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FINANCIAL INCLUSION AND HOUSEHOLD WELLBEING IN SUB SAHARAN AFRICA

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Abstract: *Despite the growing literature on household wellbeing, little is known about the role of financial inclusion in explaining household wellbeing. Through the lenses of minority influence theory, this paper tested the power of financial inclusion (in terms of access, quality and usage) on household wellbeing using data from teachers in primary schools of central and western Uganda. By means of a questionnaire approach to collect data, the study adopted a cross-sectional research approach. 326 respondents were responsive from a sample of 377 which yielded 86.5% response rate. Quantitative data were analyzed using Statistical Program for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS). Drawing on the survey results, the paper clearly demonstrates that financial inclusion underpinned informs household wellbeing significantly in Uganda.*

Keywords: *Financial inclusion, Household, Minority, Wellbeing*

1. Introduction

Wellbeing has been tied to particular individual circumstances and conditions. It is not a product of wealth, though a chance mix of wealth, good health and decent environment may contribute to this state (Manderson, 2010). In Sub Saharan Africa, access and usage of financial services is seen as a medium through which welfare can be enhanced. Access to financial resources is predicted as critical to almost every economy (Sakyi et al., 2019). This is largely because it enables the attainment of eight (Goals 1, 2, 3, 5, 8, 9, 10 and 17) out of the seventeen sustainable development goals (SDGs). These eight goals are no poverty, zero hunger, good health and wellbeing, gender equality, decent work and economic growth, industry, innovation and infrastructure, reduced inequalities.

In Uganda, according to Uganda Bureau of Statistics (2021), the total population is presently 41 million people of which 8.3 million are in poverty, 4% of this access health insurance coverage leaving over 40 out 41 million people lacking medicine and health staff to attend to them. Majority of the citizens go for medication in public hospitals where beds are always full, while many other patients wait in line. Patients and their family members bring mats and sleep on government hospital ward floors, in the corridors and courtyards as they lack medical insurance to get treatment from private modern equipped hospitals. The households in subsistence economy are 39 million, Ugandans working out of the working population age is 79% and 31% households are operating a business (UBOS, 2021). This makes a number of Ugandans fail to access quality basics of life. For example, parents take their children to public schools where it is estimated that 68% of children who enrol in primary school drop out before completing primary education (UNESCO, 2020). The same report also shows that pupils in Universal Primary Education schools cannot compete with those in private schools. Many pupils in government funded schools study under trees when they are hungry, and, in most cases, are taught by equally hungry teachers, the cost of pens, exercise books and uniforms is beyond the reach of many Ugandans (World Bank Development Report, 2019).

These cases demonstrate questionable wellness in different households in Sub Saharan Africa where access to financial services still low. Despite the proliferation of bank and nonbank financial institutions in the past decade, a huge proportion of the population does not have access to formal financial services such as basic savings accounts. The estimates from UBOS (2021) indicate that just about 0.4% households have loans from commercial banks which is much below the African average of 34% (Demirgüç-Kunt, Klapper, Singer, & Van Oudheusden, 2015). Lack of availability of financial service providers in areas predominantly occupied by the poor still remains a challenge. This even attracts a lot of interest which frustrates access to finance that is vital for enhancing household welfare. Yet, when Ugandans have access to and use of formal financial services such as savings, deposits, payments, loans, insurance, financial intermediation and financial advisory services at affordable price. This promotes positive welfare thereby supporting economic growth and development (Aliero, 2020; Kouki, 2013). The ultimate goal of development is to raise the well-being of a society especially reducing income inequality through improvements in social, political and economic conditions. Specifically, it is seen as increasing formal financial services such as savings, access to credit and bank account to large segment of people in the society (Ofori-Abebrese, Baidoo & Essaiam, 2020).

In an effort to curb the threat of poverty, financial access is at the forefront among the main government interventions used to underpin a push towards economic development of the populace (Chongvilairan, Taniguchi & Rabanal, 2016). In conformity with this ideal, over the years the Ugandan government rolled out a number of programmes such as; Rural Farmers Scheme, Modernisation of Agriculture, Poverty Eradication Plan, Prosperity for All, The Presidential Initiative on Poverty and Hunger, Bona Bagagawale among others. However, the challenge of lacking wellbeing continues to prevail. Household poverty is experienced as 38.5 per cent of the population will not survive beyond the age of 40; about 23 per cent of children are under weight (UNDP, 2018). This is inconsistent with the G-20 Financial Inclusion Action Plan which reaffirms the G20 Leaders' commitment to advance financial inclusion benefiting all countries and all people, including vulnerable (such as elderly people, migrants and forcibly displaced persons) and underserved groups (including the poor, women, youth, and people living in remote rural areas).

Empirically, Ibrahim and Olasunkanmi (2019); Nanziri (2016); Jalilian and Kirkpatrick (2005) argued that high level of financial inclusion is closely related with high rate of investment, employment, high-income and low-poverty rate. Demirguc-Kunt and Klapper (2012b) assert that less than a quarter of the adult population in sub-Saharan Africa owns bank account which fosters their household

incomes. Woolard and Klasen (2005) discuss the transitions into and out of poverty using different approaches and country cases. Justino, Litchield and Pham (2008) identified the characteristics of a household, the private and public assets a household possesses, changes in macroeconomic condition such as trade reform, inflation, and economic crisis on the dynamics and influence on household wellness. In addition, data from the Global Financial Index dataset of the World Bank (2019) reveals that not more than a quarter of adults in Africa have an account with formal financial institutions and also many adults in Africa use informal means to save. These researches tend to pay less attention to the power of financial inclusion in explaining household wellbeing.

Theoretically, previous studies have largely focused on subjective well-being theory (e.g., Headey, 1993), the classic positions of telic need theory (Maslow, 1970; Murray, 1938) and autotelic activity theory (Csikszentmihalyi, 1975, 1982; Schachtel, 1959) to explain household wellbeing. But a strong limitation persists, namely, that trade-offs between satisfactions of diverse needs are not considered. Because of this, no heuristic exists to systematically examine how resources and constraints are utilized by humans to achieve well-being. This study contributes to the body of knowledge by using the minority influence theory to inform wellness at household level. The present study is among the very first attempts at empirically examining the association between financial inclusion (in terms of: access, quality and usage) and household wellbeing using data from teachers in primary schools of central and western Uganda. Specifically, this study is guided by these three specific objectives: i) to examine the relationship between access and household wellbeing ii) to access the relationship between quality of finance and household wellbeing iii) and to test the relationship between and household wellbeing. Therefore, this paper is divided into nine sections. The first section sets the stage by presenting the introduction to the study. Then, the theoretical orientation follows. The third episode focuses on literature review then the approach adopted in this study follows, which is followed by sample characteristics, then exploratory factor analysis and confirmatory factor analysis. The seventh section presents hypotheses testing and then discussion chapter comes. The concluding section provides conclusions for this study stemming from findings and discussion of this research.

2. Theoretical Underpinning

Minorities are a source of influence in group situations. Social change particularly household poverty reduction can be a result of minorities' questioning of the norms and confronting what has been taken for granted (Moscovici, 1976; 1980; 1985). Minorities are mainly groups of people that think and act differently, outside the norm; their voices are always not heard. They are individuals or a small group, or even few people who attempt through their ideas and actions, to produce innovation and social change (Gardikiotis, 2011). They are usually numerically small groups that question social norms. Minorities influence people's thinking, attitudes and behavior by being consistent and flexible in their negotiation with majority members. Their influence is more often hidden (i.e., evident on delayed, indirect and private measures) than manifest. They affect the amount and the quality of cognitive processing of their messages (triggered by the different elaboration demands of the influence situation). Minority influence interacts with various situational factors such as social identity (in-group or out-group) and the task employed (e.g., objective or opinion) leading to different kinds of influence outcomes (Gardikiotis, 2011).

Minority influence refers to a small group's influence on majority attitude change on indirect or related issues. Moscovici (1976) viewed minority dissenters as frequent, perhaps major catalysts of social change and assumed that if minority dissenters successfully influenced the majority's attitude toward the minority's position, they potentially could change group norms and by extension, an entire society. However, indirect minority influence's role in social change has remained hypothetical,

because the primary methodology in social psychology cannot adequately deal with this cross-level causal link. Whereas attitude change is an intra- and inter-individual phenomenon, social change is a global-level, societal process whereby a group adopts a new attitude or idea that eventually becomes accepted as normative (Jung, Bramson & Crano, 2018).

Moscovici found that minority opinions were particularly influential on indirect attitudes (Moscovici et al., 1969; see also Clark, 1990; Wood et al., 1994). For minority positions to be considered carefully, they must be consistent. In Moscovici, Lage and Naffrechoux (1969)'s blue-green study, participants were shown a series of identical blue slides and asked to report the color of each. When two minority confederates consistently stated green (vs. inconsistently stating both blue and green), more participants answered that the slide was green. We often find that people do not immediately see the validity of a minority's views even when their view is correct (e.g., Copernican heliocentrism). However, if the minority's view is coherent and presented consistently, it may capture the majority's attention.

Consistency is identified by Moscovici as the most important behavioral style for a minority to be influential (other behavioral styles include investment, autonomy, fairness and rigidity). It concerns intrapersonal (or diachronic) consistency across time and situations and interpersonal (or synchronic) consistency across individuals. Most importantly, it is not consistency per se that is influential but more essentially the interpretation and the attributions of it made by the target of influence (Nemeth et al., 1974). Consistency conveys perceptions of certainty and commitment to a coherent stance and thus is assumed to enhance influence (Maass & Clark, 1984; Moscovici & Lage, 1976). However, Levine and Russo (1987) suggest that consistency does not always work in a simple manner and that, on attitudinal issues, it is not a crucial determinant of minority influence (e.g., Levine & Ranelli, 1978; see also Maass & Clark, 1984) and is often constrained by other variables such as the size of the minority (Nemeth, Wachtler, & Endicott, 1977), the extremity of minority opinion (Levine & Ranelli, 1978), the normative context ('Zeitgeist') of the influence setting (Paicheler, 1976), or the amount of social support available to the majority (Doms, 1984).

The theory of minority influence argues that social change takes place when a member of a minority group influences the majority to accept the minority's beliefs or behavior (Moscovici, 1976; Nameth, 1974). It is founded on the notion that a small group or an individual acts as an agent of social change by questioning established societal perceptions and proposing alternative, original ideas which oppose the existing social norms. Related to the case of Mr. R., as a poor person, he influenced social change with his innovative and pro activeness actions. Minorities propose new and original ideas that bring in innovation that creates household wellbeing. However, poor people are marginalized and the levels of minority differ from society to society which this theory is silent about.

3. Literature review

3.1 Financial inclusion

Financial inclusion, describes the access to and effective use of appropriate financial services (Demirguc-Kunt, Klapper, and Singer 2017) and has become a subject of growing interest for policymakers, and other financial sector stakeholders. The G20 leaders expressed a commitment to expanding financial inclusion and supporting efforts to meet the challenge of promoting financial inclusion around the world ("2017 Financial Inclusion Action Plan" 2017). The G20 accepts there are beneficial effects for individuals, providing both an economic and a political rationale for government policies to promote financial inclusion. The trend to broaden the initial World Bank framing of financial inclusion in the context of bank account, now embraces digital financial services (Wilson and Krystalli 2017; Payment aspects of financial inclusion 2016).

The G20 financial inclusion indicators (2016) suggests that the main indicators to consider when measuring financial inclusion are Access, Usage and Quality. The appropriateness of these forms of financial inclusion indicators for households, given their limited access to formal financial services, may introduce a bias as an informal sector and other formal sector services provide financial inclusiveness. Access, usage and quality of financial service measurement when broadened provide a wider understanding (Wellalage & Locke, 2029). The revised G20 Financial Inclusion Indicators (2016) propose that having an account, (individually or jointly) with a formal financial institution or a mobile money provider are the main usage indicators for financial inclusion.

3.2 Household

A household is a collective of individuals who usually sleep in the same house, eat meals together, and share the same kitchen and food expenses. Persons who live in the same house but do not eat meals together and do not share food expenses are not included in the same household (Oda, 2008). Household members are seen as persons who normally live and eat in the household. Those who are temporarily absent for reasons such as travelling, attending school, being hospitalized, etc., are treated as household members. Absent household members such as migrant workers are also considered to be part of the household. Households are constantly exposed to economic shocks that alter their incomes and consequently, their consumption. These fluctuations can generate severe consequences for families, as they do not always have good coping measures to protect themselves (Urrea & Maldonado, 2011).

3.3 Wellbeing

If one defines economic wellbeing as the ratio of economic resources to need, then a household is “poor” if its available economic resources do not meet its needs at some minimum level. The household’s economic resources are assumed to be determined by its total disposable income, which is equal to the gross weekly income of all household members from all sources minus National Insurance contributions, taxes and housing costs. The household’s needs are assumed to be a function of the number and age of its members. It is further assumed that there is equal sharing of resources among household members (Morduch, 1994)

3.4 Education

As far as education is concerned the UNDP considers adult literacy rate and combined enrolment ratio as the two indicators of educational attainment. Das (2007) considers adult literacy rate together with school attendance rate in computing combined educational attainment. The enrolment of children in schools depicts the current flow or the spread of education. There are alternative measures to capture the flow aspect of education. Among the more commonly used measures, gross enrolment ratio, age-specific enrolment ratio, net enrolment ratio, dropout rates and school attendance rates are relevant.

3.5 Empiricism and Hypotheses Development

Financial inclusion involves the ability by financial intuitions to on-board all categories of people in extending financial services and systems to the people (Jan, 2021). It pays attention to situations where financial institutions educate all people to be involved in financial literacy and accessibility (Bonin, 2021). This construct is credited for reducing the gender gaps in financial services by offering adequate and formal access to financial products and services. Inclusion guarantees training and advice to improve financial capabilities, gain financial autonomy. Society members are educated on financial services which help in reducing on financial literacy and wastage of financial resources (Mader, 2018). Scholars have demonstrated how fiscal attachment promotes economic development

since it encourages the user to save, provide financing for consumption and investment of households and companies manage risks, and face economic crises. When people save money, it can be used to start-up income generating activities that can sustain their livelihoods. Therefore, financial inclusion is a vital tool for reducing poverty and impacting the quality of life (Ouma, 2017).

Monetary inclusion increases investment and growth of production and economic growth. With economic insertion, all categories of people become financial literate, get to know means of financial accessibility to invest in income generating activities. This creates financial opportunities and new technologies that integrate coordinated and articulated actions to reverse and exclusive financial system that expands coverage and promotes the integration of women in the financial sector (Folarin, 2019). Financial inclusion increases the opening of companies, increases the number of entrepreneurs, increase the number of entrepreneurs, increases employment and changes consumption patterns (Pradrian, 2021). With financial inclusion, people are able to invest in projects that bring in income daily, and in the process of investing, youths are given jobs which reduce on the unemployment rates among the people especially the youth.

Financial access is about all people getting access to financial services from financial institutions (Feng, 2021). With financial access, women and other vulnerable groups are able to invest a greater part of their money in education, health and well-being of their children. Access to financial services contribute to the economic empowerment by providing vulnerable groups with the essential tools to generate income, accurate assets and have greater participation in household decision making, reinforcing family and social well-being (Luther, 2019). It leads to economic development and economic growth in the country. With financial access, citizens are able to approach financial institutions for credit to set up income generating activities and become entrepreneurs (Zuhra, 2020). This then enhances empowerment of women, youth by providing employment opportunities for youths, which improves on their quality of life of vulnerable groups. This variable encourages creativity and innovation among the vulnerable groups. With financial access, women and youths become innovative by engaging in income generating activities to earn a living. They engage in production and craft ship that increases on their financial ability to improve the quality of their livelihoods. This reduces on the dependency levels hence leading to economic independence (Nhamo, 2021).

Through financial access, government enlarges its tax base by levying taxes on income generating projects started by the citizens. The revenue generated is used to provide social services to the people in hospitals and schools which improve on the quality of life of people. Hospitals provide treatment medical services to the households hence improving on their well-being (Nhamo, 2021). Financial inclusion has a more direct effect in improving households' welfare by facilitating consumption smoothing in the face of anticipated negative shocks which is done through two main channels. One is through enhancing risks, sharing with family and through their social networks. People who are financially included are more likely to send and receive remittances from family and friends than those who are not (Jack, 2014). This helps them to withstand negative shocks. Financially included individuals can easily avail themselves of their networks to obtain short –term support.

Financial usage involves use of financial resources in a financially literacy manner (Morduch, 2021). People that are financially literate access resources and use them or invest in projects that benefit them and their households. This greatly improves the quality of life and well-being of the households. Financial resources are used to start up projects that help sustain livelihoods and improve the well-being of the family. This is done through providing medical care, education and other essentials needed in the day-to-day life. Therefore, financial usage improves the quality of life and house-hold well-being (Hegazy, 2020).

Financial usage increases money circulation in the economy. People borrow money from banks, micro-finance institutions to start-up businesses and projects that increase money circulation in the economy. Through businesses, government generates revenue that is further used to provide social amenities to its population. Financial usage encourages the establishment of more banks and micro-financial institutions. With financial usage, more banks and micro financial institutions are open up to increase financial access to the population and encouraging financial literacy (Blum, 2020).
Financial quality refers to maintaining the value of money that is circulated in the economy. This helps to avoid currency devaluation. Financial quality enables foreign exchange to take place. With financial quality, business men and proprietors are able to import goods from other countries. Such goods are used / help in improving the livelihood and well-being of the people. Financial quality enables international trade and relations to take place. Through financial quality, meaningful international businesses are established and they are assured financial stability in terms of currency value which increases remittances from abroad that boost the economy through economic growth and economic development (Baker, 2020).
The following hypotheses are thus put forward:

H_1: *There is a positive significant relationship between financial inclusion and household wellbeing*

$H_{1(a)}$: *There is a significant relationship between financial access and household wellbeing*

$H_{1(b)}$: *There is a significant relationship between financial usage and household wellbeing*

$H_{1(c)}$: *There is a significant relationship between financial quality and household wellbeing*

4. Approach

4.1 Research Design and Study area

This study used cross-sectional data obtained from primary school teachers in central and western Uganda. This approach is the most appropriate method of data collection because cross sectional studies are perceived to be relatively inexpensive, faster and easier to conduct, useful for generating and clarifying hypotheses and can lay the groundwork for decisions about follow-up studies (Sekaran 2000). The researchers incorporated standardized measures and statistical techniques associated with the positivism paradigm to obtain in depth responses on the three study variables. Previous research supports the reliability and validity of the self-report measures (Lechner et al. 2006). The researcher distributed questionnaires to 377 respondents and 326 were returned. This survey was conducted from 20 March 2022 to 13 April 2022 amongst teachers working in primary schools founded in central and western Uganda. Cross-sectional survey designs allow a researcher to prove or disprove a hypothesis using large sums of data collected in the shortest possible time (Echambadi, Campbell Argarwal, 2006). The quantitative design was used to construct the structural equation model to be able to test the study hypotheses through multi-variant analysis (Sekaran, 2000).

4.2 Study Population

The study was conducted amongst primary teachers based in central and western Uganda. These teachers in these two zones were chosen as respondents because these regions are seen to be better off than other regions in regard to household wellbeing. The two regions are known for the better wellbeing of teachers at a household level in Uganda compared to other regions (UBOS, 2022). The population census figure for Uganda Bureau of Statistics 2018 shows that 6776 primary schools exist in Uganda with a population of 27,641 teachers based in primary schools in central and western Uganda (World Bank Collection of Department Indicators, 2020). The choice of this study population

is based on its predominant rural characterization and development in comparison to other regions in Uganda. The study's unit of analysis is a household while the units of inquiries are teachers who provided information in regard to the constructs under study predicting household wellbeing.

4.3 Unit of analysis and Unit of inquiry

The unit of analysis relates to the concept being studied (Bryman & Bell, 2003). In this study unit of analysis is a teacher from a public primary school. On the hand, the Unit of inquiry (participants) are the respondents who provide information relating to the study variables. The unit of inquiry was a teacher based in primary schools in central or western Uganda.

4.4 Questionnaire design and administration

In this study, the data was collected through self-administrated surveys which were sent through house visits by the lead researcher and two research assistants. Prior to going into the field, the researchers designed a questionnaire to measure financial inclusion (in terms of access, quality and usage) and household wellbeing. Data on household demographics included; gender, date of birth, qualification, marital status, employment, location (urban or rural) among others as seen in the background traits. Using a six-point scale, respondents evaluated different items that were anchored on this scale (Chomeya, 2010). The questionnaire was refined through discussions with experts and professors in the area of house wellbeing before piloting. Minor revisions were made before going to the field to execute the study. Appointments were made in advance before going to primary schools to distribute the questionnaires for data collection. Free prior informed consent was always acquired and anonymity was guaranteed.

4.5 Data analysis

Raw data from the field was captured into SPSS and checked for entry errors, out of range values, missing values, presence of outliers and normality. Outliers and missing values were not a threat to the data. The "missing values analysis" was used to statistically test whether missing values were random or non-random. Missing values were found to be at 0.4% which is within the rule of thumb of being less than 5%, hence were replaced using linear interpolation (Field, 2009; Little & Rubin, 2002). The data was tested for normality assumption and found to exhibit a normal distribution pattern. Additionally, tests included stem and leaf, the PP and QQ plots which confirmed normality of the data.

The study tested the validity and reliability of the research instruments. The content validity index (CVI) for financial inclusion and household wellbeing were 0.86 and 0.84 respectively. These were above the recommended 0.70, hence appropriate for the study (Amin, 2005). Reliability of the research instrument was found to be 0.892 and 0.892 for financial inclusion (usage and quality of finance) and household wellbeing respectively (Cronbach, 1951). These exceeded the minimum acceptance value of 0.70 as recommended by Nunnally (1978). This signified a high reliability of the instrument to be based on in the testing of our research hypotheses (Sarantako, 2012).

5. Sample characteristics

A response rate of 86.5 percent was obtained, corresponding to 326 respondents from the 377 questionnaires that were distributed to teachers in central ad wester Uganda. The descriptive statistics show that majority (51.4%) were males while females constituted 48.6%. Most of the respondents were born 1981–2000 and constituted 39.9%. 1965–1980 had 35.7%, 20.0% were born 1946 to 1964 and the least respondents were born between 2001 to date with 4.3%. The majority of the respondents

were Diploma holders comprising 39.4% of the respondents. This was followed by Certificates holders (32.4%), Degree holders (15.4%). Those below Certificates constituted 9.1%. Masters 2.6% and the least respondents had PhDs with 1.2%. Most of the respondents were married comprising of (52.9%), this was followed by the singles comprising of 35.5%, divorced comprising of 5.5%, widow comprising of 4.4% and the least category of respondents were widower comprising of 1.9%. Most of the respondents were public servants (employed in government schools) as evidenced by 52.0%, the self-employed are at 40.3% and corporate 7.7% of the respondents.

6. Exploratory factor analysis and Confirmatory factor analysis

To assess construct validity, exploratory factor analysis (EFA) was applied prior to conducting CFA. All the items loaded onto their intended factors with factor loadings greater than 0.50 and eigen value greater than 1.0 for each factor. In conducting exploratory factor analyses, principal axis factor analysis with varimax rotation was used to assess the factor loadings and dimensionality of our scales as well as to refine the measures. Considerations for data reduction strategy included the size of the sample in respect to the model being tested. In the end, EFA was used to estimate principal components. The goal of EFA was to find the smallest number of interpretable factors that can adequately explain the correlations among a set of variables. Items that are grouped together are presumed to be measuring the same underlying construct (Kerlinger, 1986). All items that were cross loading on other components with values exceeding 0.5 and items that had loadings below 0.5 were not included in the analysis (Guttman-Kaiser rule). The KMO for our study, variables ranged between 0.878 and 0.810 implying that they were oscillating around only meritorious ranges (Kulcsar, 2010).

Table 1: EFA for financial inclusion

	Quality of Finance	Usage	Access
ICQUA5	.550		
ICQUA7	.758		
ICQUA8	.706		
ICQUA9	.591		
ICQUA10	.512		
ICQUA11	.546		
ICQUA12	.716		
ICQUA15	.598		
ICUSA9		.657	
ICUSA10		.594	
ICUSA13		.779	
ICUSA15		.785	
ICUSA16		.555	
ICACC3			.688
ICACC4			.689
ICACC5			.727
ICACC6			.709
ICACC7			.721
Eigen Values	**4.184**	**2.405**	**1.684**
Variance %	**34.922**	**18.559**	**15.728**
Cumulative %	**34.922**	**53.481**	**69.209**

KMO and Bartlett's Test of Sphericity Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.878
Bartlett's Test of Sphericity	Approx. Chi-Square	4099.105
	df	378
	Sig.	.000

Table 2: EFA For Household wellbeing

	Assets	*Income*	*Education*	*Food*	*Health*
HWASS1	.583				
HWASS2	.561				
HWASS3	.686				
HWASS4	.692				
HWASS5	.786				
HWINC3		.663			
HWINC4		.640			
HWINC6		.522			
HWINC7		.540			
HWEDU1			.555		
HWEDU2			.755		
HWEDU3			.736		
HWEDU4			.571		
HWEDU5			.581		
HWFOD1				.584	
HWFOD6				.591	
HWFOD7				.571	
HWHTH2					.765
HWHTH3					.699
	5.393	**3.921**	**3.179**	**2.633**	**2.329**
	35.951	**8.713**	**7.064**	**5.851**	**5.174**
	35.951	**44.664**	**51.729**	**57.580**	**62.754**

KMO and Bartlett's Test of Sphericity Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.810
Bartlett's Test of Sphericity	Approx. Chi-Square	6975.687
	df	990
	Sig.	0.000

7. Confirmatory factor analysis (CFA)

According to Hair et al. (2010; 2014) and Henseler et al. (2009), in assessing measurement model, researchers need to determine individual item reliability and internal consistency, content validity, convergent validity and discriminant validity. This was examined and confirmed prior to conducting

CFA models. CFA was conducted to assess model fit. Only those dimensions and respective items that were retained at EFA for each variable were used to carry out a CFA model using Analysis of Moment Structures (AMOS). A confirmatory factor analysis using structural equation modelling (SEM) allowed us to determine whether the shared variance-covariance of these variables define our latent construct and provided a more precise way to account for the error variances associated with our variables which, if untested, could lead to biased parameter estimates (Schumacker & Lomax, 2010).
Several goodness-of-fit indices were also evaluated to assess model fit. These indices are of two types: absolute and incremental. As an absolute index, the standardized root mean square residual (SRMR) ranges from 0 to 1. Kline (1998) suggests that values less than 0.10 indicate good model fit. Another absolute fit index, the root mean square error of approximation (RMSEA), was used here to assess lack of fit based upon model misspecification and to provide a measure of this discrepancy per degree of freedom. This fit index ranges from 0 to 1 and values less than 0.08 indicate good fit (Browne & Cudeck, 1993). Incremental fit indices are also recommended (Hoyle & Panter, 1995; Hu & Bentler, 1998, 1999) to assess model fit. The comparative fit index (CFI) developed by Bentler (1990) is one such index and assesses the improvement to fit of the hypothesized model to the null model. The CFI ranges from 0 to 1 and values greater than 0.90 indicate good fit (Kline, 1998). In this study, the researchers considered indices with values greater than 0.95. Kline's (1998) cut offs for the supplementary fit indices should not be interpreted too rigidly.
The study notes that the dimension of financial access was eliminated at CFA and thus was not subjected to hypothesis testing.
The fit indices indicate that the measurement models of financial inclusion and household wellbeing present acceptable fit with the data as indicated in the respective figures below with their fit indices.

Fig. 1: Measurement model for financial inclusion

Chi-square = 27.716; Degree of Freedom(DF) = 18; Probability (P) = .067
;Incremental Fit Index (IFI) = .984 ;Tucker Lewis Index (ITL) = .975
;Comparative Fit Index (CFI) = .984
;Root Mean Square Error of Approximation (RMSEA) = .041
;Goodness of fit index (GFI) = .980
;Adjusted Goodness of Fit Index (AGFI) = .959

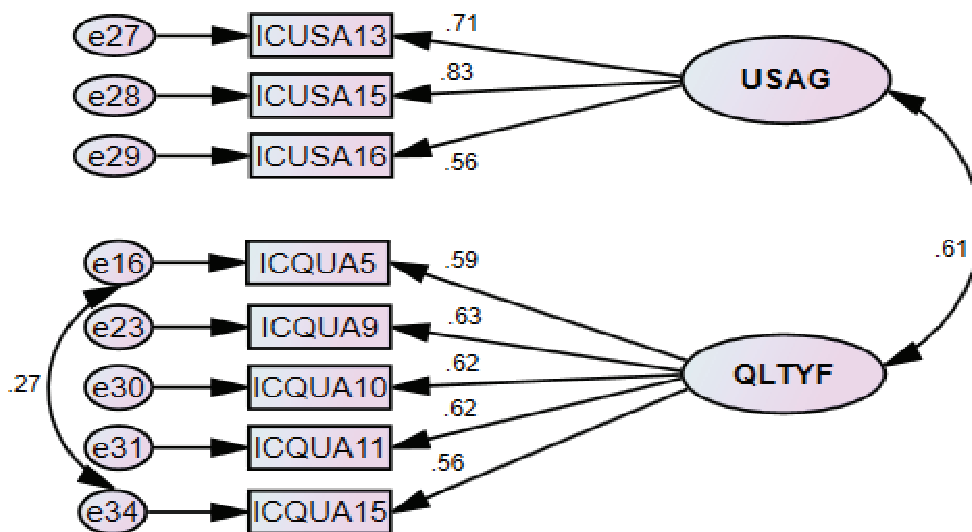

Fig. 2: Measurement model for household wellbeing

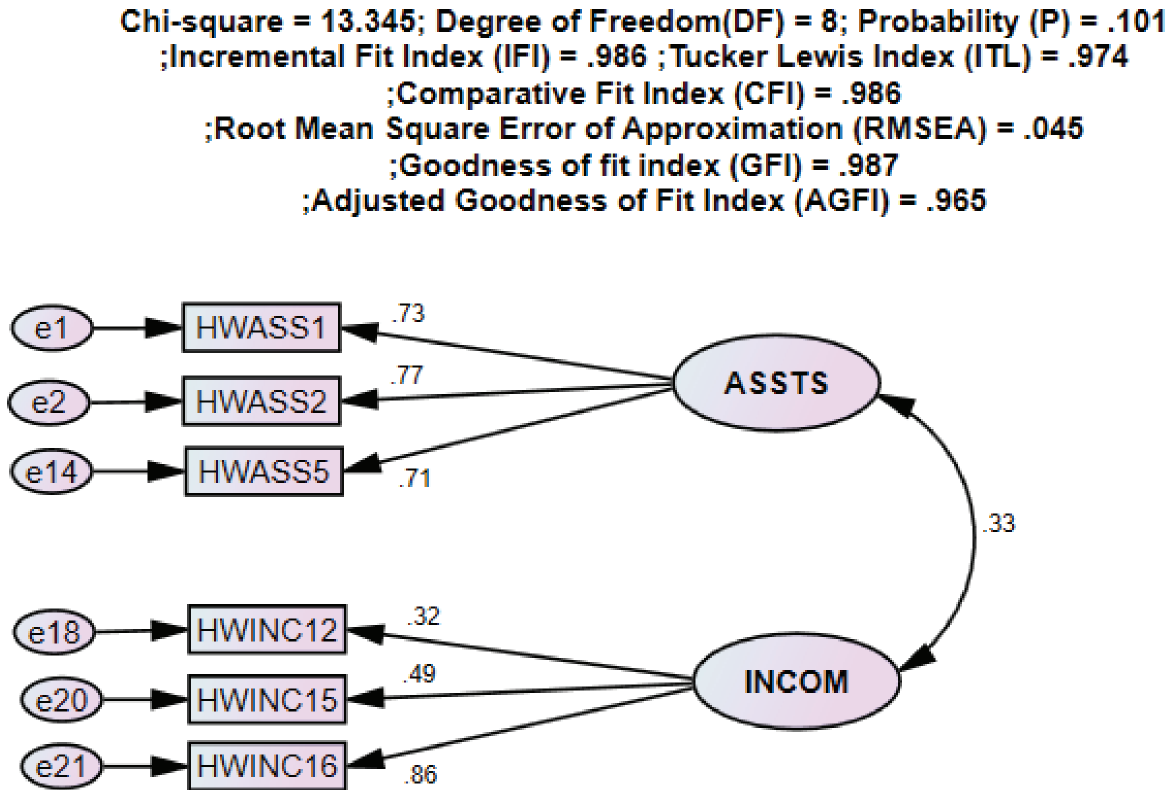

Fig. 3: Structural Model for Financial Inclusion and Household Wellbeing

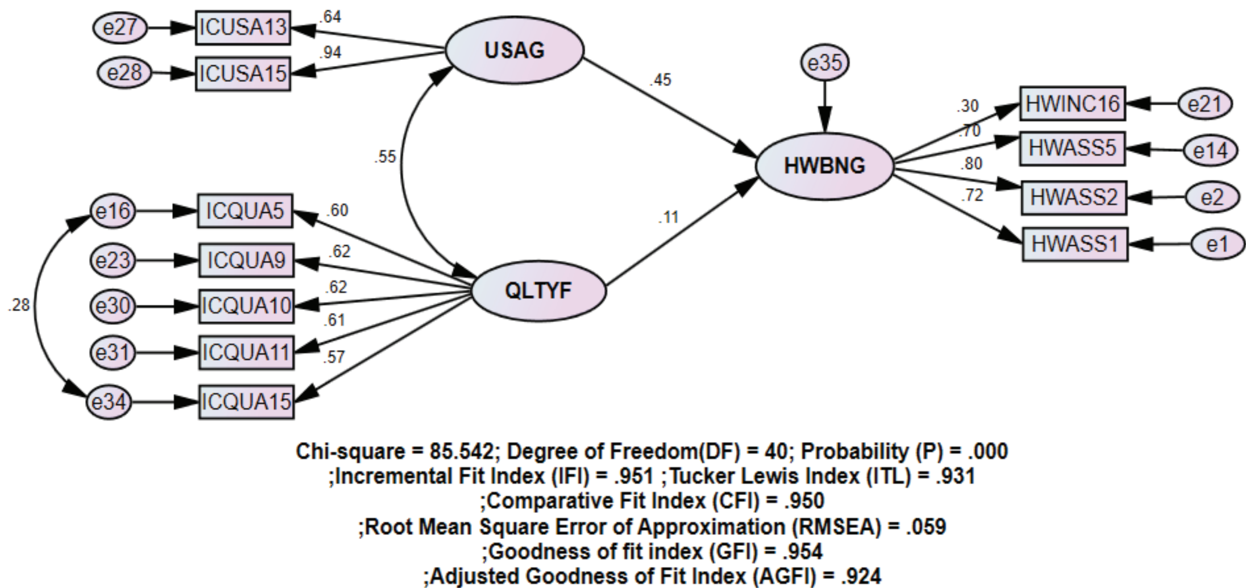

Table 3: Structural Model Estimates for Financial Inclusion and Household Wellbeing

			B	S.E.	β	C.R.	*Sig.*	Verdict
HWBNG	◄—	QLTYF	.057	.048	.350	4.191	***	Supported
HWBNG	◄—	USAG	.213	.057	.449	3.729	***	Supported

***$p < .01$

8. Empirical results

8.1 Hypothesis Testing on Relationships

The research results above show a significant positive relationship between quality of finance and household wellbeing (β = .350, t-value = 4.191, p < .05). Furthermore, results confirm that there is a significant positive association between financial usage and household wellbeing (β = .449, t-value = 3.729, p < .05). These findings are discussed below.

8.2 Discussion

8.3 Financial inclusion and household wellbeing

The holistic development of an economy requires it to have an inclusive financial services system that facilitates the social uplifting of the underprivileged in a country by giving them access to financial products and services and extending credit facilities. Financial inclusion facilitates everyday living, and, when people can use the available financial products and services, such as savings, credit, and insurance, they can pursue long-term goals, such as starting and expanding a business, investing in education and health, and saving money to deal with any emergencies, thereby improving the overall quality of their lives (Sharma, 2022). Financial inclusion is the sustainable provision of affordable financial services that bring the poor into the formal economy (United Nations, 2018).

Financial inclusion as a process that ensures the ease of access, availability, and usage of the formal financial system for all members of society. An inclusive financial system has several merits, which include facilitating the efficient allocation of productive resources that can reduce the cost of capital, access to appropriate financial services that can significantly improve the day-to-day management of finances and reduction in the growth of informal sources of credit (e.g., money lenders), which are often found to be exploitative. Thus, an all-inclusive financial system enhances efficiency and household well-being by providing avenues for secure and safe saving practices and by facilitating a full range of efficient financial services (Sarma & Pais, 2008).

$H_{1(b)}$: There is a significant relationship between financial usage and household wellbeing

The results tested and confirmed that *"There is a significant relationship between financial usage and household wellbeing"*. This implies that a positive change in financial usage promotes household wellbeing. Financial usage includes the ability to perform transaction, use credit, and investment products and services from formal financial institutions. Financial usage is a necessary component of strong household financial well-being. Wellness in terms of quality of life, living standards and empowerment are all aspects of the multifaceted concept of wellbeing. According to these factors, wellbeing can be considered as both an objective (economic and social components) and a subjective (psychological aspects) concept (Dolan et al., 2008). A number of researchers have concentrated on the measurable aspect of wellbeing in terms of education, assets, food, health and income. Financial access is a necessary component of household financial well-being focusing on having control over finances, capacity to absorb financial shocks, meeting financial goals, and having financial freedom

to make life-enhancing choices (Consumer Financial Protection Bureau, 2015). That is, if households have and use safe, affordable, convenient financial products, particularly a bank account, they have financial access to the financial system.

Usage of financial services is considered essential for the economic well-being of households in low-income circumstances. Savings, payments, and credit services facilitates household -level consumption smoothing, help secure against risk, allow investment in education and other forms of capital. A study on an empirical foundation of financial inclusion by Honohan & King (2012), demonstrate that income and education are the key demand – side determinants of access to formal banking. In their study they note that, in the short term its evident financial literacy programs may be effective interventions for greater financial inclusion and thus enhanced house hold well-being.

Financial inclusion through its dimension of access to finances positively demonstrates a positive association with household well-being. This is evident in the study of (Sakyi-Nyarko et al., (2022) on financial inclusion household well being conducted in Ghana, the study notes that the other plausible channel through which financial inclusion directly affects well-being is through the access and provision of loan and saving products. The study further contends that being highly financially included increases one’s chances of accessing the credit, thus increasing the availability of cash at one’s disposal. In addition, the loan and/or saving product could be invested in income-generating activities, so that it becomes hard for a financially included individual to go without cash income at any point in time. Additionally, a study by Baye, (2014) in Cameroon on household well-being and access to credit, evaluated the determinants of borrowing, effects of borrowing on economic well-being, and potential disparity in responses by sources of well-being, location and gender. The survey adopted a range of survey-based econometric methods that purge parameter estimates of potential intra-cluster correlation, endogeneity and sample selection biases. In his study, he notes that access to credit/borrowing is strongly associated with household economic well-being irrespective of source of well-being.

In other words, rural well-being is significantly more contingent on credit access than urban well-being. The study further indicates that male-headed households rely more significantly on credit access to enhance well-being than their female counterparts. Also, higher levels of education associate more significantly with well-being enhancement than lower levels, more so for female-headed households than their male counterparts. Thus, to sustain the impact of credit on well-being, accompanying measures availability of sufficient funds, quality services by lenders, physical infrastructures, healthcare and training are required.

$H_{1(c)}$: There is a significant relationship between financial quality and household wellbeing

The findings upheld the hypothesis and confirm that financial quality relates with household wellbeing. The quality dimension of financial inclusion relates to the relevance of the financial service or product to the lifestyle needs of the consumer (Siqueira & Hans, 2012). In the present research context, “quality” rotates around the extent to which available formal financial services and instruments are relevant to the lifestyle needs of the individuals (Maheswari, 2016; Ghosh, 2019). The quality dimension is described by one strand of literature in terms of the quality of the products and services offered by financial service providers whereas another strand defines it in terms of barriers to financial inclusion.

In line with this study, Kumari, (2021) conducted research that focused on dimensions of financial inclusion based on the world bank financial inclusion index developed by Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar, and Jake Hess (2012). The study was designed based on deductive approach in positivist research paradigm. The Research findings revealed that quality made significant impact to determine the financial inclusion and the impact is reconnoitered as the most significant dimension among all the four dimensions. Those measures are access, usage, quality

and impact. Additionally, in the study that investigated financial inclusion and household well-being in Ghana among the low-income earners and disadvantaged groups, revealed that, quality dimension of financial inclusion shows a strong marginal effect on food consumption, in that Individuals who are satisfied with their financial products and services are 22.3% more likely to never go without food. The study results further indicated that, among the dimensions of financial inclusion, quality dimension received the highest weight clarifing that it is the most important financial inclusion dimension; therefore, its strong marginal effect on food consumption is expected. Also, they note that the quality dimension has the strongest effect on household wellbeing, that's increasing one's chances of never going without medicine or medical treatment by approximately 20% (Sakyi-Nyarko et al., 2022).

9. Conclusions and implications of the study

The study was based on minority influence theoretical review that provides the conceptualization of the construct of financial inclusion as a predictor of household wellbeing. The first notable theoretical implication of this study is that it contributes to the ongoing wellness debate. One of the key gaps in the minority influence theory is that the theory ignores the fact that poor people are marginalized and the levels of minority differ from society to society which the theory tends to ignore. Therefore, future studies should examine other theories (like resource-based view, network and personal initiative theories) that influence household wellbeing. The quantitative approach was adopted, neglecting qualitative methodology. The views of respondents, which would have informed us of the reasons why respondents held certain views about financial inclusion and wellbeing were neglected. In addition, the study adopted a cross-sectional approach. This implies that the views of individuals that change over time were not considered. The same study should be conducted using the longitudinal approach.

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