UMYU Journal of Accounting and Finance Research. Volume 4 No.1 December 2022
https://doi.org/10.61143/umyu-jafr.4(1)2022.001
ISSN: 2795-3831
E-ISSN: 2795-3823

EMPIRICAL ANALYSIS OF THE IMPACT OF FINANCIAL INCLUSION ON POVERTY REDUCTION IN KATSINA STATE, NIGERIA

Abdulsalam Abubakar[1] (PhD) & Ahmed Halliru Malumfashi[2]
[1,2]Department of Economics, Umaru Musa Yar'adua University Katsina, Nigeria
***Corresponding Author:* +234 706 5770 247; abubakar.abdulsalam@umyu.edu.ng**

Abstract
Financial inclusion holds the potential to reduce poverty by raising the levels of income and human capital. This study verifies this postulation in Katsina state by adopting quantitative research strategy and cross-sectional research design. Primary data was collected through field survey and using questionnaire in four local government areas of Katsina state, namely Batagarawa, Batsari, Katsina and Kaita. In all 480 questionnaires were distributed, but 388 were eventually used in the analysis. Results from the regression analysis show that access to and usage of financial services reduces poverty by improving people's level of income. Against the backdrop of these conclusions, the study recommends that financial institutions in Katsina state in particular and Nigeria in general should diversify their financial services. Beyond deposit and withdrawal services they should introduce specific credit facilities, reduce the time taken to complete transactions and resolve customer complaints and reduce the cost of financial services being provided. More so, the Central Bank of Nigeria and other financial sector regulatory agencies should enhance the monitoring and surveillance of financial institutions to ensure efficiency in services delivery and that the rights of customers are protected. In addition, they should also strengthen and make the regulatory frameworks adaptable to the needs of various segments of the population and rollout more financial inclusion strategies.

Key Words: *Financial inclusion, Poverty, Financial access, Quality of financial services, Usage of financial services*

Acknowledgement: This research is sponsored by the Tertiary Education Trust Fund (TETfund) through the Institution Based Research (IBR) grant.

1. Introduction

Financial inclusion is crucial for improving human and physical capitals, thereby creating wealth and reducing poverty. Inclusive financing or financial outreach is a pre-condition for accelerating inclusive growth, reducing income inequality and poverty thus, enhancing the potentials of the poor to invest in better nutrition, housing, health and education among others, and this enable them to absorb economic shocks (Manohar et al., 2013). Theoretical and empirical evidences on financial development suggested that access to finance is pro-growth and pro-poor by reducing income inequality. But lack of access to finance is a critical mechanism for the generation of persistent income inequality as well as slower growth which influences resource allocation and the comparative economic opportunities of individuals in the economy. Yet in many developing countries a significant portion of the population are financially excluded and most of them are the average citizens (Chibba, 2009).

ISSN: 2795-3831
E-ISSN: 2795-3823

In this context, financial inclusion can encourage human capital accumulation by easing borrowing constraints, thereby allowing households to borrow and finance the accumulation of productive assets, education of their members and smooth consumption. Moreover, a developed financial system provides avenue for households to earn high return on their savings, consequently, their personal wealth increases and thus lifted out of poverty. From the global perspective, half of the global adult population, which amounts to over 2.5 billion people, does not maintain an account with formal financial institutions. For developing countries, the figure might be higher given that their financial system is still evolving and thus financial inclusion is faced with many socio-economic challenges. For example, in developing countries only 41% of adults are banked, as against the 89% in developed countries (Aguera, 2015).

In the case of Nigeria, according to the National Financial Inclusion Strategy (NFIS, 2010), it was estimated that about 39.2 million adults representing 46.3% are financially excluded and majority of them are women (NFIS, 2010). This phenomenon has led to poor household's investment in productive assets, education and health, therefore, unable to explore their full economic potentials. Consequently, in 2014 Nigeria was categorised among countries with low human development index (HDI) and is ranked 152, out of 188 countries (UNDP, 2015). Similarly, Katsina state scored a low HDI of 0.3031 thereby ranked 36 among the Nigerian states and the Federal Capital Territory (UNDP, 2018). This combination of lack of access to finance and low human capital development is a sign of high level of poverty among households. This phenomenon motivated this study, which seeks to examine the relationship between financial inclusion and poverty reduction in Katsina state.

2. Literature Review

2.1. Conceptual Framework

This section reviews various definitions and conceptions of the key concepts of the study; these are financial inclusion, poverty and their interaction.

Financial Inclusion and its Dimensions

Financial inclusion is a broad term encompassing institutions, markets, services, products and facilities that enable economic units (producers, consumers and government) have access to and utilize financial products and services. In terms of quantum, financial inclusion can be defined as the percentage of people and firms that utilize the various forms of financial products services. In other words, it entails providing universal access to various financial services for individuals, firms as well as micro, small and medium enterprises (MSMEs) at affordable cost by responsible and sustainable financial institutions (Aguera, 2015). Such financial services as identified by Aguera include credit/loan to smooth consumption and accumulate human capital; savings to cushion the effects of shocks and provide self-financing; payment avenues to ease exchange of goods and services etc.

However, MSMEs tend to be excluded in accessing financial services especially from the established conventional financial institutions. Hence, from the micro perspective,

ISSN: 2795-3831
E-ISSN: 2795-3823

financial inclusion can be conceived as the provision of micro-loans to the segments of population who have hitherto no access to lending facilities provided by the conventional lending institutions (Schmied & Marr, 2016). These segments usually are provided with financial services through micro-finance banks, development finance institutions and other informal financial institutions and schemes.

Other enablers of financial inclusion is the information and communication technology (ICT), which has improved financial inclusion through various means, such as mobile-banking, e-payments, internet banking and e-money among other ICT-driven financial services. This has made it possible for a wider segment of the population to have access to and utilize financial products and services at reduced cost and at their conveniences (Aguera, 2015).

The opposite of financial inclusion is financial exclusion, which is a situation whereby individuals who want to use financial services could not do so because of barriers such as high cost of finance, physical distance and absence of financial service/product that suit their needs among others (Aguera, 2015). Therefore, in the absence of all these barriers, if an individual is still not willing to access financial services/products, then such individual is said to be financially excluded voluntarily. In his regard, the World Bank (2014) defines voluntary financial exclusion as a condition where the segment of the population or firms choose not to use financial services either because they have no need for them or due to economic, cultural and/or religious reasons. From these definitions, it is clear that financial inclusion has many dimensions, in this regard, the Alliance for Financial Inclusion (AFI) (year) identified four dimensions of financial inclusion, these are:

a- Access, which encompasses the ease or otherwise to use formal financial services such as the barriers to opening bank account, proximity of financial institutions and their facilities to customers as well as affordability of financial services.
b- Quality, this entails whether the needs of customers are taken into consideration in developing available financial products and rendering financial services and if the products match their needs.
c- Usage, this is concern with the question of how regular the customers use financial services/products, the frequency and time taken utilize the products or services.
d- Welfare, this considers the overall welfare effects of the usage of financial services/products in terms of the livelihood of individuals and productivities of companies.

This conception of the dimensions of financial inclusion is comprehensive and encompassing, therefore, this study adopts it.

The Concept of Poverty

Poverty is multi-dimensional socio-economic concept that attracts the attention of policy makers, scholars and non-governmental organizations among others. Using the income measure, the World Bank (2015) defined the poor as those living on less than $1.90 per day. However, this conception of poverty is limited and may not reflect other forms of

ISSN: 2795-3831
E-ISSN: 2795-3823

deprivations, which constitute poverty. As argued by Schmied and Marr (2016) the early definitions of poverty were narrow by restricting their scope to consumption and income dimensions of poverty. On the other hand the broader dynamic definitions of poverty consider its socio-political dimensions. Such conceptions account for the wider human development indices including nutrition, health, education, life expectancy among others.

Poverty can be relative or absolute, while relative poverty measures ones standard of living against a particular threshold in relation to other members of his/her community. In this context, a person earning less than 60% of the median income of his community is defined as poor. On the other hand absolute poverty is defined in terms of minimum requirements necessary for a basic standard of living. Such requirements include food, health care, shelter, water and clothing among others (Deonandan, 2019).

The Interaction of Financial Inclusion and Poverty

The poor can generally be described as people who cannot partake in political and socio-economic endeavours as a result of lack of resources and hence are unable to enjoy the commonly accepted standard of living in their respective communities (Rodgers, Gore & Figueiredo, 1995; de Haan, 1997). Resources in this context include human and material resources, in which financial resources can be categorized. Therefore, lack of access to finance or financial exclusion can lead to poverty, by denying the poor the ability to embark on productive economic activities and smoothly undertake exchange of goods and services in the market place. In this regard, Schmied and Marr (2016) averred that most of the people, who are financially excluded, tend to be among the impoverished, socially and economically disadvantaged group.

Financial inclusion has the potential to enhance economic opportunities, investment in physical and human capital, thereby promoting economic growth and reduce poverty. In some cases the poor people have some entrepreneurial skills, but could not develop the skills due to lack of finance resources. Therefore, financial inclusion will enable such category of the poor to establish businesses that could generate income and provide employment, thereby reducing poverty (Schmied & Marr, 2016). Specifically, the provision of credit facilities through financial inclusion enable individuals to smoothen their consumption and invest in accumulating physical and human capital (Aguera, 2015), these also have the potential to reduce poverty. Moreover, access to finance can enable economic agents to make longer-term consumption and investment decisions, participate in productive activities, and cope with unexpected short-term economic and financial shocks (Park & Mercado, 2015).

2.2 Empirical Review

Evans, Green and Murinde (2000) assess whether financial inclusion/development and human capital have favourably impacted on the economic growth of 82 countries. The findings show that both financial development and human capital are making important contribution towards the growth process, and hence poverty reduction. In related development, Kendall (2007) found that human capital accumulation can reduce the negative

ISSN: 2795-3831
E-ISSN: 2795-3823

effects of financial constraint and also acts as a substitute to bank intermediated finance in the growth process of some Indian districts.

In a study on eight SSA countries, covering the period 1970-2000, Hakeem (2010) employed the fixed effect, random effects and maximum likelihood estimation techniques in a panel data framework. Although both the stocks of human and physical capital are found to be significant for growth in Africa, financial development was found to have no strong impact on growth. The downside of Hakeem's study is that it used the standard panel approaches, which are not capable or will make it difficult to detect and accommodate individual country effects as well as the potential endogeneity of the independent variables among other shortcomings.

Park and Mercado (2015) extend the existing literature on financial inclusion by investigating 37 developing Asian economies. The study constructs financial inclusion indicator to assess various macroeconomic and country-specific factors affecting the degree of financial inclusion for the selected economies. The results show that per capita income, rule of law, and demographic characteristics significantly affect financial inclusion in developing Asia. Moreover, financial inclusion significantly reduces poverty and lowers income inequality. The findings indicate that provisions for young and old people such as the retirement benefits and pensions as well as stronger rule of law, in the form of enforcement of financial contracts and financial regulatory oversight, tend to widen financial inclusion, thereby contributing to poverty reduction and lower income inequality.

Harley, Adetoso and Adebola (2017) investigated the role of financial inclusion in poverty reduction and economic growth in developing countries using panel data from 2006-2015. The study employed regression analysis and the results revealed that the number of active ATM, bank branches and government expenditure on infrastructure are the most influential factors that reduce poverty. The study recommends for the development of infrastructure to reduce poverty. In another perspective, Tita and Aziakpono (2017) analyzed the relationship between financial inclusion and income inequality in sub-Saharan Africa. The empirical results show a positive relationship between formal account used for business, electronic payment, formal savings and income inequality.

Although the findings from the above studies are robust, cross-country studies do not capture country specific features adequately and this call for country-based research. In line with this, Burgess and Pande (2005) found that state-led expansion of rural bank branches in India has helped reduce poverty. Specifically, the study found robust evidence that opening bank branches in rural unbanked locations in India was associated with reduction in rural poverty rates in those areas. In another development, Abdin (2016) estimated the impact of financial development and financial stability on poverty reduction in Bangladesh. Employing a GMM technique, the study found a significant relationship between financial development and poverty reduction. Also, the results show a strong impact of private credit ratio on the income of the poor.

ISSN: 2795-3831
E-ISSN: 2795-3823

Other researchers based their studies on state level data to take care of regional and state specific features. For example, using t-test and Garret's ranking technique, Ambigadevi, Gandhimathi and Mirseth (2012) analyse the impact of financial inclusion on social inclusion base on self-help group (SHG) in India. The study found that in all spheres, the empowerment of women increased after becoming the members of SHG. Moreover, they concluded that financial inclusion proved to be an effective mechanism for poverty reduction and empowerment of women and thus recommends for the promotion of micro-finance for income generation, poverty reduction and women personality development. In related development, Ayyagari, Beck and Hoseini (2013) assessed the effect of financial deepening and outreach on rural poverty using state-level data between 1983 and 2005. Employing instrumental variable regression, the results indicate a strong negative relationship between financial deepening rather than financial inclusion and rural poverty. It further indicates that financial deepening reduce poverty rate especially among self-employed in the rural areas and at the same time supported an inter-state migration trend from rural areas into the tertiary sector in urban areas. Anwar, Uppun and Reviani (2016) determine the effect of financial inclusion on poverty in the presence of geographic challenges. The study utilises panel data covering 2005 to 2013 from 31 provinces in Indonesia. The results indicate that there is a positive and significant effect of inclusive finance to investment and growth; however a negative and significant effect is found on poverty.

In the context of Nigeria, Ajide (2015) employed the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration to examine the effect of financial inclusion on poverty reduction in Nigerian rural communities between 1996 and 2013. The results confirmed the existence of a long run equilibrium relationship between financial inclusion and poverty. However, the author argued that the effect of financial inclusion can be cancelled out if costs of borrowing and financial openness are not addressed. This and other studies focused on macro level data and variables with less attention on micro-level analysis. In this regard, Ogunsakin and Fawehinmi (2017) examined financial inclusion as an effective tool of poverty alleviation in Ekiti state between 1980 and 2015, using multinomial logit regression. The findings of the study show that poverty was higher among women. Further findings indicate that employment, marital status, educational level, use of banks products and services, distance, household size, access to political contract, income and age were the major factors that influence poverty and financial inclusion in the state.

The previous studies reviewed so far largely utilised macro-level secondary data, while poverty is a constantly changing socio-economic phenomenon that cannot adequately be explained by secondary data. Additionally, the studies used aggregated indicators of financial inclusion. Therefore, this study seeks to bridge this literature gap by examining the effect of disaggregated dimensions of financial inclusion (financial access, usage and quality of financial services etc.) on poverty reduction in Katsina state, using micro-level primary data.

ISSN: 2795-3831
E-ISSN: 2795-3823

3. Methodology

This section covers research strategy and design, population, sampling and instrument of data collection as well as model specification and method of data analysis.

3.1. Research Design

The study adopts quantitative research strategy, in which primary quantitative data is collected and analysed to draw inference on financial inclusion and poverty in Katsian state. Meanwhile, cross-sectional survey research design is adopted, which involves collection of data from a cross-section of the population in order to generalise.

3.2. Population of the Study

The population of the four selected local governments is the population of the study. Based on the estimated population of Katsina state for the year 2016, by the National Population Commission (NPC), the population of the four LGAs is Batagarawa (255,200); Batsari (280,600); Kaita (246,200) and Katsina (429,400); this gives a total population of 1,211,400 people.

3.3. Sample Size and Sampling Techniques

Following the work of Taro-Yamane (1967) the optimal sample size is calculated using the formula in equation 1.

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

Where n is the desired sample size, N is Population under consideration and e is margin of error or level of precision. Given the population of the study area (1,211,400) and using 5% margin of error, the optimal sample size is calculated as approximately 400 respondents. To draw this sample, both probability and non-probability sampling techniques were employed. These include purposive and simple random sampling. A sample quota was assigned to each local government. Finally, simple random sample of the respondents was drawn from each local government. Semi-structured questionnaire was employed as a tool for primary data collection and it comprises of three sections. These sections are the bio data, research data and the general questions (see appendix A).

3.4. Variable Measurement and Definitions

The key variables of interest are poverty and financial inclusion. Poverty is measured by monthly level of income and level of education, which capture human capital. All things being equal, the higher the level of income the lower the incidence of poverty. On the other hand, high level of human capital means high productivity, income, social capital etc.

As stated earlier, four dimensions of financial inclusion are used in this study. These are financial access, which including elements such as having account with bank or microfinance

ISSN: 2795-3831
E-ISSN: 2795-3823

institutions, availability of bank branches and ATMs and financial services. The second dimension is quality of financial services; it includes whether financial services meeting the needs of customers, time taken to complete transactions and resolve complains and cost of financial services. The third is usage of financial services; it involves utilisation of financial facilities for loan, payment and exchange services. The fourth is welfare effect of financial inclusion, it borders on whether utilising financial services increases productivity, income, assets and wealth of the household.

3.5. Model Specification

This study adopted the Schmied and Marr (2016) model; in which poverty is regressed against financial inclusion and other control variables including education, employment, and health coverage. Following the Schmied and Marr (2016) model, the baseline model of this study specifies levels of income and education as functions of the four dimensions of financial inclusion in equations (2) and (3) below:

$$IC_i = f(FA_i, QF_i, UF_i, WF_i) \quad (2)$$

$$EL_i = f(FA_i, QF_i, UF_i, WF_i) \quad (3)$$

Where "IC" is level of income; "FA" is financial access, "QF" is quality of financial services, "UF" is usage of financial services and "EL" is level of education.

3.6. Method of Data Analysis

Regression analysis is employed to examine the relationship between levels of income and education on one hand and the four dimensions of financial inclusion on the other hand. The regression equations are specified in equations (4) and (5) below:

$$IC_i = \alpha_0 + \alpha_1 FA_i + \alpha_2 QF_i + \alpha_3 UF_i + \alpha_4 WF_i + \varepsilon_i \quad (4)$$

$$EL_i = \alpha_0 + \alpha_1 FA_i + \alpha_2 QF_i + \alpha_3 UF_i + \alpha_4 WF_i + \varepsilon_i \quad (5)$$

The variables are as earlier defined, while α_1 *to* α_4 and ε_i are the parameters of the models and the error term respectively. The significance of the respective dimensions of financial inclusion in influencing poverty is tested using t-test, while their joint significance is tested through F-test. Before the estimation of these models, preliminary analysis that is correlation analysis is conducted to ascertain the linear association among the variables. In addition, post-estimation tests are conducted to verify the assumptions of regression models as well as tests for model stability. These are normality, serial correlation, and Heteroskedasticity and stability tests.

4. Results and Discussions

The results from the empirical analysis of the data are presented and discussed in this section. It involves a summary of the bio data of the respondents; pair-wise correlation and regression analysis. The bio data of the respondents is presented in Table 1.

ISSN: 2795-3831
E-ISSN: 2795-3823

Table 1. Bio Data of Respondents

Age Group	Frequency	Percentage	Education	Frequency	Percentage
18 – 33	109	28.09	Informal	65	16.75
34 – 49	182	46.91	Primary	52	13.40
50 – 65	83	21.39	Secondary	97	25.00
66 – 81	14	3.61	Tertiary	174	44.85
Total	388	100	Total	388	100
Gender	**Frequency**	**Percentage**	**Employment**	**Frequency**	**Percentage**
Male	332	85.57	Self Employed	221	56.96
Female	56	14.43	Civil Servant	167	43.04
Total	388	100	Total	388	100
Marital Status	**Frequency**	**Percentage**	**LGA**	**Frequency**	**Percentage**
Married	353	90.98	Batagarawa	86	22.16
Single	23	5.93	Batsari	94	24.23
Divorcee	12	3.09	Kaita	96	24.74
			Katsina	112	28.87
Total	388	100	Total	388	100

The Table shows that a reasonable number (182) of the respondents are within the age group 34 to 49 years; this represents 46.91%. This is followed by the age groups 18 to 33, with 109 respondents and 50 to 65 with 83 respondents, representing 28.09% and 21.39% respectively. These results indicate that majority of the respondents are in the active working age and thus are engaged in one economic activity or another, thereby in need of financial services. Further breakdown of employment status reveals that majority of respondents (56.96%) are self employed, representing; engaged in various economic activities including farming, while the remaining 43.04% are civil servants.

On educational qualification, Table 1 reveals that, 174 (44.85%) and 97 (25.00%) respondents have attained tertiary and secondary education respectively, while 52 (13.40%) and 65 (16.75%) have primary and informal education respectively. On gender, majority of the respondents were males, accounting for 332 (85.57%), with females accounting for only 56 (14.43%). This has revealed the dominance of men in economic and social activities in Katsina state. Moreover, an overwhelming majority of the respondents (353) are married, which represents 90.98%. In addition, the Table reveals that the respondents are fairly

ISSN: 2795-3831
E-ISSN: 2795-3823

distributed across the LGAs. Katsina LGA accounts for 28.87%, while Batsari and Kaita account for roughly 24% each and Batagarawa 22.16%. Overall, the bio data of the respondents has shown that they represent various socio-economic groupings and hence tendency of bias is reduced to the barest minimum. In order to have a preliminary idea of the nature of the relationship among the variables, pair-wise correlation analysis is conducted and the results is presented in Table 2.

Table 2. Correlation Matrix of the Variables

	EL	FA	IC	QF	UF	WF
EL	1.00					
FA	-0.06	1.00				
	(0.23)	-----				
IC	0.12**	0.23***	1.00			
	(0.02)	(0.00)	-----			
QF	-0.22***	0.44***	0.03	1.00		
	(0.00)	(0.00)	(0.57)	-----		
UF	0.06	0.51***	0.26***	0.38***	1.00	
	(0.28)	(0.00)	(0.00)	(0.00)	-----	
WF	-0.28***	0.42***	0.09*	0.60***	0.33***	1.00
	(0.00)	(0.00)	(0.07)	(0.00)	(0.00)	-----

Note: ***, ** and * shows statistical significance at 1%, 5% and 10% levels of significance P-values are in parentheses.

Table 2 shows that positive and significant linear association exists between level of income, which is the proxy for poverty and the financial inclusion variables; these include financial access (FA), usage of financial services (UF) and welfare effect of financial services (WF). However, the linear association is weak since the correlation coefficients are all less than 0.5, but this does not constitute a problem since the data is cross sectional. This implies that having access to and usage of financial services tend to increase level of income and vice versa. Moreover, weak and moderate linear association is detected among the financial inclusion variable, the correlation coefficient ranges from a minimum of 0.33 between UF and WF and a maximum of 0.60 between QF and WF. Another interesting finding is the positive and significant linear association between level of income and educational level that is IC and EL.

The results of the regression analysis is presented in Table 3, two dependent variables are used as proxies for poverty; these are levels of income (IC) and education (EL). On the other hand the independent variables are the financial inclusion variables, which are financial

ISSN: 2795-3831
E-ISSN: 2795-3823

access (FA); quality of financial services (QF); usage of financial services (UF) and welfare effects of financial inclusion.

Table 3. Results of Regression Analysis

	Level of Income		Level of Education	
Variable	Coefficient	Prob.	Coefficient	Prob.
C	9.82***	0.00	3.15***	0.00
FA	0.03***	0.00	0.004	0.80
QF	-0.03**	0.01	-0.03**	0.03
UF	0.04***	0.00	0.05***	0.00
WF	0.01	0.52	-0.07***	0.00
Joint Significance and Diagnostic Tests				
R-squared	0.11		0.11	
Adjusted R-squared	0.10		0.11	
F-statistic	11.56	0.00	12.42	0.00
Durbin-Watson stat	1.55		2.05	
Jarque-Bera Normality Test	18.41	0.00	9.76	0.01
Breusch-Godfrey Serial Correlation Test	14.67	0.00	0.23	0.79
Breusch-Pagan-Godfrey Heteroskedasticity Test	2.09	0.08	10.42	0.00
Ramsey RESET Test	0.91	0.36	1.82	0.07

Note: ***, ** and * shows statistical significance at 1%, 5% and 10% levels of significance

The results in Table 3 show that there is significant positive relationship between level of income and access to and usage of financial services. Specifically, a 1% increase in access to and usage of financial services leads to 3% and 4% increases in the level of income respectively. This means availability of financial institutions, facilities and services increases access to finance and hence the income of people in Katsina state. Moreover, usage of financial services appeared to have greater effect on level of income, which implies that utilization of the availability financial facilities and services brings even greater benefits to people. These findings are consistent with the findings of Abdin (2016) who found a significant relationship between financial development and poverty reduction in Bangladesh.

ISSN: 2795-3831
E-ISSN: 2795-3823

However, quality of financial services has significant negative relationship with level of income (-3%). This implies that a 1% decline in the quality of financial services will lead to 3% decrease in the level of income. Thus, when there are delays in accessing financial services and facilities; when customer complaints are not resolved in good time and the cost of financial services is high among others, people tend to avoid accessing financial services. This means people loss the opportunity to facilitate exchange of goods and services and increase risks of transactions, thereby losing some part of their income. This is in line with the findings of Ajide (2015) who found that the effect of financial inclusion can be cancelled out if costs of borrowing and financial openness are not addressed in Nigeria. On the other hand, the welfare effect of financial inclusion has insignificant positive relationship with level of income.

Using level of education as a proxy of poverty/prosperity shows that access to finance has no significant effect on level of education. On the other hand, when usage of financial services increases by 1%; level of education increases by 5%, which statistically significant. This means availability of financial services and facilities is not enough to boost educational achievement of people. It is only when those facilities and services are utilised to enhance educational endeavours that financial inclusion can lead to human capital development and hence reduce poverty. This is supported by the findings of Evans, Green and Murinde (2000) that financial development and human capital are making important contribution towards the growth process, and hence poverty reduction in 82 countries. Furthermore, quality of financial services and welfare effects of financial inclusion, have significant negative effects on level of education. For the quality of financial services, poorly supplied, ineffective and costly financial services tend to reduce access and usage and hence rob people of the opportunity to smoothly finance educational pursuits.

The implications of these findings are that availability of financial facilities and services is not enough to improve people welfare and hence reduce poverty. Utilizing those financial facilities and services holds greater potential to enhance income and educational achievement, thereby reducing poverty. However, one of the major factors that facilitate or hinder people from accessing and utilizing financial facilities and services is their quality. This encompasses the variety of financial services provided, time taken to complete transactions and resolve complains effectiveness of financial facilities and the cost of financial services. Therefore, improving these indices will enhance financial inclusion, increase income and reduce poverty.

5. Conclusion and Recommendations

Financial inclusion holds the potential to reduce poverty by raising the levels of income and human capital of people. This study seeks to verify this postulation in Katsina state by adopting a quantitative research strategy and cross-sectional research design. Primary data was collected through field survey and using questionnaire in four local government areas of Katsina state, namely Batagarawa, Batsari, Katsina and Kaita. In all 480 questionnaires were distributed, but 388 were eventually used in the analysis. The results shows over 70% of the respondents maintain a bank account with either conventional or micro finance bank.

ISSN: 2795-3831
E-ISSN: 2795-3823

From the results presented and analysed it is concluded that access to and usage of financial services reduce poverty by improving people's level of income. Another channel through which financial inclusion reduce poverty is by enhancing educational attainment. In this regard, it is found that utilizing financial services improve level of education. However, poor quality of financial services and facilities dampen the effect of financial in reducing poverty. Limited variety of financial services, taking long time to complete transactions and resolve complains, ineffective financial facilities and high cost of financial services discourage people from accessing and utilizing financial services, thereby losing its positive effect on their income and level of education. Against the backdrop of these conclusions, the following recommendations are proffered:

1- Financial institutions in Katsina state in particular and Nigeria in general should diversify their financial services. Beyond deposit and withdrawal services, there is the need to introduce more creative credit services targeted and suited to the needs of various segments of their customers.
2- Moreover, financial institutions should enhance the quality of their services by reducing the time taken to complete transactions and resolve customer complains. This can be achieved by automating some of the processes involved in transactions and resolving complains. Also, the effectiveness of financial facilities and services should be improved. The ATMs and online banking services need to be improved; such that people are encouraged to use them.
3- Financial institutions should also reduce the cost of financial services being provided. These include service charges, account maintenance charges, interest rates charged on loans and costs of cheques and credit/debit cards. This can be achieved by making these charges flexible and reducing operation costs.
4- The Central Bank of Nigeria and other financial sector regulatory agencies should enhance the monitoring and surveillance of financial institutions to ensure efficiency in services delivery and that the rights of customers are protected. In addition, they should also strengthen and make the regulatory frameworks adaptable to the needs of various segments of the population and rollout more financial inclusion strategies.

ISSN: 2795-3831
E-ISSN: 2795-3823

References

Abdin, J. (2016). Financial Development and Poverty Reduction: Exploring the Link between the Issues Using Evidence from Bangladesh. International Journal of Financial Research, 7(4), 44-65.

Aguera, P. (2015). Financial Inclusion, Growth and Poverty Reduction. ECCAS Regional Conference- Finance for All: Promotion Financial Inclusion in Central Africa, Brazzaville, March 23, 2015.

Ajide, F. (2015). Financial Inclusion and Rural Poverty Reduction: Evidence from Nigeria. *International Journal of Management Sciences and Humanities*, 3(2)

Ambigadevi, P. A., Gandhimathi, S. and Mirseth B. (2012). Social Inclusion through Financial Inclusion- An Empirical Study on SHG Women in India. *International Journal Multidisciplinary Management Studies*, 2(4), 59-68.

Amendola, A., Boccia, M., Mele, G. and Sensini, L. (2016). Financial Access and Household Welfare: Evidence from Mauritania. Policy Research Working Paper 7533, Macroeconomics and Fiscal Management Global Practice Group, World Bank Group.

Anwar, A., Uppun, P. and Reviani, I. T. (2016). The Role of Financial Inclusion to Poverty Reduction in Indonesia. *IOSR Journal of Business and Management*, 18(6), 37 – 39.

Ayyagari, M., Beck, T. and Hoseini, M. (2013). Finance and Poverty: Evidence from India.https://assets.publishing.service.gov.uk/media/57a08a54e5274a27b200053f/61070_Finance_Poverty_India.pdf

Blaxter, L., Hughes, C. and Tight, M. (2006). How to research, 3rd ed. Open University Press, McGraw-Hill Education, England.

Burgess, R. and Pande, R. (2005). Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment. *American Economic Review.* 95(3), 780–795.

Chibba, M. (2009). Financial Inclusion, Poverty Reduction and Millenium Development Goals. *European Journal of Development Research*, 21, 213 – 230.

De Haan, A. (1997). Poverty and Social Exclusion: a comparison of Debates on Deprivation. University of Sussex, Poverty Research Unit, Working Paper No. 2.

Deonandan, R. (2019). Defining Poverty: A Summary of Competing Models. *Journal of Social and Political Sciences*,2(1), 17-21.

Evans, D., Green, C. &Murinde, V. (2000). The importance of human capital and financial development in economic growth: New evidence using the translog production function. Finance and development research programme, working paper series, No. 22. Institute for Development Policy and Management, University of Manchester.

Hakeem, M. I. (2010). Banking development, human capital and economic growth in Sub-Saharan Africa (SSA). *Journal of Economic Studies.* 37(5): 557-577.

Harley, T. W., Adetoso, J. A. and Adebola, D. (2017). Role of Financial Inclusion in Poverty Reduction and Economic Growth in a Developing Economy. *Internal Journal of Research in Economics and Social Sciences*, 7(5), 265-271.

ISSN: 2795-3831
E-ISSN: 2795-3823

Kendall, J. (2007). The importance of local finance and human capital in regional growth: The case of India. University of California Santa Cruz, Job Market Paper.

NFIS, (2010). Annual report, National Financial Inclusion Strategy-NFIS, Central Bank of Nigeria.

Ogunsakin, S. and Fawenhinmi, F. O. (2017). Financial Inclusion as an Effective Policy Tool of Poverty Alleviation: A Case of Ekiti State. *Journal of Economics and Finance*, 8(4), 01-10.

Park, C. and Mercado, R. V. (2015). Financial Inclusion, Poverty and Income Inequality in Developing Asia. ADB Economics Working Paper Series, No. 426, January, 2015.

Rodgers, G. Gore, C. G., and Figueiredo, J. B. (1995). Social Exclusion: Rhetoric, Reality, Responses. International Institute for Labour Studies, Geneva.

Schmied, J. and Marr, A. (2016). Financial Inclusion and Poverty: The Case of Peru. *Regional and Sectoral Economic Studies*, 16(2), 29 – 43.

Taro-Yamane. (1967). *Statistics, an Introductory Analysis*, 2nd Ed., New York: Harper and Row.

Tita, A. F., and Aziakpono, M., J. (2017). The Effect of Financial Inclusion on Welfare in sub-Saharan Africa: Evidence from Disaggregated Data. Economic Research South Africa (ERSA) working paper 679.

UNDP, (2015). Human Development Index, United Nations Development Programme-UNDP.

UNDP, (2018). National Human Development Report 2018. Achieving Human Development in North East Nigeria. United Nations Development Programme-UNDP.

World Bank. (2015). Global Poverty Line Update. Sep 30, 2015. Available at: http://www.worldbank.org/en/topic/poverty/brief/global-poverty-line-faq

ISSN: 2795-3831
E-ISSN: 2795-3823

Appendices

Appendix A: Research Questionnaire

Department of Economics

Umaru Musa Yar'adua University, Katsina

Research Questionnaire: Financial Inclusion and Poverty Reduction

All information given will be used confidentially and purely for the purpose of the research. Tick as appropriate.

BIODATA OF RESPONDENTS

Characteristics of the Respondent	**Response**
Local Government Area	
Age	
Gender: (Tick)	Male ( ) Female ( )
Marital Status (Tick)	Married ( ) Single ( ) Divorcee ( )
Level of Education (Tick)	Primary Secondary Tertiary Non-formal
Employment Status (Tick)	Self-Employed ( ) Civil-Servant ( )
Number of People in the Household	Adult ( ) Non-Adult ( )
Monthly Income (Tick)	5,000-17,000 18,000-29,000 30,000-49,000 50,000-70,000 Above 70,000

RESEARCH DATA

S/N	**Item (s)**	**Agree**	**Neutral**	**Disagree**
	Financial Access			
1	I have account(s) with bank(s) or microfinance institution(s)			
2	It was easy for me to open the account(s)			
3	There is bank or microfinance institution in my locality			
4	There are ATM in my locality			
5	POS services are available in my locality			
6	It is convenient for me to use ATM or POS services			
7	I spend nothing to access banking services			

ISSN: 2795-3831
E-ISSN: 2795-3823

Quality of Financial Services

1. Available financial services meet all my financial needs
2. It takes me little time to complete transaction(s)
3. I don't encounter any problem while using financial services
4. All complains are resolved in good time
5. The bank charges are affordable and fair

Usage of Financial Services

1. I receive salary/pension through my account
2. I pay/receive money (apart from salary) through my account
3. I once received loan from my bank/ microfinance institution
4. I use POS services with my debit card (ATM card)
5. Other members of my household pay/receive money through my account

Welfare Effects of Financial Inclusion

1. Using financial services enhances my productivity
2. Using financial services increases my income
3. I acquire some of my assets through loan(s)
4. Using financial services expand my business outreach
5. Using financial services improves my household's welfare

Informal Financial Inclusion

1. I belong to a thrift cooperative society
2. I participate in Crowd funding *(Adashe)*
3. I once received loan (in cash) from local money lenders
4. I once receive loan (in kind) from local money lenders
5. I acquire some of my assets through Crowd funding *(Adashe*)

ISSN: 2795-3831
E-ISSN: 2795-3823

General Questions

1. **I do not have account because:**

(a) I am not aware of its benefits (b) Do not have enough money (c) I do not need it (d) I do not have the documents required (e) There is no bank/microfinance institution in my locality

2. Which of the following financial services you mostly used or enjoyed?

(a) deposit (b) Withdrawal (c) Transfer (d) Mobile/e-banking (e) Loan/overdraft

3. How many times do you use the above financial services per month?

(a) Once (b) Twice (c) Three times (d) Four times (e) Five times and above

4. If you ever benefitted from a loan facility, what is the amount you received?

(a) Less than 100,000 (b) 100,000 – 300,000 (c) 301,000 – 500,000 (d) Above 500,000

5. If you ever participated in Crowd funding *(adashe*), what is the amount you received?

(a) Less than 100,000 (b) 100,000 – 300,000 (c) 301,000 – 500,000 (d) Above 500,000

6. What did you do with the money received in (4 and/or 5) above?

(a) Buy household items (b) Buy/renovate house (c) Farming (d) Buy means of transportation (e) Capital for business (f) Finance health or education (g) Others (specify)……

7. How many members of your household have account?

(a) One (b) Two (c) Three (d) Four (e) Five and above

8. How many members of the household have ever received loan?

(a) One (b) Two (c) Three (d) Four (e) Five and above

9. How many members of the household have ever benefited from crowd-funds (*Adashe*)?

(a) One (b) Two (c) Three (d) Four (e) Five and above

10. Number of times one of the three square meals is missed in a week

(a) One (b) Two (c) Three (d) Four (e) Five and above (f) None

11. Number of times children missed school in a week

(a) One (b) Two (c) Three (d) Four (e) Five and above (f) None