EFFECT OF INCOME ON THE URBAN YOUTH SAVINGS. A CASE STUDY OF NAIROBI CITY COUNTY, KENYA

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Abstract

Savings play a crucial role as they act as backstop for capital formation and economic growth. A better saving behavior is the basis of a sound economic and financial policy. Studies on savings have historically taken a central position in several economic research areas. Issues and problems related to savings among households and individuals have gained significant importance in microeconomic studies as savings stimulate larger investments and higher gross domestic product growth. Studies conducted in developing countries have shown that savings remain low particularly among the youth due to various factors such as high unemployment rates, low incomes, limited access to financial services and high dependency rates among other factors. Low savings inhibit the availability of investment funds. This paper examined the effect of income on the urban youth savings using Ordinary Least Squares estimation method. The goal was to get an understanding on the effect of income factor on the uptake of savings by the youth. A cross-sectional research design was adopted where primary data was collected from the youth in Nairobi City County. Random sampling technique was used to select the respondents in the survey where self-administered questionnaires were administered to 400 urban youth. The study's results demonstrated a showed a positive relationship between income and the level of savings among the urban youth. Other factors such as rate of return was found positively affect savings while factors such as age, number of dependents and education effected savings negatively. The paper concluded that promoting youth incomes through quality job and through revitalizing both the formal and informal sector and offering higher rate of returns on savings would be critical in mobilization of savings.

Keywords: ***Keywords:*** *Income, Urban youth Savings, Savings and Income*

1.0 Introduction

1.1 Background of the Study

Proper saving behavior is positively associated with economic well-being of an individual, household and the national economy across the globe (Arezki et al. 2017; Kadir & Jamaluddin, 2020; Ribaj & Mexhuani, 2021). As per the United Nations Confrence on Trade and Development (2004), the major factor in boosting in-country investment funds or capital is by increasing domestic savings. Consequently, developing countries must prioritize mobilization of savings so that capital can be invested to the most productive economic processes.

The importance of savings is further emphasized by Neoclassical growth models such as Ramsey (1928), Cass-Koopmans (1965) and endogenous growth models such as Harrod(1939), Domar(1946), Romer(1986) as well as Barro & Sala-i-Martin(2004) that assert that savings are critical to economic growth as they facilitate

capital formation. Additionally, Solow growth model (1956) postulated that holding technology constant, growth in the economy is influenced by the rate of growth in population and by national savings rate. Capital accumulation therefore would be boosted by policies that aim at increasing savings rates and the capital imports or foreign savings.

Even though, savings are undoubtedly the bedrock of capital formation and economic growth, across the Sub-Saharan countries saving rates have been persistently low averaging 17.3 percent of the GDP (Ribaj & Mexhuani, 2021). In Kenya saving rates have persistently ranged between 10-14 percent of the (GDP) compared to lower middle income countries such as Vietnam which save about 33 percent of their (GDP) (Hill, 2020) while upper middle income countries such as China save about 50 percent of its GDP (Zhang et al., 2018). In general, the rates of saving in Kenya from 1971-1979 averaged 17.8 percent, 1980-1991 averaged 18.8 percent, 1992-2007 averaged 13.78 percent and 2008-2019 averaged 14 percent below the Vision 2030 target of 28 percent (Musamali et al.,2022). Gross domestic saving rates in Kenya have continued to fluctuate over the years and particularly in the past ten years during the implementation of Vision 2030.

The challenge of increasing savings among the developing countries is exacerbated by the fact that about 80 percent of the youth from poor households have low or no incomes and are completely excluded from the financial systems (Johnson et al., 2018). The inadequacy in the mobilization of youth savings particularly in developing countries such as Kenya is further compounded by the fact that about 90 percent of the youth are in low income brackets, not optimistic that a better living standard and financial inclusion is possible and this results to millions of youth floundering in frustration and poverty bringing fragile countries down with them. Due to inadequate incomes, globally, about 2.5 billion youth are excluded from financial services including savings limiting them from accessing saving products particularly those offered by formal financial institutions. In Africa, saving rates average 18.3 percent of the GDP. The low saving rates are further depicted by the prevalence of savings accounts by youth in Africa where it ranges from 12 percent as compared to other continents such as Pacific and Asia that have a 50 percent youth savings account prevalence (Johnson et al., 2018).

According to Retirement Benefit Authority Report (2009), the most affected demographic group with poor income savings habits in Kenya is the youth as over 50 percent of the Kenyans who are non-savers are youth. Among the savers, the average rates remain far below the minimum target rate of 20 percent of their incomes (Authority, 2009). This non-saving habit is mainly attributed to inadequate incomes as 16 percent of Kenyans live below $2 which is an international poverty line. Nevertheless, savings among youth in Kenya still lags at 12 percent (Kagotho et al., 2017). Disappointingly, youth are 33 percent unlikely to have savings accounts as compared to adults and 44 percent unlikely to save in the formal sector (Johnson et al., 2018). Yet, most of the incomes saved by the youth are low and irregular given that about 38.9 percent of the youth population in Kenya is unemployed with absolutely inadequate disposable incomes (Kenya National Bureau of Statistics, 2019).

Notably, saving behaviour has for a long time received great attention leading to a number of theories. Neoclassical theories of saving followed by life cycle hypothesis by Modigliani & Brumberg (1954) and then followed by permanent income hypothesis by Milton Friedman (1957) emerged to explain the determinants of the saving behaviour of economic agents. These theories focused mainly on income as the main determinant of saving behaviour. The theories support the notion that as income increases, households and individuals would have a higher marginal propensity to save. This is due to the fact that there would be a diminishing marginal utility to consume and therefore households and individuals with excess income would likely save it. On the other hand, it is expected that households and individuals with low incomes would save less. However, if there is an increase in income of the low income households, there would be a large increase on savings as compared to a rise in income of the wealthy (Fagereng et al.,2019). The nature of income also tends to affect savings where income uncertainty and irregularity may increase the propensity to save as supported by the buffer stock theory. On the other hand, income certainty may not have the same influence on savings as income uncertainty may have.

Globally, the ability of the youth to save is significantly affected by income levels. Ideally, income is a critical variable that impact significantly on the savings and saving behavior of the households and individuals. The trend across the globe is that a majority of the youth are unemployed and have little or no sources of income and would therefore save less (Fagereng et al.,2019). This is compounded by the fact that youth are great spenders and have poor access to financial services and consequently have a lower propensity to save their incomes. Additionally, majority of low income youth save mainly informally despite the fact that studies demonstrate that formal institutions are superior in increasing savings and investments for low income households through tangible returns. From the theoretical perspectives on savings including the behavioral lifecycle theory of saving, raising incomes and financial knowledge of the youth on saving habits would influence positively their savings (Fagereng et al.,2019). A body of literature suggests that access to formal financial services should be encouraged for low income households and individuals. This would increase access to saving products, income and investments. Temporarily offering financial incentives to save could generate sustained impacts on investment behavior and

savings and this would impact income in the long run and consequently savings for households and individuals (Schaner, 2018).

1.2 Statement of the Problem

Savings are important to economic growth as increased savings would facilitate more rapid expansion of the capital stock and consequently higher investment rates and eventual economic growth would be realized. Saving rates in Kenya have been perpetually low even when compared with its regional peers Uganda and Tanzania that save on average at least 20 percent of their GDP (Abdul, 2022). Currently, the annual national savings rates for the country average 10-14 percent, far below the target rates of 25-28 percent (Government of Kenya, 2007). Therefore, it is essential to encourage the mobilization of savings to boost national savings, particularly among young people, who make up 75 percent of the Kenyan population, with those aged between 18-34 years constituting 29 percent of the population (Kenya National Bureau of Statistics, 2019). Accordingly, youth, demographically the largest segment in Kenya should be encouraged to save proactively. Further, Kenya's Vision 2030 focuses on promoting a competitive, efficient, and sound banking system and strong financial institutions that are well-supervised and regulated and can mobilize savings and provide financial support for the growth of the private sector.

From an institutional basis, when savings are priced appropriately, mobilization of small and micro-savings would lead to increased domestic savings and economic growth. Formal and informal financial institutions could gain the confidence of potential youth savers if the perceived risks are reduced. Ideally, savings targeting youth must meet certain characteristics such as liquidity, safety, and convenience and yield positive returns (Mbuthia & Ndiritu, 2020). Though the saving behavior of the youth in developing countries is paramount, it remains understudied and associated with preconceived but untested notions. It is assumed that youth have a higher preference for spending and are out of touch with financial institutions, particularly the formal ones, and therefore will save less. More so, youth saving behavior is intensely constrained by high rates of unemployment and low incomes.

Furthermore, literature on youth savings in Kenya is scarce since only few studies exist such as Kagotho et al (2017); Flynn & Sumberg (2018) and Rashid & Ondiek (2018). The existing studies on youth savings have not analyzed the effect of income on the saving levels of the urban youth. Existing literatures such as Ribaj & Mexhuani (2021), Steinert et al. (2018), Kadir & Jamaluddin (2020), and Hill (2020) have mainly analyzed household and general population's savings without disaggregating savings behavior by demographic categories such as youth. Further, previous studies have not been conclusive about determinants of youth savings such as income (Chakravarty & Vaillant, 2017, Konya & Nyakwara ,2019). In regard to the above literature, the objective of this study is to analyze factors affecting urban youth savings mobilization.

1.3 Objective of the Study

To determine the effect of income on the Urban Youth Savings. A Case Study of Nairobi City County, Kenya

2.0 Literature Review

2.1 Theoretical Literature Review

2.2.1 Absolute Income Hypothesis (AIH)

John Maynard Keynes postulated AIH in 1936 in his study on consumption, savings and income on the basis of the fundamental psychological law (Drakopoulos, 2020). AIH posits that as the consumer's income rises, consumption also rises, though not necessarily in the same proportions. Keynes argued that there should be a simple positive relationship between income and consumption where the two variables should not move in opposite directions (Drakopoulos, 2020). Therefore, Keynes concluded that consumption expenditure and savings increase with increased income and decrease when income falls or decreases, though non-proportionally. Further, Keynes concluded that there are eight motives to save: precautionary, lifecycle, inter-temporal substitution, independent, enterprise, bequest, enterprise, down payment, and avarice motive (Drakopoulos, 2020).

AIH significantly links with the present study on youth saving behavior. From analysis of AIH, rising incomes would likely lead to better saving behavior as it increases savings levels among youth. Individuals and households who gain more disposable incomes can put aside a significant amount of income towards savings (Shaikh, 2018). As their incomes increases, youth will have a higher glut for saving since there would be diminishing marginal utility to consume. The theory's strength lies in the fact that it underpins the fact that total income is an essential variable in influencing consumers' consumption and savings behavior, where an increase in income will likely result to an increase in consumption and private saving (Shaikh, 2018).

The theory's weaknesses lie in the fact that it has proved inadequate in supporting this relationship, with the most irregularities being scenarios where consumption and savings may still increase as income falls. The theory ignores other factors, such as wealth and assets, as aspects that may also

influence youth saving behavior.

2.2.2 Life Cycle Hypothesis (LCH)

Richard Brumberg (1954) postulated LCH to explain individuals' and households' savings and consumption patterns over their lifetime (Hayakawa, 2019). This theory assumes that consumers would try to smooth their consumption through borrowing when they have low incomes and saving when they receive higher payments. Modigliani and Brumberg (1954) assumed that households make plans of their lifetime consumption patterns so as to ensure maximum utility from consumption. On the assumption that a household does not intend to bequeath assets to their dependents, a household with age T assumption is expected to maximize the below function for utility.

$U=U(C_T, C_{T+1}, C_{T+2}, \ldots, C_L)$……...……2.1

In this case C_i (i=T, T+1, T+2,…,L) is the planned consumption for an individual of age i . L is the age of a consumer at death point. Given that an individual or a household must consume all resources in their lifetime equation 2.1 is maximized subject to a budget constraint below.

$$A_{T-1}+Y_T+\sum_{i=T+1}^{N}\frac{Yi^e}{(1+r)^{i-T}}=\sum_{i=T}^{L}\frac{C_i}{(1+r)^{i-T}}$$……...……2.2

Where A_{T-1} is non-labor income or financial and physical assets carried over from households *(T-1)*the years., Y_T is the non-property income earned by a household at age *T,* Y^e_i is the non-asset income at ith age while r is the rate of interest. N is the retirement age for a household. Ando and Brumberg (1963) assumed that utility function 2.1 is homothetic which means that the planned consumption at current period can be given by:

$$C_T= \gamma_T W_T$$ ……..……..……..…2.3

Where W_T is the expected lifetime resources for a household at age T and is equivalent to the left-hand side of equation 2.2.

$$W_T=A_{T-1}+Y_T+\sum_{i=T+1}^{N}\frac{Yi^e}{(1+r)^{i-T}}$$……..……2.4

Similarly, in future years, planned consumption would be given by

$C_i= \gamma_i W_T$ i = T + 1, T + 2,..., L …….……..2.5

The γ_i in equation 2.5 is dependent on the rate of interest, tastes and preferences. It is also dependent on the household's age since resources are to be exhausted during the entire lifetime. Because resources are to be consumed fully in the lifetime of a household it means that a larger proportion of resources is expended towards end of the lifetime. In Equation 2.3 and 2.5 γ_i are not dependent on the size of W_T and therefore an individual of a household would keep the ratio of planned consumption unchanged regardless of the lifetime resources.

The LCH links the present study in that it underpins the fact that income and consumption needs are unequal at various points in the individual lifecycle. Additionally, the hypothesis suggests that with high income, one can save and increase financial savvy compared with those in the low-income brackets (Spangenberg et al., 2019). Individuals will tend to have more significant consumption needs at their youth stage that exceeds their incomes, and this limits the proportion set aside towards savings. At retirement, incomes decrease, and the elderly are forced to consume from their savings. LCH, however, presents a potential problem because it implies that as national incomes grow, a savings glut would also result (Shaikh, 2018). The theory also assumes that individuals are planning and rational. Another problem with this theory is that it does not address any abnormal deviations in saving patterns over time.

2.2.3 Permanent Income Hypothesis (PIH)

Milton Friedman suggested PIH in 1957, and argued that people spend incomes consistent with their expectations about long-term average income. This theory's objective was to explain how agents spread their consumption over time (Hayakawa, 2019). PIH and LCH share a number of similarities, however PIH generalizes the two-period situation into an indefinitely horizon instead of remaining lifespan as is the case of the LCH. There is also the concept of planned permanent income Y^p and planned permanent consumption C^p. Friedman (1957) argued that permanent consumption is a function of the current total wealth(W) and the interest rate.

C^p=*q(W, r)*……………………………………………………………………………….2.6

Aggregate wealth as per the PIH would be explained by the sum of discounted future incomes including non-labor income. Wealth in a period t would be:

$W_t = Y_t + \frac{Y_{t+1}}{1+r} + \frac{Y_{t+2}}{(1+r)^2} + \frac{Y_{t+3}}{(1+r)^3} +$………………………………………………………….……2.7

Y_t is period t's expected total income. Additionally, Friedman (1957) made an assumption of homothetic utility of function and therefore equation 2.8 can be written as follows.

$C^P = qW$ …………………………………………………………………………….…2.8

Where q which is the factor of proportionality that depends on the tastes of the consumers as well as on the interest rates. Permanent income is the maximum income consumed by a household without any changes on wealth. It depicts return on wealth and can be written as $Y^p = rW$. Equation 2.9 would as such be rewritten as

$C^p = q(\frac{Y^p}{r}) = kY^P$ where q=rk………………………………………………………………2.9

In the above equation, k is dependent on the tastes and on the rate of interest for the households. For uncertainty cases, Friedman(1957) proposed an additional motive for saving influenced by contingent events. The amount of permanent income k consumed is dependent on the portion of total wealth that is held as non-labor income and is represented by w which leads to the below equation.

$C^P = k(r,w,u)Y^P$ ………………………………………………………..……….………2.10

In equation 2.10 above u represents consumers tastes. According to Friedman (1957) income *Y* comprises of permanent income $Y^P$and transitory income Y^t. Consumption *C* comprises of permanent(C^P) and transitory consumption(C^t). Therefore, the equations representing these facts are as below.

Y=$Y^P + Y^t$ and $C = C^P + C^t$………...…………………………………………..……2.11

The theory is plausible to the present study on youth saving behavior. It explains possible scenarios to be expected about their saving habits based on their current incomes and expected long-term income. Youth have limited sources of income due to the high levels of unemployment and limited income sources. Their income levels and sources essentially limit their saving rate and behavior.

The PIH is critical in this study as it provides a profound relationship between income and savings with theoretically understandable parameters (Spangenberg et al., 2019). Therefore, it is more empirical as it helps study inter-temporal choices among youth on savings. Despite this theory's plausibility in studying youth's behavior towards saving, it fails to provide adequate socio-economic aspects or influences that impinge on youth saving decisions other than income and wealth-related factors (Spangenberg et al., 2019).

2.3 Empirical Literature Review

Mensahklo et al., (2017) carried a study in Ho Municipality, Ghana to analyze the savings' determinants by households in Ghana. A sample size of 152 individuals was drawn from primary data using non-probability and probability sampling techniques. Inferential and descriptive statistical techniques were employed to draw conclusions about the savings' determinants. The findings from the study demonstrated that many individuals within Ho Municipality had fewer dependants, and therefore their incomes were less constrained, which promoted their savings.

Higher-income induced higher levels of saving with financial institutions. Additionally, most individuals had access to bank services that encouraged them to save with financial institutions. Nevertheless, the study found that savings varied from individuals as each individual had different reasons for saving and consumption from their incomes. Though this study evaluated the general population without focusing on youth, it underscored the importance of income and the size of dependants on savings. The current study, therefore, endeavors to evaluate the determinants of savings of the urban youth.

Saikia (2018) examined the pattern of savings and investments among youth aged 17-25 years who had begun to earn from employment in Mumbai, India. The study aimed to understand the youth's income and saving patterns and their preferred saving mode. The study employed random sampling with questionnaires for collection of primary data. The independent variable was traditional and modern savings platforms, while the dependent variable was saving behavior. The questionnaire addressed factors such as how much the youths saved and

whether it was saved in traditional modes or formal modes such as capital markets and bank accounts. Correlation analysis found that about 70 percent of the youth respondents made savings in the bank accounts and other modern methods.

The study also concluded that most youth knew about the various saving options available due to the volume of financial information available in recent days. To reinforce a proper saving behavior demands increasing financial saving options, increasing the reliability of financial institutions, offering financial security as well as higher returns for savings. While Saikia (2018) focused on the saving behavior of employed urban youth in India, the major objective of the present research study is on factors affecting savings of the urban youth in Kenya.

Sakaya & Lyimo (2019) examined the saving habits of individuals in Tanzania. The study employed a survey design in collecting primary data. The study involved interviews and administered survey questions to 130 respondents from the Centenary Rural Development Bank (CRBD) Bank in Tanzania. Random and purposive sampling techniques were employed. Low income Individuals in Marangu District saved much of their incomes informally and for shorter periods. Incomes and rate of returns were found to be impactful on the saving habits of the Tanzanians.

Further, through a descriptive analysis, the results found that the financial institution did not have effective financial capabilities and training programs that would educate individuals to embrace best saving practices. The findings of the study established that individuals with low incomes had a negative view about saving with formal financial institutions given the high transaction costs including the cost of opening and operating the account. Sakaya & Lyimo (2019) focused mainly on general population without paying attention to the urban youth and therefore this research study focuses to close the gap by analyzing the effect of income on urban youth saving behavior.

Konya & Nyakwara (2019) investigated factors that influenced savings and allocation of assets among Kenyan rural individuals in low income brackets. Independent variables included financial education, fiscal policy, financial institutions and demographic information of the households. A stratified sampling strategy was adopted in collecting primary data, where 351 respondents were involved. A quantitative data analysis was adopted to make findings.

The findings showed that financial education, fiscal policies, and demographic factors of the household significantly influenced the saving behavior and the allocation of assets among individuals in low-income rural regions. Though this study's main focus was on rural settings on the general population, it proved critical as it identified factors such as financial literacy, accessibility, interest rates and cost of opening a savings account as having had a significant influence on savings. The study underscored the importance of financial institutions and government on asset allocation and savings. Specifically, they should incentivize low income households to save proactively. Thus present study will therefore extend an analysis by evaluating the effect of income on the urban youth level of savings in Nairobi City County.

Zwane (2021) conducted a study to identify factors influencing savings in South Africa and establish whether there were any disparities on the factors determining savings in both localities. Dependent variables included savings while independent variables included income and family size. The data was sourced from National Income Dynamics Study (NIDS) from year 2008 to 2017. A two-stage least square to analyze factors affecting household savings was adopted. The two-stage least square helped address the problem of endogeneity that may have plagued previous studies in the field. Zwane (2021) established that factors determining savings varied across urban and rural settings. Though there was a supportive correlation between savings and income both in the rural and urban regions, the effect on the savings was higher for rural households as compared to the impact it had on urban households. Unemployment had similar impact on savings with the magnitude being stronger in rural sample.

However, household size had a major impact on the urban household savings. The study therefore argued that there was the need to adopt policies that encourage creation of employment that would generate income and reduce unemployment to encourage savings. The study is critical to the present study as it explored some of the determinants of savings the current study endeavors to investigate. It however does not investigate urban youth saving but rather focused on the general population.

3.0 Materials and Methods

3.1 Introduction

3.2 Research Design

The research study focused on analyzing the determinants of urban youth savings. The study employed a cross-sectional research design that entailed analyzing the primary data collected from urban youth respondents within Nairobi City county.

3.3 Theoretical Framework

Permanent Income Hypothesis (PIH)

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Y_t is period t's expected total income. Additionally, Friedman (1957) made an assumption of homothetic utility of function and therefore equation 2.8 can be written as follows.

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Where q which is the factor of proportionality that depends on the tastes of the consumers as well as on the interest rates. Permanent income is the maximum income consumed by a household without any changes on wealth. It depicts return on wealth and can be written as $Y^p = rW$. Equation 2.9 would as such be rewritten as

$C^p = q(\frac{Y^p}{r}) = kY^P$ where q=rk………………………………………………………………2.9

In the above equation, k is dependent on the tastes and on the rate of interest for the households. For uncertainty cases, Friedman (1957) proposed an additional motive for saving influenced by contingent events. The amount of permanent income k consumed is dependent on the portion of total wealth that is held as non-labor income and is represented by w which leads to the below equation.

$C^P = k(r,w,u)Y^P$ ………………………………………………………..…….….………..2.10

In equation 2.10 above u represents consumers tastes. According to Friedman (1957) income Y comprises of permanent income $Y^P$and transitory income Y^t. Consumption C comprises of permanent(C^P) and transitory consumption(C^t). Therefore, the equations representing these facts are as below.

$Y = Y^P + Y^t$ and $C = C^P + C^t$………...……………………………………………..……….2.11

The theory is plausible to the present study on youth saving behavior. It explains possible scenarios to be expected about their saving habits based on their current incomes and expected long-term income. Youth have limited sources of income due to the high levels of unemployment and limited income sources. Their income levels and sources essentially limit their saving rate and behavior.

The PIH is critical in this study as it provides a profound relationship between income and savings with theoretically understandable parameters (Spangenberg et al., 2019). Therefore, it is more empirical as it helps study inter-temporal choices among youth on savings. Despite this theory's plausibility in studying youth's behavior towards saving, it fails to provide adequate socio-economic aspects or influences that impinge on youth saving decisions other than income and wealth-related factors (Spangenberg et al., 2019).

Table 1: Definition and Measurement of Variables

Variable	Definition	Measurement
Savings(S_i)	This is income not currently consumed but mainly set aside for future consumption and expenditures	This is the dependent variable in the study. Based on the amount of annual savings or deposits made and is measured in Kshs.
Income(Y_i)	Amount of money received from employment, services, businesses and investments	Based on the amount earned by the respondent annually and measured in Kshs.
Age of respondent(AGE_i)	This is the length of time that an individual has lived	Age of the respondent measured in years from time of birth.
Transaction cost(TRC_i)	These are costs that are incurred in operating savings accounts or making savings	Based on average cost of opening savings account, running savings and withdrawal of savings monthly measured in Kshs.
Interest Rates ($INTR_i$)	This is the amount earned as interest on top of savings made through financial institutions	Based on interest rate earned on savings or deposits measured in percentage per year.
Education($DumEDU_i$)	This is the amount of schooling that an individual has achieved	Dummy variable based on the education level attained by the respondent (Primary education and below=0, Secondary education and above=1)
Dependants(DEP_i)	Individuals particularly family members dependent on others	Based on the total number of people directly dependent on the respondent.

Source: Author

3.4 Study area and Target Population

The study population defines the group of individuals from which a sample size would be drawn. This research targeted Nairobi County's as the study area, with a population of more than 10,000 youth aged between 18-34 years, regardless of their income status, gender, or level of education. For the present study, both female and male genders that are in their youth stage are involved in the study.

3.5 Sample size and sampling procedures

The study adopts Yamane (1973) formula in determining the size of the sample.

$n=\frac{N}{1+N(e)^2)}$ where:

n-Size of the sample

N-Size of the Population and;

e=sampling error

Nairobi County has an estimated population of 4,396,828 with 31 percent of the population being youth aged 18-34 years (Kenya Population and Housing Census, 2019).This translates to a population of 1,363,017 youth aged 18-34 years. Using Yamane's fomula while allowing a 5% sampling error the sample size is 400 urban youths

$n=\frac{1,363,017}{1+(1,363,017*0.05*0.05)}$=399.8 which is approximately 400 urban youths.

3.6 Data types, sources, and collection

The type of data used in this study was cross-sectional primary data collected from the youth respondents within Nairobi City County. The selection of the sample size was arrived through random sampling. Structured questionnaires were distributed to collect the necessary data, including income, gender and institutional factors.

3.7 Data Analysis

The research study employed both descriptive data analysis and inferential data analysis to make informed findings. Diagnostic tests were conducted to identify inherent problems in the primary data and the model. An OLS Estimation method was adopted to show the effect of explanatory variables on the response variable.

3.8 Diagnostic Tests

To evaluate whether the results obtained were consistent and unbiased, diagnostic tests were conducted. Cronbach's test for reliability was adopted to check on the internal reliability of the collected data. A test on heteroscedasticity using Breusch-Pagan test, autocorrelation using Durbin-Watson test, normality using Kolmogorov–Smirnov test and Ramsey Regression Equation Specification Error Test (RESET) test would also be conducted. Additionally, the variance inflation factor would be utilized to identify for multicollinearity among the variables.

4.0 Results and Discussion

4.2 Descriptive Statistics

Descriptive statistics for the variables were obtained in order to understand the landscape of urban youth savings. Descriptive statistics on all factors affecting the urban youth savings in the study's model have been presented. The sample of the study included 400 urban youth respondents from Nairobi City County.

Gender being critical in this study and being a factor that may influence savings was studied. It was a critical factor in this study to ensure that the data collected was representative. Table 4.1 shows the descriptive statistics on gender.

Table 2: Summary Statistics on Gender

Descriptive	**Frequency**	**Percentage**
Male	170	42
Female	230	58
Total	**400**	**100**

Source: Owner 'calculations.

Among the respondents, 230 females participated consisting of 58 percent while 170 male respondents participated representing 42 percent. Female participants were more willing to participate in the survey. The difference in participation level being explained by unequal male and female population distribution of the youth in Nairobi City County.

Marital status is a major factor that had some influences on savings. The variable for marital status in this study was a categorical and is identified as either married or not married. Table 4.2 shows the results of marital status of the urban youth respondents.

Table 3: Summary Statistics on Marital Status

Descriptive	**Frequency**	**Percentage**
Married	120	30
Not Married	280	70
Total	**400**	**100**

Source: Owner's calculations.

Among the urban youth respondents, 280 respondents consisting of 70 percent were not married while 120 respondents consisting of 30 percent were married.

Education is a critical factor that influences savings. This factor was included in this study to measure the effect of education level on urban youth savings. The level of education was classified as primary, secondary, tertiary and post-graduate. Table 4.3 shows the summary statistics on the education level of the urban youth respondents.

Table 4: Summary Statistics on Education Level of the urban youth

Descriptive	**Frequency**	**Percentage**
Primary education	4	1
Secondary Education	64	16
Bachelor's Degree	284	71
Post-Graduate	48	12
Total	400	100

Source: Owner's calculations.

On education levels, 71 percent had Bachelor's Degree, 16 percent had secondary education, 1 percent had primary education while 12 percent had post-graduate qualifications. The descriptive statistics on education demonstrated higher literacy level among the urban youth. This is supported by the findings of Kenya Bureau of Statistics. (2020), which shows that 89 percent of Nairobi population is educated.

Age significantly affect savings across populations and is supported by the life-cycle hypothesis (Hsu & Lo, 2019). Age structure would have a major effect on aggregate income, saving and consumption. The descriptive statistics on age distribution of the urban youth respondents is demonstrated in table 4.4.

Table 5: Summary statistics on the age of the urban youth

Descriptive	**Frequency**	**Percentage**
18-21 Years	156	39
22-25 Years	136	34
26-29 Years	88	22
30-34 Years	20	5

Total	400	100

Source: Owner's calculations.

On age distribution, 156 respondents representing 39 percent of the total respondents fall into the 18-21 years' bracket, 136 respondents or 34 percent were aged between 22-25 years, 88 respondents which represented 22 percent of the total respondents fall into the 26-29 years bracket while 20 respondents or 5 percent of the youth in the study fall into the 30-34 years' bracket. Age distribution of the urban youth is even with more than 50 percent of the urban youth respondents being between 18-29 years.

A critical factor that influences the saving behaviour of a population particularly among the developing countries is the structure of the population especially the level of dependency. This is based on the argument that a higher ratio of dependency would lower the disposable income influenced by high expenditure levels and therefore low savings (Kwakwa, 2013). A lower dependency ratio on the other hand means low expenditure level and therefore higher savings. This study introduced this factor to evaluate its effect on the urban youth level of savings. The descriptive statistics on number of dependants is presented in table 4.5.

Table 6: Summary Statistics on the number of dependants

Descriptive	**Frequency**	**Percentage**
One	77	19
Two	58	15
Three	11	3
More than Three	4	1
None	249	62
Total	**400**	**100**

Source: Owner's calculations.

On the number of dependants 249 respondents translating to 62 percent of the total respondents had no dependants, 77 urban youth respondents translating to 19 percent had one dependant, 58 respondents representing 15 percent had two dependants, 11 respondents translating to 3 percent of the total respondents had 3 dependants while 4 respondents representing a 1 percent of the respondents had more than three dependants.

Income variable being a key factor that influences savings and consumption was measured by categorizing income earned by the urban youth into four bands. Table 4.6 shows that descriptive statistics on the incomes of the urban youth.

Table 7: Average Reliability Statistics of Instruments

Variables	Cronbach Alpha Based on Standardized Items	No of Items
Average Reliability of Research Instruments	α.= 0.800	16

The Cronbach Alpha coefficient in this research study was .800 which means that the questionnaire items had a high reliability and internal consistency.

Source: Owner's calculations. The results of Cronbach Alpha test were .800 which meant that the questionnaire items had a high internal consistency and reliability.

The normality tests conducted included the the Kolmogorov–Smirnov test and the Shapiro–Wilk test. The results on normality using Kolmogorov -Simonov are shown in table 4.12.

Table 8: Normality Test using Kolmogorov-Siminov Test

	Kolmogorov-Siminov			Shapiro-Wilk		
	Statistic	df	P-Value.	Statistic	d.f	P-Value

Level of Savings(What Amount of money do you put aside as savings each month?)	.371	404	<.001	.376	404	<.001

- *If the value p< 0.05, then the data is normally distributed research.*
- *If the value p >0.05, then the research data is not normally distributed*

Source: Owner's calculations

The normality test using Kolmogorov -Simonov test produced a p value less than 0.05 i.e. (p< 0.05). The Kolmogorov -Simonov test showed that the data had been approximately normally distributed.

The multi-collinearity test was conducted before the regression to determine if there was high correlation between the independent variables. A high correlation between the variables would be problematic in fitting the model and in making interpretation of the results. The multi-collinearity output is shown in table 4.15.

Table 9: Regression Model Output

Model	Unstandardized Coefficients		Standardized Coefficients	T-Statistic	P-value
	B	Std. Error	Beta		
(Constant)	-264.006	3592.139	-264	-.268	.729
Monthly Income	951.968	769.313	.680**	8.847	.011
Occupation	818.653	738.518	.638**	8.109	.013
Number of Children	-779.250	560.851	-.617**	-7.746	.022
Age Bracket	-525.699	1175.261	-.504*	-4.430	.047
Education Level	-499.880	642.343	-.411*	-3.155	.057
Estimated Rate of Return	646.119	758.090	.605**	6.061	.032
Estimated Charges	581.286	821.610	.435**	5.438	.037
Adjusted R-Squared	0.720			Prob (F-Statistic)	0.018
a. Dependent Variable: Youth Level of Savings					

Note: ***, **, * implies that the coefficient is statistically significant at 1%, 5% and 10 % respectively.

Source: Owner's calculations

The results of the test showed that all the variables had no multi-collinearity. The VIF for all explanatory variables was below 4 and therefore all the variables showed no multi-collinearity. Ideally a VIF above 4 indicates that multi-collinearity exist and therefore further investigation is required (Gunst & Mason, 2018). A VIF of more than 10 shows significant multi-collinearity that need to be corrected (Pal & Bharati, 2019). Multi-collinearity would have been a problem since it would have undermined the significance of the independent variables.

4.5 The Regression Model

The regression model output showed the effect of the explanatory variable on the dependent variable. Ideally, the model's coefficient shows each variable's contribution on the saving levels of the urban youth. The results show that income had significant effect on savings. Other factors such as the number of dependants and the estimated rate of return also influenced savings of the urban youth positively. Education level, age and number of dependants affected urban youth savings negatively. Table 4.17 presents the output of the regression model using least squares method.

Table 10: Regression Model Output

Model	Unstandardized Coefficients		Standardized Coefficients	T-Statistic	P-value
	B	Std. Error	Beta		

(Constant)	-264.006	3592.139	-264	-.268	.729
Monthly Income	951.968	769.313	.680**	8.847	.011
Occupation	818.653	738.518	.638**	8.109	.013
Number of Children	-779.250	560.851	-.617**	-7.746	.022
Age Bracket	-525.699	1175.261	-.504*	-4.430	.047
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Estimated Charges	581.286	821.610	.435**	5.438	.037
Adjusted R-Squared	0.720			Prob (F-Statistic)	0.018
a. Dependent Variable: Youth Level of Savings					

Note: ***, **, * implies that the coefficient is statistically significant at 1%, 5% and 10 % respectively

Source: Owner's calculations

The study found that R-squared was 0.720 which implied that 72 percent of the changes in the level of savings for the urban youth could attributed by the combined effect of the explanatory variables. From the results in the table 4.17 above, the coefficients for income, occupation, number of dependants, age, transaction costs or charges and estimated rate of return were statistically significant. This means that these factors affected savings of the urban youth. However, education had statistically insignificant coefficient which means that education had a weak relationship with the urban youth savings.

For the income earned, the coefficient was positive (0.680) and statistically significant at 5 percent level since the value was 0.011. This means that an increase in the level of income is expected to lead to an increase in urban youth savings. These results support the findings of Zwane (2021) who showed that income was a critical factor that influenced savings. More so, the findings concur with the economic theories on savings such as absolute income hypothesis and lifecycle hypothesis which have demonstrated that increased income would increase the propensity to save.

The coefficient of the number of dependants was negative (–0.617) but statistically significant at 5 percent sigficance level with a p- value of 0.022. As suh an increase in the number of children or dependants would lead to a decrease in savings for the urban youth. This can be attributed to the fact that with increased number of dependants, a larger proption of income for the urban youth would be allocated to expenditure. These results are similar to those of Mwangi (2020) who found that family size had a negative impact on savings where household savings decreases with an increase in the size of a family.

The coefficient of age was negative (-0.504) but statistically significant at 10 percent with a p-value of 0.047. Therefore, with increased age of the urban youth, savings decreased. This may be explained by the fact that at an advanced age of their youth, urban youth would tend to have more number of dependants and therefore increased expenditure consequently end up dissaving. The findings of this study corroborates with Modigliani and Brumberg (1954) in the lifecycle hypothesis who argued that household saving rate would peak at the best working turn and age and then would decline such that households dissolve their savings after retirement.

The coefficient for the rate of return was positive (0.605) and statistically significant at 5 percent with a p value of 0.032. This means that the rate of return on savings had a positive effect on savings where an increase in the rate of return is expected to lead to increased savings levels for the urban youth. These findings are similar to those of Saikia(2018) who found that offering higher returns on savings would stimulate more savings among the households

The coefficient of education was negative (-0.411) but statistically significant at 10 percent with a p value of 0.057. Therefore, a higher education level had a negative effect on the level of savings. This is contrary to the general expectations where education is expected to influence higher savings given that it is likely to increase financial literacy of the urban youth. Nevertheless, the negative impact of education on urban savings may be attributed to the likelihood of increased educational expenses initially where the urban youth end up decreasing savings. The findings corroborate with Morisset & Revoredo (1995) who argued that education decreased saving since with increased financial literacy individuals may tend to take too many risks, over borrow and hold some naïve financial attitudes towards saving.

The coefficient of estimated charges or the transaction cost was positive (0.435) and statistically significant at 5 percent level with a p-value of 0.037. Therefore, transaction costs had a positive effect on savings which was contrary to the expectations. This may be explained by the fact that transaction costs charged may be perceived as not substantial and therefore have no major effect on the savings. This may also be due to the fact that if transaction costs are higher, they may tend to discourage withdrawals rather than savings. The findings on

transactions costs are similar to those of Schanner (2017) who found that transaction costs mainly affected withdrawal of savings rather than the decision to save in financial institutions.

5.0 Conclusion and Recommendations

5.1 Conclusion

Various studies have demonstrated that low savings and disinterest in saving among Kenyans emanates from factors such as poverty, low incomes, inadequate financial education as well as lack of financial incentives. This has made it challenging for the Kenyans to build on a good saving culture. This calls for the need to mobilize savings among the Kenyans in order to facilitate capital formation for investments.

Specifically, youth being the backbone of the Kenyan population with those aged between 18-34 years representing 29 percent of the population should be encouraged to save as substantial savings from youth would influence economic growth through creation of investment funds and through increased entrepreneurial spirit. Studies conducted showed that the annual saving rate ranges between 10-14 percent with that of the youth still lagging at 12 percent (Kagotho et al., 2017). Given these scenarios there was the need to conduct a study regarding factors that affect the level of savings among the youth.

5.2 Recommendations from this study

By providing adequate financial education to the youth, they would likely become more attuned to better saving behaviour. Imparting better financial skills including planning would help the youth in financial decisions particularly for those with more dependants as the number of dependants significantly reduced the level of savings among the youth. Youth that are adequately financially literate would be more likely to spend less income, create some emergency funds and open savings accounts as compared to those with lower levels.

5.3 Recommendations for further studies

The paper focused only on the effect of income on the Urban Youth Savings. A Case Study of Nairobi City County, Kenya, therefore the need for another paper to be carried focusing on other prospect that could have effect on Urban Youth Savings. A Case Study of Nairobi City County

Ethics approval and consent to participate

Consent for publication

The author sought permission to publish his work with by first registering as well as following all their guidelines.

Availability of data and material

The original study data is included in this article. Further inquiries can be directed to the corresponding author.

Competing interests

The authors declare that there is no conflict of interest regarding the publication of this paper

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The authors conceived and collaboratively contributed to development of this study.

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