Real Estate Sector in Kenya.
- ii. To determine the influence of Technology on the financial performance of Real Estate in Kenya.
- iii. To obtain the impact of Taxation Rate on the financial performance of Real Estate in Kenya.

### **1.4 Value of the Study**

Essentially, economic growth is an important macroeconomic objective for any nation. Governments have the duty of providing basic infrastructure and goods for its citizens. Nwafor (2020) noted that stabilizing the economy, income redistribution and providing social services are primary responsibilities for the government. In this regard, resource availability has a direct impact on its ability to deliver on its goods and services.

According to a report released by Cytonn (2017), the real estate sector has exploded in the last two decades. The report indicated that the sector's contribution to the GDP has grown over the years, rising from 10.5% in 200 to 12.6% in 2012. The growth continued



to 13.8% in 2016. The Research and Markets on Kenya Real Estate Market Activities Report 2020 indicated that its contribution to GDP was 7% in 2019. The rapid population growth and rising middle class has increased the demand for housing units, resulting in an annual deficit of 200,000, and a total shortage of 2 million units accrued over the last two decades.

Cytonn (2020) reported that the largest demand for housing units is driven by urban dwellers at 61%. A shortage of quality affordable housing and student accommodation has led to a 40% deficit in urban areas. The problem has been exacerbated by a rise in infrastructure development, improved roads, and utility connections with a stable GDP growth at 5.4% over the last five years, which is above 4.1%. Furthermore, demographic trends such as rapid urbanization (4.4%) as compared to the global 2.5% against a population rise of 26%. Furthermore, it provides a high total returns of 25.0% against the 12.4% derived from traditional asset classes.

The recommendations generated by this study should be made available to the Institutions tasked with collecting taxes in formulating policies that will be useful in designing workable frameworks to help improve tax collection. This will reduce the headache of yearly Budget deficits. The recommendations of this study, if adopted by the relevant authorities, should help enhance the level of tax revenue collection, which in turn, if properly utilized, should spur economic growth like infrastructural development. The recommendations should be available for researchers who would want to conduct studies in the areas of taxation.

The budget for other developments would be increased with improved revenue collection, thereby promoting economic growth and development. This way, the revenues collected will be plowed back to the economy and increase employment opportunities. Some people have lost jobs because of austerity measures to manage the economy because a considerable section of the budget is allocated to clear debts. If rental income is taxed correctly, the demand for external debts will reduce, thereby minimizing cases of National debts and unnecessary job losses.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section comprises of the theoretical framework for residential real estate, the literature review, and a literature review summary.

#### **2.2 Theoretical Literature Review**

The study relies on the theories that have been discussed in line with the variables. The theories include Aristotle's Theory of Property Tax, Hamilton's Property Tax Theory, and Traditional Tax Theory.

##### **2.2.1 Aristotle Theory of Property Tax**

According to (Miller, 1986) the Aristotle theory of property tax in the private property sector has huge importance in the current economy. The state uses the taxes to pool together the resources to be used by the state. According to Aristotle's theory of property tax, the process of collecting tax is a sure way of ensuring that the resources and the wealth of the nation are replenished. Taxes apply to all the citizens of the country, including those who have property. In this case, Aristotle argues that people who are well up should pay their taxes while the slaves should be exempted. During Aristotle's time, slaves and women were considered part of the man's property. The issue of talents during the time of Aristotle was to ensure that the men could reap their full potential (CCH State Tax Law Editors, 2007, p7). In this context, it is preferable that taxation should be based on an individual's wealth as opposed to their property. Arguably, people who fail to use their property to generate wealth should be fined in the form of extra taxes (Slack, 2010).

A good example is the owners of land who leave it lie idle, yet they should have done some business to accumulate wealth. A similar model can be used in society today to ensure the resources of a country do not go to waste. When such taxes are introduced, people will be triggered to ensure they use all their resources at all times (Aristotle and Ellis, 2006). It is also essential to subject households to taxation to enable the country to get the necessary resources to run the vital activities. The wealth needed by the government will be sufficient to ensure the salaries of the civil servants are paid, thus creating equality.

Society should ensure it pays all the taxes on time to ensure the country is running smoothly. This will ensure that the government can carry out all the activities perfectly (La Forest, 2006). Taxation is a crucial tool to exercise governance because it also helps build infrastructure and amenities in the country. This means that a country will tax for it to move even a single inch. This makes the theory relevant to this study. (Akbar & Beig, 2010).

### **2.2.2 Hamilton's Property Tax theory**

The theory that approaches the proper local tax as a tax on benefits was developed by B.W Hamilton (1975). He claims that property is a diversified capital tax, distorting capital allocation in local jurisdictions (Felis, 2014). Property tax should be considered as having two components; a tax on residential property and another on non-residential property. Slack (2011) noted that there is a strong case for imposing property tax on residential property. This observation is based on economists' belief that property tax is an important contributor to local government revenues.

The tax helps the local government come up with services and other amenities that the local people may require to live comfortably. The taxes charged in the different regions or jurisdictions are the same to avoid people from moving from one to another in search of comfortable places to pay less tax.

The public's perception has been against the taxes as they seem to give a high level of inconsistency due to the taxes paid, which do not match the developments carried out. The problem could be a result of buoyancy in property taxes. Both types of taxes are highly political, and thus, the various challenges incurred in implementing the taxes should not be underestimated. Although the challenges can be overcome easily, it is essential to note that they can restrict progress while implemented. Property, a source of revenue, plays a huge role in decentralization and local governments' specific state of autonomy. In this regard, the theory has profound implications on real estate investment.

### **2.2.3 Traditional Tax Theory**

According to Wallace (2016), the theory of traditional tax examines the effect of the tax on the economic system due to the increased burden of paying more tax. A group of scholars, including Bruce Hamilton, William Fischer, and others, states that local property taxation and the rules and regulations of the specific zones will produce an effective system that will enhance the taxation process to promote the efficient location and fiscal decisions.

Local tax differentials have the potential of distorting local decisions. As such, the people would be discouraged from using their capital. The implementation of the property tax has been a case of heated debate. This is because the properties are not sold regularly, and

as such, the tax should be based on the estimated or assessed value. In light of the lack of harmonization of the tax bills, it is evident that the theory is applicable in this context.

## **2.3 Determinants of performance of real Rental Income taxation and financial performance of Real Estates in Kenya.**

### **2.3.1 Empirical Literature Review**

The section covers studies that have been done in line with the rental income tax and financial performance of real estate investments. Mhizha (2015) in his investigation on the effect of taxation on investment in Zimbabwe demonstrated that it has the capacity of shaping a country's investment landscape and long-term economic growth. The study relied on both theoretical and empirical evidence, establishing that taxation is an important consideration for investors. However, they established that it is not a sufficient condition, with political stability, macroeconomic stability, the availability of a skilled workforce and infrastructure being important concerns as well. Nonetheless, it was determined that taxation is a positive condition for development. Taxation is the primary function through which the government collects resources to fund development projects. The construction of schools, dams, healthcare facilities were identified as some of the projects supported by taxes. They recommended the reformation of tax policies to reduce tax burdens and streamlining public funds management to optimize resource management.

Philips et.al (2011) investigated the distributional impact of both direct and indirect tax reforms in Mexico. Their study focused on tax reforms in Mexico with the aim of generalizing to similar jurisdictions that are characterized by high tax avoidance rates in both the consumption and labor markets. They developed a tax micro simulation

(MEXTAX) method and relied on micro data. The model enabled them to quantify the revenue and distributional effect of tax reforms. They relied on two main assumptions, that changes in taxes do not translate into behavioral change and that taxpayers react along specific margins. Response to tax changes is evidenced in their labor supply, shift in consumer spending due to indirect taxes and their less than full pass-through to consumer prices.

Their findings demonstrated the need for Mexican authorities to prioritize investments in improving the quality of data that can be used in micro-simulation models by either creating a micro-dataset of tax records or improving household survey (ENIGH). The incentives provided for informality have been identified as being useful in examining responsiveness to taxable income and changes in tax rates. Philips et.al (2011) recommended the inclusion of cash welfare transfers in the micro-simulator coverage.

Mo (2019) investigated the effect of general rates and property taxes on the retail price index of private housing in Hong Kong. They established that the real estate tax had a limited effect on the pricing of private housing. However, the real estate tax on the transaction link and the profit tax have proven to be more impactful. As such, the Hong Kong government would need to adopt a holistic tax reform to suppress housing prices.

In his study, England (2016) investigated the economic questions surrounding taxation on land matters such as agricultural land. The study sought to investigate if the apartment owner or the renter is responsible for paying rent in an urban city context. The findings from the study indicated that occupancy and tenancy rates are outcomes of the housing market as a whole as opposed to being features of two distinct markets. Moreover, he recommended investigating the effect that renter's illusion has on housing demand.

In its publication, *Tax Laws and Legal news South Africa on the tax impact of Covid-19 on landlords*, KPMG (2020), the institution established that the property industry is a capital intensive industry with some landlords leveraging debt in funding commercial property acquisition. Loan funding for commercial real estate is high due to the vast resources required. The publication highlighted an important concern about the potential VAT implications for landlords when their properties accrue interest while there is a decrease in rental income.

William (2011) decried the lack of sufficient studies on the effects of the tax reforms on real estate financial performance. Most studies focused on the impact of tax rates as opposed to a holistic look at tax measures. As Tanzi (2007) points out, tax administration determines the real (or effective) instead of the statutory tax system, there is a need to differentiate between tax policies from the tax administration.

In Kenya, the Ministry of Finance (Treasury) is responsible for promulgating tax policy, while the Kenya Revenue Authority (KRA) focuses on tax administration. In effect, KRA functions as the agent while the Ministry is the principal. In the context of this study, tax administration refers to both KRA and the treasury. Tanzi (2007) noted that tax administration is a tax policy. An analysis of the empirical literature has identified research gaps regarding the effect of tax reforms on property tax due to lags in maintaining the tax base due to inefficiencies in the tax management system (Kelly, 2011). In this regard, property tax reform must address both its administration-intensive nature and the value of direct and active government involvement.

In his study, Moturi (2011) used fifty projects drawn from different categories undertaken across some counties in Kenya. He concluded that the variability of a study is low while



the determinants of financial performance were limited to the higher disposable income of the target population interested in the project development.

Furthermore, Karoki (2013) investigated the determinants of residential real estate prices in Kenya. Using a composite property index that is published by Hass Consulting Ltd, he established that there is a significant relationship between residential real estate prices and interest rates, income levels and the GDP. Although there is a relationship between residential real estate prices and inflation rates, it is insignificant.

In his study on the determinants of financial performance of the real estate brokerage industry in Iran, Hassan (2017), applied pooled ordinary least squares and panel fixed effect regression to establish the relationship between its performance and explanatory variables. The findings indicate that REB firms invest more in residential properties with the rent transactions due to their high financial performance.

Ocheni (2015) relied on descriptive survey research when studying the impact of tax policy on the performance of SMEs in the Nigerian economy. The study focused on Kogis state and Abuja, and their population of 68 small and medium-scale enterprises. The study demonstrated that having a low tax policy is instrumental to the longevity and growth of SMEs. As such, the optimal tax policy should lower both compliance costs and administration costs.

In his study, Gadzo (2013) investigated the effect of corporate income tax on the financial performance of listed manufacturing firms in Ghana. The researcher relied on a descriptive-causal research design with a purposive sampling technique resulting in the selection of 10 manufacturing firms listed in the Ghana stock exchange between 2005

and 2012. The study established a negative correlation between corporate income tax and financial performance. In contrast, it identified a significant positive relation between firm size, age and growth and its financial performance.

Mburu (2017) investigated the determinants of the financial performance of Real Estates Investment Trusts in Kenya. The study adopted a census design and guide using an empirical model. The study adopted a holistic approach, seeking to establish the effect of government policies, interest rates, demographic factors and the economy on the performance of Real Estate Trusts in Nairobi County. The study found that there were strong positive and significant relationship among the factors under consideration.

Mburugu (2019) focused on Premier Realty Limited as a case study. The study focused on customer, managerial practices and social-demographic factors and how they impact real estate growth. The study relied on survey design in collecting data from customers who had bought land representing customers and agencies. The study established that customer confidence has an influential effect on demand for real estate.

## **2.4 Empirical Literature Review**

### **2.4.1 Determinants of Financial Performance**

A firm's performance is of huge importance to the people who have shares in the firm, the investors who have financed the activities, and the economy. Resources will require to be employed in the right way to attract production. The private sector has been viewed as responsible for venturing into new products to ensure the economy keeps growing (Kalirajan and Singh, 2009). The government appreciates the role of the private sector and thus ensures the appropriate infrastructure is provided for the growth and development of projects in new ventures. Profit is the major focus of any business,

according to Kyereboah- Coleman (2007). It helps boost the shareholder's wealth and boost growth.

The external factors include the different preferences and tastes the customer may develop due to the changing times. On the other hand, customers' perceptions will also imply how a business will be run. Other factors include the laws governing a country and the general state of the economy. The change in the performance of the economy can have adverse effects on a business. Kalirajan (2009) noted that this emboldens both real estate flippers and landlords. People who have made huge investments could also find it wise to take a second to third mortgage to develop their financial portfolio. As such, the landlord will have full control of the investments made and will exercise due diligence even though the whole amount has not been paid.

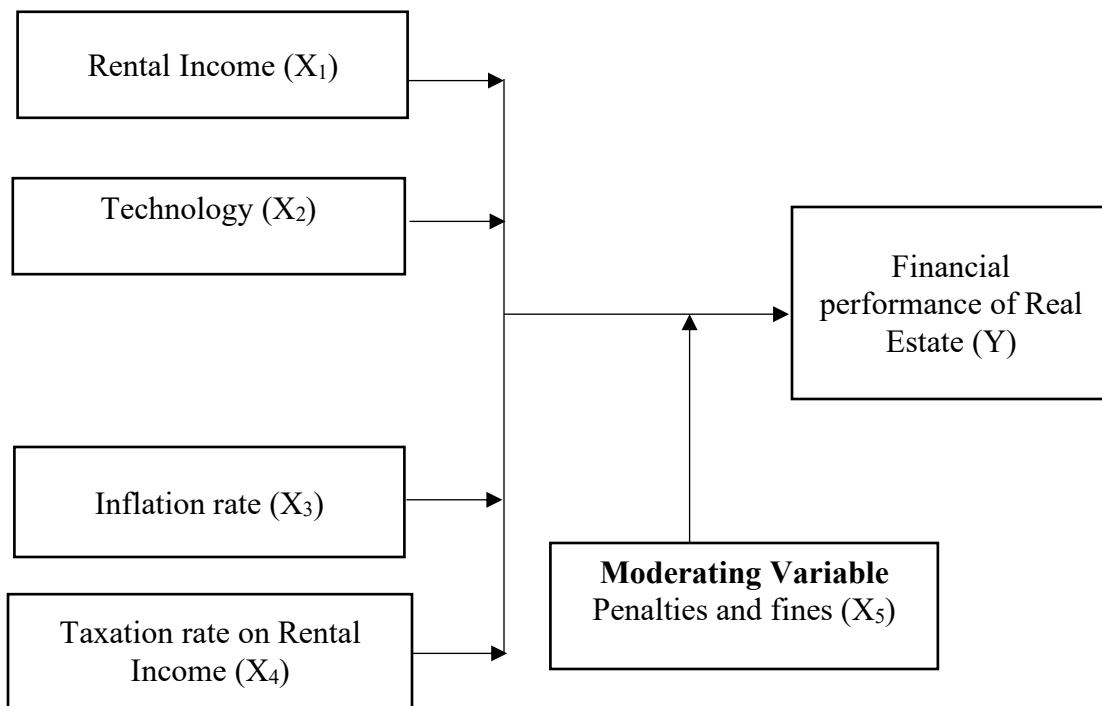
One of the reasons why people face challenges when they are investing is the problem of illiquidity. It is also evident that the problem of low conversion of money to asset and asset into cash has been evident in the property business. This is because the business of properties is different from that of bonds or stocks. It is difficult to close a deal in the property sector, whereas it is easy to close a deal in the stocks or bond market to close a deal within seconds (Boethius et al., 2012). Therefore, real estate investments are considered part of alternative investing. It has a supplementary investment nature used to build on the primary portfolio such as stocks or bonds plus other kinds of securities.

## **2.5 Conceptual Framework**

The study is on the effect of rental income tax on financial performance in residential real estate investors in Kenya. The independent variable featured in the study is the rental

income tax. The control variable in the study is pricing, while the dependent variable is financial performance in residential real estate. As illustrated in the figure below (Fig. 2.1).

**Figure 2.1: Conceptual framework**  
**Independent Variables**



**Source (Researcher, 2021)**

In this current study, and as shown in Figure 2.1 above, there are three independent, moderating, and dependent variables. The independent variable, in this case, has been split into sub-variables, namely, Rental Income, Taxation rate on Rental Income, Inflation rate, and Technology, Moderating variable is Penalties and fines. Strengthens the relationship between the predictor and depend on variable. Moderators specify when a relation will hold. In this case, pressing fines and penalties on tax defaulters will improve the rate of tax payments.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This section focuses on the procedures employed in collecting, analyzing and interpreting data. Besides describing the research design, it will describe the techniques used in the data collection and analysis.

#### **3.2 Research Design**

Research design is the methodologies used to collect and analyze information about the variables. Essentially, it describes the type of study used in the research. Cooper and Schindler (2011) noted that it is a framework that is useful in finding answers to research questions. Descriptive research has been used in this study due to the focus on investigating how rental income tax influences financial performance in the real estate sector. This approach involves observing and describing a subject without influencing its behavior. Kothari (2004) noted that it focuses on establishing the what, where and how of a phenomenon.

#### **3.3 Population of the Study**

Kombo and Tromp (2006) stated that the population is the source of statistical data on the subjective. The information obtained from the sample facilitates the development of hypotheses about a larger population. Sampling enables researchers to gather information about a large population. Sekaran and Bougie (2010) noted that a population is select group a researcher is interested in. The sampling approach in a study is determined by the available time, physical boundaries, areas of interest and the resources available for the study.

In this study, the population in investors in the real estate sector with operations in Nairobi. According to Estate Agents Registration Board, there are approximately 49897 real estate investors in Nairobi County. This study will, however, be conducted in Westlands Constituency in Nairobi County. This is because Westlands represent some high-income areas with many residential rental properties and slum areas such as Kangemi, with a huge population.

### **3.4 Sampling Technique**

Polit et al. (2001) defines a sample as a sub-section of the target population. Crossman (2019) Snowball sampling technique is cost-efficient, cheap, and easy to use. A sample cannot represent the technique for statistical purposes, but it is relevant in exploratory and/or qualitative research because it affects their validity or reliability. In this case, the researcher will start with a small population, and the participants will introduce other respondents. Here the size of respondents will be growing.

### **3.5 Sample Size Determination**

Sampling is the method by which inference is made to the whole by evaluating a component to provide different forms of qualitative or quantitative statistical knowledge by examining a few selected units (Kerlinger, 1973). The form of sampling is the scientific methodology for the collection of another sample frame which will provide the required estimates with the associated ranges of ambiguity arising from the study of only one variable rather than the entire variable (Kothari, 2003). To pick the research subjects, this research will use simple random sampling. Black (2014) stated that simple random sampling ensures that each element in the larger population can be chosen for the study. The transparency associated with this sampling method ensures that there is no prejudice.

The Fisher formula is as follows:

$$n = \frac{z^2 p(1 - p)}{d^2}$$

Where;

$n$ = sample size

$z$ = the standard normal deviate value for the level of confidence, for instance 95% level of confidence =1.96.

$d$ = margin of error or level of precision at 0.10 for CI at 95%

$p$ = proportion to be estimated, Israel (2009) recommends that if one don't know the value of  $p$  then you should assume  $p=0.5$

Therefore, sample size is arrived at as follows:

$$n = \frac{(1.96^2)(0.5)(1 - 0.5)}{(0.10)^2}$$
$$n = 96$$

Thus, the sample size for the study will be 96 respondents are identified.

### **3.6 Data Collection Methods**

Kothari (2004) observed that data collection gathers and measures information on the variables of interest based on the research questions. In this study, secondary data will be used due to its convenience and the availability of accurate industry data. Furthermore, the data used in the current study will be collected from the real estate and property management companies in Nairobi County. The use of secondary data is deemed to have been justified because some of these source's pieces of critical information which is vital for the current study and have been reviewed and approved. Data collected from 2016 to



2020 will also be used in this study. Moreover, a questionnaire with a five-point Likert scale will facilitate primary data collection.

### 3.7 Data Analysis

In this study, a linear regression model will be employed to assess the effect of rental income tax on financial performance in residential real estate investors in Kenya.

#### 3.7.1 Conceptual Model

Conceptual model consists of concepts that enable any logical reader to understand a subject that the model represents. Below is the conceptual model for this study

The following regression equation will be used to determine the influence of the identified variables on the actual performance of real estates in Kenya.

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

$$Y = f(X_1, X_2, X_3, X_4, X_5) \dots\dots\dots 1$$

**ROA will measure Y=**Financial performance in residential real estate

**a** is the intercept

**X<sub>1</sub>** = the Residential Rental Income

**X<sub>2</sub>** = Effect of penalties and fine will be measured by interest rates of penalties and fines

**X<sub>3</sub>** = Prevailing inflation rate

**X<sub>4</sub>** =Taxation rate on Rental Income will be measured by residential property income

**X<sub>5</sub>**=The level of technological advancement to monitor the income tax compliance

**ε** is the error term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  are Regression Co-efficient. They are defined by the extent by which Y changes for every unit change of the predictor variable. A 95% level of confidence will

be used to test the significance of each co-efficient. A null hypothesis  $H_0$  will be used to test the significance of the econometric model.

Financial Performance in residential real estate investment is  $Y$  (0) is not significantly affected by Rental income tax  $X_1$  (0) and Pricing  $X_2$  (0)

$H_0: Y = X_1 = 0, X_2 = 0, X_3 = 0$

$H_1: Y \neq X_1 \neq 0, X_2 \neq 0, X_3 \neq 0$

### **3.7.2 Test of Significance**

In this study, the relationship between financial performance in residential real estate investment (dependent variable) and rental income tax (independent variable) will be tested using the Pearson product correlation. The inferential tests will be computed at a 95% confidence level. A correlation co-efficient will be established from testing the results, with a higher correlation coefficient indicating a stronger relationship.

## CHAPTER FOUR

### DATA ANALYSIS

#### 4.1 Introduction

This chapter presents the analyzed results and findings of the study on the research questions concerning the data obtained from the relevant sources on effect of rental income tax on financial performance of real estate sector in Kenya. The first section covers raw data and source. The second section deals with data presentation. The other section deals with the objective questions as answered and the final section discusses the summary of the entire chapter.

**Table 4.1: Yearly Data**

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Rental Yields %	2.3	4.1	4.3	7.14	6.29	6.6	6.1	8.6	7.4	3.17
Rental Income Rates (X1)%	5.70	11.00	11.00	14	6.80	6.00	7.60	7.40	7.00	6.10
Penalty Interest rates%	5%	5%	5%	5%	5%	12%	12%	12%	12%	12%
Inflation rate (X3)%	14.02 249	9.377 767	5.717 494	6.878 155	6.582 174	6.297 158	8.005 723	4.68 982	5.23 586	5.404 815
Taxation rate on Rental Income %	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Technology (x5)%	0	0	0	1	1	1	1	1	1	1

*Data Source: KRA, Hass Consult, World Bank Website*

This chapter provides a detailed presentation and discussion of data analysis and the findings of this study. The findings of the study are presented under following headings. the influence of rental income on the financial performance of Real Estate Sector in Kenya, the influence of Technology on the financial performance of Real Estate in Kenya, the impact of inflation rate on the financial performance of Real Estate in Kenya. In the study, regression analysis was conducted twice; one when the other mediating variables were assumed to be absent and when the other variables such as inflation, technological influences, penalties and taxation rate which was constant all through were factored in.

**Table 4.2: Model summary for Annual Rental Yield (%) and Penalty on Interest Rate (%)**

<b>Model Summary</b>									
Model	R	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	
1	.402a	.162	1.97110	.162	1.542	1	8	.250	

a. Predictors: (Constant), Penalty Interest Rates % (x2)

Table 4.2 above shows the model summary for annual Yield (%) and Penalty on Interest rates. Findings revealed that penalty accounted for 5.7% on the annual rental yield

**Table 4.3: ANOVA for Annual Rental Yield and Penalty Interest Rates**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.991	1	5.991	1.542	.250 <sup>b</sup>
	Residual	31.082	8	3.885		
	Total	37.073	9			

a. Dependent Variable: Annual Rental Yield % (Y)

b. Predictors: (Constant), Penalty Interest Rates % (x2)

Table 4.3 is an ANOVA table of Annual Rental Yield (%) and Penalty on interest Rates (%). The significance level is 0.25 against the p-value of 0.05. From the study, we find that penalty on interest rates is not significant on the real annual yield.

**Table 4.4: Coefficients Penalty on Annual Rental Yield**

Model		Unstandardized		Standardized	t	Sig.	95.0% Confidence	
		Coefficients		Coefficients			Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.720	1.637		2.273	.053	-.055	7.495
	Penalty Interest Rates % (x2)	.221	.178	.402	1.242	.250	-.190	.632

a. Dependent Variable: Annual Rental Yield % (Y)

$$Y=a+bx+\alpha, Y=3.72+0.221x+ \alpha$$

According to the regression model, findings of the study, an increase in penalty rate by one per cent (1%) increase the annual yield of rental income by 0.221 units.

**Table 4.5: model summary of rental income Rates (%) and Annual yield of rental income (%)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.127a	.016	-.107	2.13533	.016	.131	1	8	.727

a. Predictors: (Constant), Rental Income Rates % (x1)

Table 4.5 above shows the model summary for annual Yield (%) and Penalty on Interest rates. Findings revealed that penalty accounted for -10.7% on the annual rental yield

**Table 4.6: ANOVA table of Annual Rental Yield % (Y) AND Rental Income Rates (%)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.596	1	.596	.131	.027b
	Residual	36.477	8	4.560		
	Total	37.073	9			

a. Dependent Variable: Annual Rental Yield % (Y)

b. Predictors: (Constant), Rental Income Rates % (x1)

Table 4.6 above in an ANOVA table of Annual Rental yield on Rental Income Rates. According to this study, the amount of rental income has a significant impact on the annual rental yield. The statistical level of significance is 0.027 compared to 0.05. It shows that rental income rates contributes significantly to the annual rental yield.

**Table 4.7: Coefficients of Rental Income rate on the Annual Yield Rates**

Model		Unstandardized		Standardized	t	Sig.	95.0% Confidence	
		Coefficients		Coefficients			Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	4.834	2.225		2.172	.062	-.298	9.965
	Rental Income Rates % (x1)	.093	.257	.127	.361	.021	-.499	.685

a. Dependent Variable: Annual Rental Yield % (Y)

Table 4.7 above is a regression model. The model shows that other factors held constant, an increase in rental income (%) by a unit influences an increase in annual yield (%) by 9.3%. Accordingly, given the significance level of 5% against the p-value of 2.1 %, the contribution of rental income has a significant influence on the annual rental yield.

**Table 4.8 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.633a	.401	.326	1.66651	.401	5.349	1	8	.049

a. Predictors: (Constant), Inflation Rates % (x3)

Table 4.8 above shows the model summary for annual Yield (%) and Inflation rates.

Findings revealed that penalty accounted for 32.6 % on the annual rental yield

**Table 4.9: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.854	1	14.854	5.349	.049b
	Residual	22.218	8	2.777		
	Total	37.073	9			

a. Dependent Variable: Annual Rental Yield % (Y)

b. Predictors: (Constant), Inflation Rates % (x3)

Table 4.9 above shows the ANOVA of annual rental yield (%) and inflation rates (%).

Findings revealed that inflation rates is statistically significant on annual rental yield since the p-value is 4.9% against the significance level of 5%.



**Table 4.10: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	8.956	1.544		5.801	.000	5.396	12.517
	Inflation Rates % (x3)	-.465	.201	-.633	-	.049	-.928	-.001

a. Dependent Variable: Annual Rental Yield % (Y)

Table 4.10 is a regression model. Findings reveal that assuming that other factors held constant, with inflation as the only factors under consideration, an increase in inflation by 1 per cent reduces Annual rental yield by 0.465 units

$$Y = a + bX + \epsilon,$$

$$Y = 8.956 - 0.465X + \epsilon,$$

**Table 4.11: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.691a	.478	.413	1.55538	.478	7.324	1	8	.027

a. Predictors: (Constant), Technological Advancement % (x5)

Table 4.11 above shows the model summary for annual Yield (%) and Inflation rates. Findings revealed that penalty accounted for 41.3 % on the annual rental yield.

**Table 4.12: ANOVAa**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.719	1	17.719	7.324	.027b
	Residual	19.354	8	2.419		
	Total	37.073	9			

a. Dependent Variable: Annual Rental Yield % (Y)

b. Predictors: (Constant), Technological Advancement % (x5)

Technological Advancement (%) is statistically significant to the Annual Rental Yield (%). According to the results, the statistical level of significance is 5% against the p-value of 2.7%.

**Table 4.13: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	3.567	.898		3.972	.004	1.496	5.637
	Technological Advancement % (x5)	2.905	1.073	.691	2.706	.027	.430	5.380

a. Dependent Variable: Annual Rental Yield % (Y)

b. Predictors: (Constant), Technological Advancement % (x5)

$$Y = a + bx_5 + \alpha,$$

$Y = 3.567 + 2.905x_5 + \alpha$ , an increase in technological advancement by **one** unit, other factors held constant, raises the Annual Rental yield by **2.905** Units when other factors are held constant.

Table 4.13 above shows the model summary for annual Yield (%) and Inflation rates, Rental Income Rates %, Technological Advancement %, and Penalty Interest Rates %, Findings revealed that Rental Income Rates %, Technological Advancement %, and Penalty Interest Rates % accounted for 28.3 % on the annual rental yield.

**Table 4.14: ANOVAa**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.312	4	5.578	1.889	.251b
	Residual	14.761	5	2.952		
	Total	37.073	9			

a. Dependent Variable: Annual Rental Yield % (Y)

b. Predictors: (Constant), Inflation Rates % (x3), Rental Income Rates % (x1), Technological Advancement % (x5), Penalty Interest Rates % (x2)

The table above represents an MANOVA Table for all the factors in the study. From the findings, it was observed that when MANOVA is conducted, the predictors combined do not have a statistical influence on the Annual Rental Yield.

**Table 4.15: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.841	5.749		.494	.642	-11.939	17.620
	Technological Advancement % (x5)	2.451	1.760	.583	1.392	.223	-2.074	6.976
	Rental Income Rates % (x1)	.214	.285	.292	.749	.487	-.520	.947
	Penalty Interest Rates % (x2)	.043	.264	.078	.164	.876	-.635	.721
	Inflation Rates % (x3)	-.151	.303	-.205	-.497	.640	-.931	.629

a. Dependent Variable: Annual Rental Yield % (Y)

The above table 4.15 represents regression model for all the factors under the study combined. The equation below represents the model.

$$Y = a + b_1x_1 + b_2x_2 - b_3x_3 + b_4x_4 + b_5x_5 + \alpha$$

Where;

**X1** = the Residential Rental Income

**X2** = Effect of penalties and fine will be measured by interest rates of penalties and fines

**X3** = Prevailing inflation rate

**X4** =Taxation rate on Rental Income will be measured by residential property income

**X5**=The level of technological advancement to monitor the income tax compliance

$$Y = 2.841 + 0.214x_1 + 0.043x_2 - 0.151x_3 + 2.451x_5 + \alpha, \text{ an increase}$$

Findings revealed that assuming that every predictor held constant, the annual rental income yield would be 2.841. If other factors held constant with residential income without any interference from other mediators, an increase in residential income by one unit would increase the value of annual rental yield by 0.214 units. Subsequently given that penalties have an impact on how defaulters pay dues, an increase penalty notice by one (1 unit) increase the rental annual yield by 0.043 units. If other factors are held constant with only inflation rate at play, an increase in inflation rate reduces the annual yield by 0.151 units. Again, an increase in technological advancement will increase the annual rental yield by 2.451 units with a standard error of 1.7 units. The rate of taxation on rental income is constant, therefore it has no influence on the rental annual yield.

**Table 4.16: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.776a	.602	.283	1.71818	.602	1.889	4	5	.251

a. Predictors: (Constant), Inflation Rates % (x3), Rental Income Rates % (x1),

Technological Advancement % (x5), Penalty Interest Rates % (x2)

Table 4.16 above shows the model summary for annual Yield (%) and Inflation rates, Rental Income Rates %, Technological Advancement %, and Penalty Interest Rates %, Findings revealed that Rental Income Rates %, Technological Advancement %, and Penalty Interest Rates % accounted for 28.3 % on the annual rental yield.

**Table 4.17: ANOVAa**

1	Regression	22.312	4	5.578	1.889	.251b
	Residual	14.761	5	2.952		
	Total	37.073	9			

a. Dependent Variable: Annual Rental Yield % (Y)

b. Predictors: (Constant), Inflation Rates % (x3), Rental Income Rates % (x1),

c. Technological Advancement % (x5), Penalty Interest Rates % (x2)

The table above represents an MANOVA Table for all the factors in the study. From the findings, it was observed that when MANOVA is conducted, the predictors combined do not have a statistical influence on the Annual Rental Yield.

**Table 4.18: Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	2.841	5.749		.494	.642	-11.939	17.620
	Technological Advancement % (x5)	2.451	1.760	.583	1.392	.223	-2.074	6.976
	Rental Income Rates % (x1)	.214	.285	.292	.749	.487	-.520	.947
	Penalty Interest Rates % (x2)	.043	.264	.078	.164	.876	-.635	.721
	Inflation Rates % (x3)	-.151	.303	-.205	-.497	.640	-.931	.629

a. Dependent Variable: Annual Rental Yield % (Y)

The above table 4.18 represents regression model for all the factors under the study combined. The equation below represents the model.

$$Y = a + b_1x_1 + b_2x_2 - b_3x_3 + b_4x_4 + b_5x_5 + \alpha$$

Where;

**X1** = the Residential Rental Income

**X2** = Effect of penalties and fine will be measured by interest rates of penalties and fines

**X3** = Prevailing inflation rate

**X4** = Taxation rate on Rental Income will be measured by residential property income

**X5** = The level of technological advancement to monitor the income tax compliance

$$Y = 2.841 + 0.214x_1 + 0.043x_2 - 0.151x_3 + 2.451x_5 + \alpha, \text{ an increase}$$

Findings revealed that assuming that every predictor held constant, the annual rental income yield would be 2.841. If other factors held constant with residential income without any interference from other mediators, an increase in residential income by one unit would increase the value of annual rental yield by 0.214 units. Subsequently given that penalties have an impact on how defaulters pay dues, an increase penalty notice by one (1 unit) increase the rental annual yield by 0.043 units. If other factors are held constant with only inflation rate at play, an increase in inflation rate reduces the annual yield by 0.151 units. Again, an increase in technological advancement will increase the annual rental yield by 2.451 units with a standard error of 1.7 units. The rate of taxation on rental income is constant, therefore it has no influence on the rental annual yield.

Table 4.19 below shows the correlations between the variables in the study. It provides the relationships between variables in the study. According to the study, according to the

study, annual rental yield is positively related to the rental income but the relationship is strongly related at 72.7 %. The study established that the relationship between annual rental yield and penalty interest is 25%. This is a weak relationship between the two variables. Inflation and Annual rental yield is 4.9% this relationship is very weak when all factors are combined

Taxation rates has no impact or relationship with annual rental income since throughout the period of study, the taxation rate is constant yielding no impact. According to the study, technological advancement majorly contributes to annual rental yield at 69.1%.

Rental Income Rates in negatively related to Penalty Interest at 54.4%. Rental income rates and Inflation Rates are weakly and negatively related at 9.3%. Rental income rates and Technological Advancement are negatively and weakly related at 24.2%.

Inflation Rates and Penalty Interest Rates are averagely and negatively related at 49.4%, again inflation rates and technological advancement are strongly and positively related at 65.5%.



**Table 4.19: Correlations**

		Annual Rental Yield % (Y)	Rental Income Rates % (x1)	Penalty Interest Rates % (x2)	Inflation Rates % (x3)	Taxation Rates % (x4)	Technological Advancement % (x5)
Annual Rental Yield % (Y)	Pearson Correlation	1	.127	.402	-.633*	.b	.691*
	Sig. (2-tailed)		.727	.250	.049	.	.027
	N	10	10	10	10	10	10
Rental Income Rates % (x1)	Pearson Correlation	.127	1	-.547	-.093	.b	-.242
	Sig. (2-tailed)	.727		.101	.799	.	.500
	N	10	10	10	10	10	10
Penalty Interest Rates % (x2)	Pearson Correlation	.402	-.547	1	-.494	.b	.655*
	Sig. (2-tailed)	.250	.101		.147	.	.040
	N	10	10	10	10	10	10
Inflation Rates % (x3)	Pearson Correlation	-.633*	-.093	-.494	1	.b	-.620
	Sig. (2-tailed)	.049	.799	.147		.	.056
	N	10	10	10	10	10	10
Taxation Rates % (x4)	Pearson Correlation	.b	.b	.b	.b	.b	.b
	Sig. (2-tailed)	.	.	.	.	.	.
	N	10	10	10	10	10	10
Technological Advancement % (x5)	Pearson Correlation	.691*	-.242	.655*	-.620	.b	1
	Sig. (2-tailed)	.027	.500	.040	.056	.	
	N	10	10	10	10	10	10

\*. Correlation is significant at the 0.05 level (2-tailed).

b. Cannot be computed because at least one of the variables is constant.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter deals with summary, conclusion and recommendations of the study

#### 5.2 Findings of the Study

Results of the study revealed that when factors were individually analyzed, rental income has a statistical significance to the annual yield but when combined and analysis is done, then all the variables including the main variable under the study; rental income don't have significant influence on the annual yield. According to the regression model, findings of the study, an increase in penalty rate by one per cent (1%) increase the annual yield of rental income by 0.221 units.

When regression model is conducted, the model shows that other factors held constant, an increase in rental income (%) by a unit influences an increase in annual yield (%) by 9.3%. Accordingly, given the significance level of 5% against the p-value of 2.1 %, the contribution of rental income has a significant influence on the annual rental yield.

The ANOVA of annual rental yield (%) and inflation rates (%) revealed that inflation rates is statistically significant on annual rental yield since the p-value is 4.9% against the significance level of 5%.

The regression model of annual rental income against annual rental shows that assuming that other factors held constant, with inflation as the only factors under consideration, an increase in inflation by 1 per cent reduces Annual rental yield by 0.465 units

Technological Advancement (%) is statistically significant to the Annual Rental Yield (%). According to the results, the statistical level of significance is 5% against the p-value of 2.7%. An increase in technological advancement by **one**-unit, other factors held constant, raises the Annual Rental yield by **2.905** Units when other factors are held constant.

Table 4.12: above shows the model summary for annual Yield (%) and Inflation rates, Rental Income Rates %, Technological Advancement % , and Penalty Interest Rates % .Findings revealed that Rental Income Rates %,Technological Advancement % , and Penalty Interest Rates % accounted for 28.3 % on the annual rental yield.

A MANOVA test for all the factors in the study was conducted. From the findings, it was observed that when MANOVA is conducted, the predictors combined do not have a statistical influence on the Annual Rental Yield.

Findings revealed that assuming that every predictor held constant, the annual rental income yield would be 2.841. If other factors held constant with residential income without any interference from other mediators, an increase in residential income by one unit would increase the value of annual rental yield by 0.214 units. Subsequently given that penalties have an impact on how defaulters pay dues, an increase penalty notice by one (1 unit) increase the rental annual yield by 0.043 units. If other factors are held constant with only inflation rate at play, an increase in inflation rate reduces the annual yield by 0.151 units. Again, an increase in technological advancement will increase the annual rental yield by 2.451 units with a standard error of 1.7 units. The rate of taxation on rental income is constant, therefore it has no influence on the rental annual yield.

A correlation model was done between the variables in the study. It provides the relationships between variables in the study. According to the study, according to the study, annual rental yield is positively related to the rental income but the relationship is strongly related at 72.7 %. The study established that the relationship between annual rental yield and penalty interest is 25%. This is a weak relationship between the two variables. Inflation and Annual rental yield is 4.9% this relationship is very weak when all factors are combined.

Taxation rates has no impact or relationship with annual rental income since throughout the period of study, the taxation rates is constant yielding no impact. According to the study, technological advancement majorly contributes to annual rental yield at 69.1%.

Rental Income Rates in negatively related to Penalty Interest at 54.4%. Rental income rates and Inflation Rates are weakly and negatively related at 9.3%. Rental income rates and Technological Advancement are negatively and weakly related at 24.2%.

Inflation Rates and Penalty Interest Rates are averagely and negatively related at 49.4%, again inflation rates and technological advancement are strongly and positively related at 65.5%.

The findings of the study per objective was as follows:

Findings revealed that factors or variable individually analyzed have significant influence on the annual rental yield but when conducted collectively, they all factors fail to have the significance on the annual rental yield

**To establish the influence of rental income on the financial performance of Real Estate Sector in Kenya.**

The results of the study show that when factors held constant, an increase in rental income (%) by a unit influences an increase in annual yield (%) by 9.3%. Accordingly, given the significance level of 5% against the p-value of 2.1 %, the contribution of rental tax income has a significant influence on the annual rental yield. The results further revealed that, the amount of rental income has a significant impact on the annual rental yield. The statistical level of significance is 0.027 compared to 0.05. It shows that rental income rates contributes significantly to the annual rental yield. This shows that rental income has a significant influence on the annual yield

**To determine the influence of Technology on the financial performance of Real Estate in Kenya.**

The results of the study revealed when the level of technology is improved by one (1) unit, the annual rental, other factors held constant, raises the Annual Rental yield by **2.905** Units when other factors are held constant. Also according to the ANOVA, the significance level of the study show that Technological Advancement (%) is statistically significant to the Annual Rental Yield (%). According to the results, the statistical level of significance is 5% against the p-value of 2.7%. it shows that rental yield has mainly been supported by technological advancement, it implies that people of rental owners pay rental dues to the Authority because they fear the technological advancement will expose

them. They are therefore forced to pay or technology has made it easier to meet rental payment obligations by landlords

The study further revealed that inflation plays a very important role in annual yield return. The ANOVA of annual rental yield (%) and inflation rates (%). Findings revealed that inflation rates is statistically significant on annual rental yield since the p-value is 4.9% against the significance level of 5%.

### **To obtain the impact of Taxation Rate on the financial performance of Real Estate in Kenya.**

According to the study, taxation rate has no impact since it is constant and therefore doesn't contribute to the annual yield. Its contribution to the annual yield is nil. Instead factors like penalty have a statistical significance to annual rental yield

### **5.3 Conclusion**

Results show that the main driver of annual rental yield is technological advancement followed by rental income itself. The level of annual income statistically influences the annual yield. Inflation too has an impact on the yield as well as penalties. Landlords fear paying extra cash and therefore pay their dues a bit earlier. Their contribution of penalties could be as result of the fact that penalties contribute to better annual yield because the amount increases.

### **Recommendations of the study**

This section provides recommendations for policy and further research

### **Policy recommendations**

There is need to increase the level of advancement of technology since according to this study, technological advancement is the main contributor followed by amount of rental income. Again, their need for management of inflation since inflation negatively contributes to rental annual income. The higher the inflation, the lower the annual rental yield. Encouraging technological advancement in other sector to improve revenue

#### **5.4 Recommendations for Further Research**

There is need to conduct further research on contributions of technological advancement in rental and other investment activities in Kenya at large. There is need to conduct research on the role of technology on real estate sector to combine the entire sector

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