EFFECT OF NON BANK FINANCIAL INSTITUTIONS CREDIT ON POVERTY REDUCTION IN KENYA: A CO INTEGRATION ANALYSIS (1980-2013)

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ABSTRACT

This study examines the effect of NBFI's credit on the population of people living below the poverty line. Using annual time series data over the period 1980 to 2013, the study was informed by a credit model based on the vicious cycle of poverty theory. The Phillips-Perron test was conducted to test for stationarity of the variables under study after which the study employed autoregressive distributed lag (ARDL) model to examine the relationship between NBFIs' credit on Poverty reduction. The study established that NBFIs' credit has significant negative effect on the number of people living below the poverty line. The paper recommends that NBFIs should channel more credit to the private sector so as to promote investment, increase output in the economy and consequently reduce poverty levels.
Key Words: Poverty, Poverty Line, Inequality, Non-Bank Financial Institutions, Per Capita Income.

1. INTRODUCTION

Poverty has been a major concern of most economies with the initiation of several poverty reduction programs over time and across regions. Despite these efforts, poverty continues to be a key impediment to both human and economic prosperity (OECD, 2000). Immediately after assuming self-rule, Kenya identified poverty as a major problem and as documented in various policy documents, most notably, the Sessional Paper No. 10 of 1965 on African Socialism and its Application to Planning in Kenya, the Government of Kenya directed its efforts to fighting poverty, disease and ignorance as part of its development objectives (GoK, 1965). Many policies, programs and projects have since been designed and implemented with the aim of alleviating poverty. However, poverty continues to afflict a large segment of the Kenyan population with estimates from the latest Household Budget Survey indicating that 45.9% of the Kenyan population lives below the poverty line (KNBS, 2007). Currently 46.8% of the population lives below the poverty line in Kenya (UNICEF, 2014).

The gap between the rich and the poor in Kenya is huge due to inequalities in the distribution of income. Recent statistics for Kenya show that income is heavily skewed in favor of the rich with 10% of the country's households controlling 42% of the total income (KIBHS, 2012). In order to eradicate poverty, people are advised to access micro-credit from non-bank financial institutions (NBFIs) because Banks charge high interest rate on loans and collateral security is required which poor people lack. Pitt and Khandker (2003) and Jean-Luc (2006) argue that the cause of poverty in developing economies among other things is that the low income earners and the vulnerable do not have access to credit for the purpose of working capital as well as investment for their small businesses.

According to Jeffrey *et al.* (2002) Non-Bank Financial Institutions are institutions that do not have full banking license or is not supervised by a national or international banking regulatory agency. NBFI's facilitate bank-related financial service, such as investment, risk pooling, contractual savings and market brokering. Examples of NBFI's in Kenya include insurance firms, microfinance institutions, Sacco's and Cooperatives, ROSCA's, pension funds, mutual funds, brokering firms and real estate financiers. NBFI's in Kenya were set up to fill a gap in the financial system and rectify inefficiencies in loan facilities. These specialized financial institutions supplement the availability of finance provided by commercial banks. They supplement commercial Banks mainly in deposits and in lending out credit to potential investors. The NBFI's are both public and private. These institutions mobilize savings in competition with commercial banks. The savings are then channelled into credit for commerce, agriculture, industry and household sectors. Kenya continues to develop a wider range of these financial institutions.(Kariuki and Misaro (2008).

One way of measuring human poverty, although it is far from adequate, is by using the human poverty index (HPI) introduced by UNDP in the Human Development Report of 1997. The HPI is a composite index of different features of deprivation in the quality of life that helps to judge the extent of poverty in a community. HPI measures human poverty in developing countries. The variables used are: (1) The percentage of people expected to die before age 40; (2) the percentage of adults who are illiterate; and (3) deprivation in overall economic provisioning measured by: (a) the percentage of people without access to health services and safe water and (b) the percentage of underweight children under five. The HPI is constructed by taking a simple average of the three variables. The trend in the HPI for Kenya between 1997 and 2012 is evident from Table 1. The table shows that the value of the HPI for Kenya has been rising and the poverty ranking of Kenya rose compared to other developing nations. Table 1also shows that the percentage of people living below the poverty line rose from 42 percent in 1997 to 45.9 percent in 2012 implying that half of the population in Kenya was living below the poverty line in 2012

Table 1: Human Poverty Index for Kenya: 1997-2012

Human Poverty Index for Kenya: 1997-2012 Year	Human poverty index		Population below absolute national poverty line (%)
	Rank among Developing Countries	**Value (%)**	
1997	35	27.1	42.0
1998	49	28.2	47.0
1999	51	29.5	48.6
2000	49	31.9	50.0
2005	42	34.4	47.2
2010	50	35.9	45.0
2011	49	37.2	46.3
2012	48	39.9	45.9

Human Development Indicators, (2013)

In Kenya the majority of the poor lack access to the basic financial services which are essential for them to manage their lives. The poor are excluded from the opportunities of financial services than the informal alternatives that are considered unsuitable. Credit is considered a vital tool for breaking the vicious cycle of poverty which is characterized by low incomes, low savings and low investment. According to Hulme *et al.* (1996) most institutions regard low-income households as "too poor to save". In order to generate higher incomes, savings and more investment there is need to inject capital in the form of credit.

According to the Poverty Reduction Strategy Paper (PRSP) of 1999, a large number of Kenyans gain their livelihood from the MSEs. Therefore, development in this sector represents an important means of employment creation, promoting growth, and poverty reduction in the long-term. The Government of Kenya acknowledges that greater access to, and sustainable flow of financial services, particularly credit, to the low-income households and MSEs is a major boost to poverty alleviation.

Regional poverty estimates for Kenya reveal that poverty varies widely by region and its incidence is particularly high in semi-arid areas of the country. Overall, the Kenyan poor are disproportionately found in: rural areas, households headed by widows and less educated persons. Some of the reasons put forward for high poverty rates in Kenya include: lack of income earning opportunities; inadequate human capital Investments; unfavorable agro-climatic conditions, HIV-AIDS pandemic and weak implementation of pro-poor strategies (Kimenyi 2002).

Economic growth is important for poverty reduction; however, the concern is that it may not do so substantially. For growth to impact on poverty substantially, it has to be sustained at relatively high levels. Kenya has numerous policy, regulatory and operational initiatives by government and other stakeholders to address growth, poverty and income inequality (KIPPRA, 2009). However the government emphasis more on accessing loans from Non-Bank Financial institutions. Kenya has seen growth of many NBFI's specifically structured to improve and sustain the lives of both small and medium sized enterprises and improve standards of living.

Kenya's prospects for long-term growth are among the most favorable in East Africa. Sustained by its investments in infrastructure, its location as a regional business hub and gradual improvements in governance and public-sector capacity is expected to keep growing steadily, according to projections by the World Bank and the International Monetary Fund (2005). Since Kenya is still on the path to economic growth, poverty alleviation remains a challenge. Nearly a half of the country's 43 million people live below the poverty line are unable to meet their daily nutritional requirements. According to the study done by (Asian Development Bank, 2009) accessing NBFI's credit helps to provide a broad range of small –scaled financial services to the poor, low-income households and their micro enterprises. Most of the NBFIs not only provide loans to the poor also try to increase their income by mobilizing savings. Apart from education which is a factor that contributes to human development, also empowerment is a variable that indicates improved standards of living.

Efforts were also made to establish the Kenya financial sector deepening programme in the year 2005 to support the development of financial markets with an aim of stimulating wealth creation and reducing poverty. The growth of the NBFI services in the country has been growing. Despite all these efforts many Kenyans are still stuck in poverty with little access to financial services because of the biasness in accessing credit (Kibua, 2007). Although GDP growth has shown upward growth trend poverty levels are still above 47% of the total population. The contributions on NBFI credit, An empirical study by Odhiambo (2009) showed causality between bank-based financial development and economic growth. The study also implied that a well-functioning banking sector supports and economic growth and poverty reduction.

In Kenya there are limited empirical studies on the effect of NBFI credit on poverty reduction. These empirical studies only examine effect of NBFI's credit on poverty reduction using individual household data of which may not give conclusive results on the extent to which credit can be used to alleviate poverty in Kenya due to regional imbalances. Other studies done in Kenya include financial development and poverty reduction using time series data (Odhiambo, 2009) and it has been shown that there exists a positive causality between financial development and poverty reduction. This study therefore was carried out to compliment other existing empirical studies done using time series datato show the existing relationship between NBFI's credit and poverty reduction in Kenya. Efficient and reliable access to credit may help mobile savings and create capital to SME's hence boost private investment through increase in incomes and employment creations. This study was important in order to prescribe policy recommendation to help reduce poverty.

2. LITERATURE REVIEW

The theoretical link between finance and poverty can be traced back to the Mckinnon Conduit Effect (Mckinnon 1973). He says financial development leads to increase in domestic savings which is good for the poor as it then increases investment undertaken by the poor. This statement is further supported by Jeannency and Kpodar (2005) who assume that financial development is beneficial to the poor as it has a positive effect on Economic growth. The study was informed by the vicious cycle of poverty theory to analyze the correlation between NBFI's credit and poverty reduction in Kenya. This study focused on a credit model that seeks to explain how NBFI's credit can be used as an instrument for poverty reduction.

(Nurkse, 1967; 1971) explains that poverty perpetuates itself in mutually reinforcing vicious circle on both supply and demand sides. It is argued that, perhaps, the most important circular relationships of a kind are those that affect the accumulation of capital in economically backward country or society. Such economies are characterized by inequality both in resource allocation and gender biasness.

Explaining the supply side, Nurkse (1971), hold the view that there is a small capacity to save due to low level of real income in such an economy. The low real income is a reflection of low productivity, lack of capital, resulting in small capacity to save. With regard to the demand side, it is argued that, demand for capital is influenced by incentive to invest. However, the lack of zeal to invest could be due to low purchasing capacity of the people, small real income and as a result of low productivity. Low productivity, however, could be due to small amount of capital used in the production, which may be caused partly by less incentive to invest. Meanwhile, the low level of real income, due to low productivity, is an issue that is common to both supply and demand sides of the circles.

Nevertheless, Aryeetey (2004) argues that a household that is constraint in its access to credit or other assets may not be able to survive a negative event. Aryeetey notes that in practice, many households survive but at the cost of adopting risk averse production strategy. However, proponents of microcredit believe that microcredit can transform the vicious circle of poverty into a virtuous circle.

Morduch and Haley (2002) in their study explain that one tool that has been recognized as effective in improving many aspects of the lives of poor is microfinance. It has become a well-known and celebrated within the framework of development aid. It is said to contribute positively and in different ways to the improvement of the welfare of the poor people. CGAP (2002) and Wright *et al*.(2000) further supports the study done by Morduch and further point out that microfinance display positive impacts on the first six out of the eight UN´s Millennium Development Goals.

Nyakambi (2014) in a study analyzed the effect of microfinance on poverty reduction in Nakuru county Kenya and found out that microfinance credit access positively contributes to alleviation of poverty at the household level in Nakuru County by providing financial access to low income earners, less educated, and those in the informal sector which helps in the expansion of business, acquisition of property, better education access and better health care services. The study used household level data using purposive sampling to conduct the study.
Roodman and Qureshi (2006) in their study further analyzed how microfinance work and found out that institutions have to devise suitable solutions to constraints like, controlling costs, keeping repayment costs high and preventing fraud if they are to deliver favorable financial services to the poor.
Peterson and Kiiru (1997) in their study argue that various approaches to credit for micro and small enterprises have been tried in Kenya by different institutions with varying degrees of success or failure. Major approaches include: minimalist versus integrated approaches; group based lending versus lending to individuals; village banking and linkage programs. Minimalist approaches and group-based lending have been very popular and much tried by leading NGOs in the field of microfinance, like K-REP, KWFT and Faulu Kenya. Minimalist approaches basically concentrate on the provision of loans, giving no or at most some functional attention to training or technical assistance. Group-based lending schemes have been very often based on the Grameen Bank method.
In a study done by Bichanga and Makanga (2014) to examine effect of micro credit on poverty reduction, using descriptive survey design, and also using representative samples to collect data, found out that Microfinance institutions play a significant role in poverty reduction. Their study found out that effective utilization of credit help boost economic activities of the poor and this has a multiple effect in reducing poverty levels in the society. Therefore this study was supposed to bridge the gap and show how data collected using aggregated variables of the economy can be used to show how poverty reduction can be reduced using the Non- Bank Financial Institutions credit can be used to reduce poverty levels.

3. METHODOLOGY

Data Type and Sources

Annual time series data for the period 1980-2013 was obtained from World Development Indicators and Central Bank of Kenya (CBK). The data obtained was then deflated by GDP deflator to convert them in to real values in order to remove inflationary effects.

Model Specification

The study area is republic of Kenya. Data period covered in this study is between 1980-2013.Kenya was chosen for this research because although the economy of Kenya is the largest by GDP in Southeast and Central Africa, poverty levels are still high at levels of 45.9%(KNBS, 2007) which is almost half of the country's population. Also Kenya is marred by inequality in terms of wealth and resource distribution which subsequently leads to high corruption levels and therefore acutely justifying the need to analyze how poverty reduction is of importance in Kenya. Despite efforts of increasing government expenditure, Kenya's poverty level continues to be a key impediment to both human and economic prosperity (OECD, 2000). However recently government of Kenya identified lack of access to credit as being a major bottleneck for entrepreneurial development and rise in poverty levels and since then NBFI's have been set up to help the low income earners improve their welfare and up to the year 2012, real per capita income for Kenya has increased significantly from 4.2% to 5.8%. (CBK, 2012)

Model Specification

To estimate the effect of Non-Bank Financial Institutions Credit on Poverty reduction in Kenya, the study adopted an Autoregressive Distributed Lag (ARDL) model.

$$\ln Y_{1t} = \beta_0 + \beta_1 LnUN_{t-i} + \beta_2 \ln PI_{t-i} + \beta_3 LnINF_{t-i} + \beta_4 \ln HC_{t-i} + \beta_5 \ln GDPGR_{t-i} + \beta_6 \ln NBFI_{t-i} + \mu_t$$

Where $\ln Y_{1t}$ = Number of people below poverty line

$ln\ UN_{t-i}$ =Unemployment rate

$\ln PI_{t-i}$ =Private Investment

$ln\ INF_{t-i}$ = Inflation rate

$\ln HC_{t-i}$ = Human Capital (proxy for education level)

$\ln GDPGR_{t-i}$ = Real per Capita GDP

$\ln NBFI_{t-i}$ = Non-Bank Financial Institutions credit (Credit loaned out by Non- Bank Institutions)

μ_t −White noise process

ln – Natural Log

$\beta's$ – Parameters to be estimated

Justification and Measurement of Variables

Private Investment or Gross Private Domestic Investment: is expenditures on Capital goods to be used for productive activities in the domestic economy that are undertaken by the business sector during a given period of time. These productive activities are expected to increase the rate of Capital accumulation in the productive capacity of the country. Therefore more private investments means more output and this will lead to poverty reduction. This variable will be expressed as a ratio of GDP. Data Source: WDI (2013)

Human Capital: refers to the stock of competencies, knowledge and cognitive abilities embodied in the ability to perform labor so as to produce economic value. Education will be used as a proxy for Human Capital in this study. Education as a basic necessity is vital for increased productivity in terms of human capital therefore education is basic in reducing poverty among households in Kenya. This variable is measured by the average years of schooling. Source: Barro-Leedatabase (2013).

Lending Interest rate: refers to the bank rate that usually meets the short and medium term financing needs of the private sector. Lending rate can either be positive or negative. This is because when lending rates are high price of loans would be high and this will consequently discourage households to access loans for productive activities hence poverty levels would still be high. When lending rates are low then more households are able to access the loans easily hence they can engage in productive activities which are deemed to be productive and hence reduction of poverty.The variable is given by lending interest rate: WDI(2013)

Unemployment rate: is a measure of the prevalence of unemployment. Kenya is faced with huge unemployment rate which is the major cause of high poverty levels. During periods of recession an economy faces huge unemployment rates. Unemployment rate is calculated as a percentage by dividing the number of unemployed individuals by all individuals currently in the labor force. Source: WDI (2013).

4. RESULTS AND DISCUSSIONS

Unit root test was conducted to test for the stationarity of the variables included in the models of this study. To test for the presence of unit roots in the variables, this study used the Philip-Perron (PP) unit root test (Phillip and Perron, 1988), because it has a greater unit root detection abilities as compared to the Augmented Dickey-Fuller (ADF) test. Therefore to test for the presence of unit roots in the data, this study employed the Phillips–Perron test because it allows for fairly mild assumptions concerning the distribution of the errors as compared to the other time series unit root tests which assume that the errors are statistically independent with a constant variance.

Table 2: Results of the Phillip-Perron (PP) Unit Root Tests

Variable	PP (Level)		PP (First Difference)		Order of Integration
	Statistic	P-Value	Statistic	P-Value	
LnUN	-3.280	0.0158			I(0)
LnYt1	-2.483	0.1196	-7.178	0.0000	I(1)
LnIFR	-3.364	0.0122			I(0)
LnHC	-4.889	0.000			I(0)
LnGDPGR	-1.937	0.3149	-4.100	0.0010	I(1)
LnNBFI	-1.617	0.4742	-4.723	0.0001	I(1)
LnPCY	0.304	0.9775	-3.141	0.0236	I(1)
LnPI	-2.483	0.1196	-7.178	0.0000	I(1)

Table 4.3 above presents the unit root test results which reveal that only LnUN, LnINF and LnPGDP are stationary at their levels and so they are integrated of order zero. The other remaining variables are non-stationary at their levels but they become stationary after differencing once, and so they are integrated of order one..

Co integration Analysis
A co integration test establishes whether non-stationary variables move together in the long-run. Since the application of ARDL bounds test approach to co-integration requires that the variables be integrated either of order zero or one, then these results suggested that ARDL co integration approach was possibleThe co integration test was based on the F-statistics or Wald Statistics.

From Table 4.4 the variables were found to be either integrated of order 0 (LnUN, LnFR and LnPGDP) and order 1 (LnYt1, LnHC, LnNBFI, LnPCY and LnPI). The preconditions for performing a bounds test for co integration using ARDL modelling requires that the variables be integrated of order 0 or order 1; a condition which has been met in this case. In conducting the test a lag length of two was selected. Pesaran *et al.,* (2001) suggested a maximum of two lag lengths for annual data owing to the small sample size. Therefore the bounds test was performed and the results reported in table 4.4.

Table 3: Bounds Test Co integration Results

Significance Level	Bounds Critical Values		F-test Value
	I(0)	I(1)	
1%	1.75	2.87	
5%	2.04	3.24	8.845
10%	2.66	4.05	

Source: The critical values were obtained from Pesaran*et al.,* (2001), Table T1-T3.

From Table 4.4 the calculated F-test value (8.845) is greater than all the tabulated critical values at any significance level. Therefore we reject the null hypothesis and conclude that co integration relationship exists among the variables.

Regression Results of the effect of NBFI's Credit on the Population of People living below the Poverty Line Due to the fact that the variable LnYt1 (number of people living below the poverty line) was found to be co integrated with all the explanatory variables, then this subsection presented long-run results of the effect of Non-Bank Financial Institution's Credit on population of people living below the poverty line. The ARDL model was estimated using the Akaike Information Criteria (AIC) where a lag length of two was adopted.

Table 5 shows the factors that are likely to affect the poverty level of a given population. The results show that NBFIs credit has positive but insignificant effect on poverty reduction. The insignificant negative effect could be as a result of the fact that most citizens of Kenya still do not have access to credit from the NBFIs due to high collaterals required to access such credit facilities thereby limiting many people. According to Bichanga Okibo and Makanga (2015), in their study found that microfinance institutions are useful tools for poverty reduction. Some of their findings for poverty reduction include trainings, localizing the business through expansion of business in remote areas to reach the poor. However, their findings also showed that respondents indicated some dissatisfaction with the current loan range, and definitely the loan range is influenced hand in hand by the amount of collateral the respondent was able to produce. Therefore these results concur with the findings of the study above. According to Easterly (2006) on impact analysis of NBFIs he suggests that the majority of borrowers who already have some assets are more likely to succeed. He refers to NBFIs as "searchers", they search instead for existing small enterprises in the informal sector, not the very poor without any assets or entrepreneurial skills.

The results show that higher unemployment rates have a significant positive effect (at 5 percent significance level) on poverty affecting a given population in a country. The results show that a 1 percent increase in the unemployment rates leads to a 0.05 percent increase in the poverty levels. This is true because those without productive employment have no access to regular income and therefore cannot afford to acquire the basic needs that are essential for a decent living. This finding is further confirmed by Saunders (2002); Ukpere and Slabbert (2009); Apergis*et al.* (2011) who in their studies found out that Poverty levels increase with increasing unemployment rates. The relationship between unemployment and poverty studied by Haveman and Schwabish, (2000); Freeman, (2003) in their analysis concluded that variations in the unemployment rate significantly affected the poverty rate. Therefore provision of employment is an essential ingredient for any poverty reduction strategy that a country can adopt.

Table 4: Long-run Regression Results Based on AIC (1,2,1,0,0,1)

Variable	Coefficient	Std. Error	t-Statistic	P-value
Constant	0.7694	2.178	0.35	0.729
LnNBFI	-0.8314	0.10650	-0.78	0.466
LnUN	0.0542**	0.0926	2.40	0.0175
LnPI	-0.4174**	0.1069	-3.90	0.0107
LnINFR	-0.0233	0.0146	-1.59	0.186
LnHC	-0.5100	1.3094	-0.39	0.702
LnPCY	-0.7135**	0.0335	-2.13	0.049
Adjusted R-Squared = 0.7711				
Durbin Watson =2.0097				
F-Statistics = 8.569				
Prob> F =0.000				
Ramsey Reset Test = 0.0693				

Notes: **denotes significance at 5 percent**

The results further show that private investment has a negative significant effect on poverty. That is, a 1 percent increase in private investment leads to a 0.4174 percent decrease in poverty levels. This implies that investment in the private sector offers employment and is responsible for provision of critical goods and services as well as ensuring efficient flow of capital. All these combined ensure that t people have income through employment and the competition and efficiency in this sector leads to availability of cheap but high quality goods. This result is consistent with those of Suryadarma and Suryahadi (2007) who analyzed the impact of private sector growth on poverty reduction in Indonesia and found out that the private sector investment significantly reduces poverty. This finding is further supported by Ayashagba and Abachi (2002) in their study on Foreign Private Investment and poverty reduction in Nigeria. They found out that direct foreign private investment contribute better to reduced poverty levels. Therefore investment by the private sector ensures that more jobs are created and real per capita income grows and leads to an improvement in the living standards of the populations of a country. When there are more infrastructures, the cost of living is brought down because people are more productive and this ensures that people can engage in activities like small scale jua kali businesses that generate some income for them and therefore reduces poverty.

Table 4.5also shows that, per capita GDP has a negative significant effect, at 5 percent significant level on poverty reduction. That is, if the economy grows by 1 percent, then poverty reduces by 0.7135 percent. This means that if a country pursues economic growth, it is likely to reduce poverty levels in the population. This findings are supported by Dollar and Kraay, (2000) who found out that on average, the income of the bottom one-fifth of the population rose one –for-one with the overall growth of the economy as defined as per capita GDP. Dollar and Kraay argue that poverty reduction could in fact be necessary to implement stable macroeconomic policies to achieve higher growth. According to Anyanwu (2013) higher real per capita GDP have significant negative effect on poverty and thus good for poverty reduction and inclusive growth. Economic growth means greater investments in the leading sectors of the economy and this leads to reduction in poverty levels. Also economic growth is likely to come with more employment opportunities and people generate income in the end which reduces poverty. Therefore the Kenyan government should pursue growth oriented policies in order to reduce poverty levels in the country.

The adjusted R^2 value is statistically significant indicating that the model had a good fit. This means that 77.11% of the variations of the dependent variable are explained by the variations in the explanatory variables. The results reveal that the model passes diagnostic test like Durbin-Watson test whose value shows absence of serial correlation. The results of the F-test also reveal that the parameter estimates are significantly different from zero. The null hypothesis of the Ramsey Reset Test states that there is no specification error in specifying the model as linear. It is shown that the RESET test's p-value obtained in the model is 0.0693 which is greater than 0.05 and therefore we accept the null hypothesis and conclude that there is no misspecification errror of the model.

Short-run Regression Results
Having established a co integrating relationship among the variables and having estimated the long-run coefficients, the short-run coefficients are modeled. Table 4.6 below reports the estimated error correction results

Table 4.6: Short-run Regression Results based on AIC (1,1,2,1,0,0,1)

Variable	Coefficient	Std. Error	t-Statistic	P-value
ECM	-0.4225	0.1388	-3.04	0.002
ΔYt1	-1.1566	0.1915	-6.04	0.000
ΔLnNBFI	-0.1416	-0.0128	-3.47	0.061
ΔLnUN	0.1125	0.0271	4.14	0.000
ΔLnPI	-1.3376	0.2190	-6.11	0.000
ΔLnINFR	0.6173	0.3893	1.59	0.113
ΔLnHC	-1.9353	1.4683	-1.32	0.187
ΔLnPCY	-0.2985	0.4801	-0.62	0.534
R-Squared = 0.8952				
F-Statistics = 8.569 Prob> F =0.000				
LM Test pro > Chi-Square = 0.2455				
Ramsey Reset Test = 0.0522				

The results on Table 4.6 indicate that the coefficient of LnUN has significant (at 5% significance level) positive impact on population of people living below the poverty line. 1% increase in unemployment rate leads to a 0.1125% increase in the number of people living below the poverty line. Therefore more policies need to be put in place to encourage creation of more employment opportunities available to the deserving poor.

From the results, the coefficient of LnPI has a significant negative impact on the population of people living below poverty line. 1% increase in Private investment leads to a 1.3376% decrease on the population of people living below the poverty line. Therefore more private investments will help mobilize savings and increase income of the poor and provide an opportunity to venture into small scale businesses that generate income.

The coefficient of LnINF, LnHC and per capita GDP has insignificant positive impact on the population living of people living below poverty line. This may be due to the fact that since in the short-run prices and wages are fixed then inflation will not have any significant effect on prices of goods and services while the wages will also not vary. This will ensure that there is no significant effect on the number of people living below the poverty line.

NBFI's credit is shown to have a significant (at 5% significance level) negative effect on the number of people living below the poverty line. This means that extension of credit will in the short-run help improve the welfare of the poor people.

The results further reveal that the error correction term which has a value of -0.4225 has the correct sign and is significant at 5% level of significance. This result implies that there's low speed to adjustment to the equilibrium.

The Ramsey RESET test shows that there is no specification error in the model while the LM test statistics reveal the absence of autocorrelation. The coefficient of determination shows that the regressors of the model explain 89.52% of the variations in the regress and implying that the model fits the data well.

5. CONCLUSION AND RECOMMENDATIONS

The study aimed to establish the effect of NBFIs' credit on poverty reduction in Kenya. To achieve the objectives proposed, the study performed unit root test using Phillip-Perron (1998) test so as to avoid spurious regression results that arise due to non-stationarity data. Unemployment, inflation and human development variables were found to be integrated of order zero and thus stationary. The other variables which included; the number of people living below the poverty line, GDP growth rate, NBFIs' credit, per capita income and private investment were found to be non-stationary. Each one of them was then differenced and tested for unit root after which it was established that they were all integrated of order one i.e. I(1).

Since the pre-requisite for bounds approach to co integration is that the variables of interest be integrated either of order one or order zero, the study employed the procedure. All the variables of the three models were found to be co integrated. The long-run regression results for the first model established that NBFIs' credit had insignificant positive effect on the number of people living below the poverty line. Human capital development too, had insignificant influence on the number of people living below the poverty line. But Unemployment rates and inflation rates ,had significant positive effect on number of people living below the poverty line, while private investment and per capita income had significant negative and significant positive effect on the number of people living below the poverty line respectively. The short-run results indicated that unemployment rates had significant positive effect on the number of people living below the poverty line. Private investment was found to have significant negative effect on the number of people living below the poverty line. Inflation rates, human capital development and per capita income, were found to have insignificant influence on the number of people living below the poverty line.

From the regression findings it was concluded that creation of employment opportunity necessitates affordability of basic services essential for decent living. It was also clear that private investment led to an improvement in the standards of living and by doing so reduce the number of people living below poverty line. Evidently economic growth means greater investment in both public and private sectors and this subsequently may have led to reduced poverty levels and an improvement in the living standards of mostly the people living below poverty line. From the study high real per capita income has a significant negative effect on poverty reduction and inclusive growth. From the study it was also found out that NBFIs credit has a negative but insignificant effect on poverty reduction on the population of people living below poverty line. This is because the poor have no collaterals for obtaining loans and therefore cannot access loans for productive ventures.

The government should increase employment opportunities by increasing government expenditure and reducing price of loans to encourage small sector businesses to grow and by doing so more youth are encouraged to engage in productive ventures. Also the government should be encouraged to invest more on infrastructures and establish projects that are appropriate to the skills owned by majority of Kenyans so that the excess labor force can be mopped out and poverty reduced to lower levels.

Economic growth is key to a vibrant economy, therefore the government should pursue growth oriented policies and this may lead to greater investments therefore reducing poverty by great margin.

The government should work on policies that reduce inflation rate because inflation not only reduces the level of investment but also the efficiency with which productive factors are used. Inflation has been found

to have a negative temporary impact on long-term growth rates which generates to permanent fall in income. Therefore the government should tighten policies that regulate inflation rates.

Employment creation is a key ingredient in income generation and poverty reduction in the country. It is therefore crucial for the government to create more employment opportunities so as to employ more Kenyans. The government should also pursue growth so as to sustain poverty reduction and create more employment opportunities.

The government should encourage private investment and induce NBFIs to reduce their collaterals so as to enable more people acquire credit and generate more private opportunities. The direct way that financial policy can influence the poor's income generation and income stabilization (poverty reduction) is by increasing their access to financial services.

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