Financial Inclusion and Human Development: Evidence from African Countries

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ABSTRACT

Africa is a continent that has experienced significant economic and developmental challenges, including high levels of poverty, income inequality, and limited access to financial services. According to a report by the World Bank in 2020, Africa has the lowest rate of financial inclusion in the world. Financial inclusion is important in that it contributes to the achievement of 7 out of 17 sustainable development goals provided by the United Nations. Apart from having low levels of financial inclusion, African countries are also ranked lowest in terms of human development. There is a growing consensus that financial inclusion is essential for economic growth and human development. This study examined the effect of financial inclusion on human development in African countries. To achieve the research objective, the study employed a panel longitudinal research design that involved collecting secondary data for the period between 2011 and 2020 on an annual basis for each of the 54 African countries. Findings indicate that financial inclusion, measured by bank branches, ATMs, deposit accounts, and loan accounts, has a positive and significant effect on human development in African countries. The study concludes that fostering financial inclusion is crucial for promoting human development in African countries. Policy implications include the need to enhance access to banking services, along with developing supportive regulatory frameworks. The study also emphasizes the need for policymakers to prioritize inclusive finance and implement targeted interventions to address the specific challenges and opportunities within each context.

Keywords: Financial inclusion, Human development, Inclusive finance, African countries.

1. INTRODUCTION

1.1. Background

Financial inclusion has garnered recognition for the role it plays in human development. A rise in financial inclusion increases households' ability to make investments in activities like businesses, health, and education. The consequence of this is that it increases the prospects of human development. According to Dinh and Nguyen (2019), financial inclusion enables the successful achievement of Sustainable Development Goals (SDGs) by creating employment opportunities, closing the gender gap, and increasing access to health, which in turn promotes human development. Financial inclusion can help reduce poverty by providing individuals with access to financial services such as credit, savings, and insurance. This can enable them to invest in their livelihoods, start businesses, and build assets, reducing their vulnerability to economic shocks and improving their overall well-being (Saha & Alam, 2022). Chowdhury and Chowdhury (2023) hold that financial inclusion can be a powerful tool for promoting human development and reducing poverty by providing people with the resources and opportunities they need to improve their economic well-being and quality of life.

This study focused on African countries. This is due to the fact that Africa is home to about half of the 2 billion people worldwide who do not have access to financial services (International Monetary Fund, 2020). According to the World Bank (2019), a staggering 72% of individuals in underdeveloped nations and 19% of persons in affluent nations do not have a bank account. African countries are also ranked lowest in terms of human development. Africa has the lowest HDI globally (UNDP, 2022). For example, the HDI for high-income OECD countries was 0.889, which is classified as very high; for Europe and...
Central Asia, it was 0.758; for Latin America and the Caribbean, it was 0.754; and for East Asia and the Pacific, it was 0.722. All of these regions are considered to have high human development. The HDIs for Arab states and South Asia were 0.688 and 0.631, respectively, which are classified as medium human development; and for Africa, it was only 0.52, which is classified as low.

1.2. Problem Statement

It is well acknowledged that financial inclusion plays a critical role in alleviating poverty and promoting inclusive economic growth by providing the capital that formerly marginalized communities need and by generating jobs that advance human development. Seven of the seventeen sustainable development objectives are made possible by financial inclusion (World Bank, 2018). In contrast, the extent to which accessibility to financial services is limited, then the advantages of financial deepening are likely to be unavailable to individuals and enterprises, causing massive absolute poverty to the population and slowed human development (Neaime & Gaysset, 2018).

Even though financial inclusion offers numerous prospects for human development, many regions of the world still have inadequate access to financial services, with Africa appearing to have even worse conditions. 94% of people in high-income economies had an account as of 2021; in contrast, 51.4% of people in Latin America, the Caribbean, and Central Asia, 46.4% of people in South Asia, and just 43% of people in Africa had an account (World Bank, 2021). On some financial inclusion measures, Africa falls much further behind. For example, current data indicates that, outside of South Africa, there are, on average, less than 6 Automated Teller Machines (ATMs) per 100,000 persons. Furthermore, according to data, the region has, on average, less than five commercial bank branches per 100,000 individuals. It is no accident that the HDI report worldwide indicates that the region with the lowest degree of human development is Africa, where the bulk of the population is economically excluded.

In fact, it seems that the region’s poor HDI performance is a symptom of the issue of low financial inclusion.

There is no provision of a clear link empirically between financial inclusion and human development, as many studies have concentrated on the classical view, thereby operationalizing human development as merely economic growth. Globally, Datta and Singh (2019) conducted an analysis of the interplay between financial inclusion and human development across developed and developing nations. Their findings indicated a positive correlation between these two variables. However, the study has a methodological gap as it primarily relied on a literature review, lacking empirical evidence. In a separate study, Chowdhury and Chowdhury (2023) explored the impact of financial inclusion indicators on human development in Bangladesh, India, and Pakistan. Their results showed a positive influence of financial inclusion on human development. Nevertheless, the study has a contextual gap as it focused on South Asian countries, making generalization to an African context inappropriate due to differing economic and social statuses. Another investigation by Barik et al. (2022) delved into the influence of financial inclusion on human development in India, revealing a positive connection. However, this study has a conceptual gap as it did not assess specific aspects of inclusion, such as the number of bank accounts, on human development. On a local scale, Omokanmi and Ogunleye (2020) examined the relationship between financial inclusion and human development in Sub-Saharan Africa (SSA), uncovering a positive correlation. Yet, this study has a conceptual gap since it overlooked specific aspects of financial inclusion, such as the number of loan accounts. From the above reviewed local and global studies, it is evident that the study concepts have been operationalized differently and this might explain the difference in findings. The studies were also carried out using different methodologies in varying contexts making it difficult to generalize the findings to a different context. This led to the research question, what is the effect of financial inclusion on human development in African countries?

2. Literature Review

2.1. Theoretical Review

The theoretical reviews covered are the theory of financial liberalization, financial intermediation theory, and asymmetric information theory. Financial liberalization theory by McKinnon and Shaw (1973) posits that the liberalization of financial markets allows financial deepening, which is evidenced by the increased use of financial intermediation by savers and investors, as well as the monetization of the economy. In other words, financial inclusion facilitates financial deepening, which addresses the basic issue of growth with equity. Financial inclusion across the world empowers the underprivileged population by meeting their capital requirements and thus fueling inclusive and broad-based growth, enhancing social and human development.

Financial intermediation theory by Diamond (1984) refers to the idea that financial intermediaries, such as banks, play a critical role in channeling funds from savers to borrowers, thereby facilitating economic growth and development. The theory supports financial liberalization theory as it holds that through intermediation, financial institutions are able to create and supply specialized financial products to meet the needs of different types of customers, essentially increasing financial access and encouraging capital accumulation, savings, and opportunities for all in a more productive and affordable manner. The theory suggests that increasing access to financial services can have a positive impact on human development outcomes, such as poverty reduction, improved health and education outcomes, and increased economic opportunities.

Asymmetric information theory by Akerlof (1970) holds that imperfections in financial markets are impediments to financial inclusion, which causes sustained inequality and slows human development. The relevance of asymmetric information theory on the relationship between financial inclusion and human development lies in the fact that many individuals and small businesses in African countries lack the financial literacy and information access
and availability necessary to effectively navigate financial markets and use financial products and services. Financial inclusion can help address these information asymmetries that discourage some investors by providing individuals and businesses with access to financial education and other supportive services that can help them understand how to use financial products and services effectively. By increasing access to information and knowledge about financial products and services, financial inclusion can empower and encourage more individuals and businesses to make more informed financial decisions, which can lead to improved economic outcomes and greater human development.

2.2. Empirical Review

The goal of Chowdhury and Chowdhury (2023) was to determine how financial inclusion affected human development in Pakistan, Bangladesh, and India. These three South Asian nations continue to trail behind in terms of reducing their rates of unemployment, poverty, and inequality while experiencing tremendous economic growth. This study indicates that financial inclusion has a favorable effect on human development, especially on income level, life expectancy, and educational attainment. Panel data and the generalized technique of moments are used in this study. A conceptual gap emerges since the study combined many financial inclusion indicators into a single index, obscuring the relative contributions of each metric to the HDI. It becomes challenging to rank and distinguish the impact of each of the three financial inclusion characteristics on human development when indicators are combined into a single index.

The current synergy between financial inclusion and human development in Indian states throughout the post-liberalization eras (1993–2015) is examined by Barik et al. (2022). First, the effect of financial inclusion on human development is quantified through the use of panel data regression models and principal component analysis. In order to determine if human development should be a prerequisite for guaranteeing increased financial inclusivity in Indian states, the reverse causation between human development and financial inclusion is assessed. Together with additional control variables, including social sector expenditure, per capita state gross domestic product, and capital receipt, it is discovered that financial inclusion has a positive and statistically significant effect on human development. On the other hand, the process of human development in Indian states is adversely affected by the absence of urbanization, as indicated by the proportion of people living in rural areas. The study was done in India, a country with a different economic and social standing than African nations. Therefore, there is a contextual gap that prevents generalizing the findings.

Using yearly data from 45 African nations spanning the years 2000–2020, Musah (2022) examines the connection between financial inclusion and human growth in Africa. The generalized method of moments methodology is used to analyze the data. The findings suggest that increasing financial inclusion promotes human development since it has a favorable and significant impact on human development in Africa. The results also show that trade openness and human development are adversely correlated, although financial development and economic expansion have a favorable and considerable impact on human development. This study combined financial inclusion measures into a single index, leaving a gap on the impact of each measure on HDI, even though it was carried out in the same setting as the current study. It is impossible to assess the impact of each of the three aspects of financial inclusion on human development when indicators are combined into a single index.

Omokanmi and Ogunleye (2020) investigated the connection between human development and financial inclusion in Sub-Saharan Africa. The study uses panel data from 2004 to 2016 to examine 41 sub-Saharan African nations. The study’s model formulation used a panel system, the Generalized Method of Moment (GMM), and panel fixed effects models to analyze the data and express HDI as a function of financial inclusion indicators. The analysis’s findings demonstrated that every financial inclusion measure significantly and favorably affects HDI in SSA. According to the study’s findings, financial inclusion raises HDI in Sub-Saharan Africa, which in turn fosters economic development. This study does not account for the six African nations that are not a part of Sub-Saharan Africa, although being done in the same setting as the current study. In panel research, it is crucial to consider them as it is likely to yield more definitive results.

2.3. Conceptual Framework

The conceptual framework is presented in Fig. 1. The independent variable for this study is financial inclusion. An increase in financial inclusion is expected to improve human development as more citizens’ access financial services such as saving and borrowing (Musah, 2022). Access to financial services can help individuals and households manage risks and smooth consumption, invest in education and health, and start and grow businesses, which can lead to higher income, employment, and productivity. These outcomes can, in turn, contribute to improvements in health, education, and overall well-being, which are key dimensions of human development. Financial inclusion can also help to reduce poverty, inequality, and social exclusion, which can enhance human development outcomes (Omokanmi & Ogunleye, 2020).

3. Methodology

3.1. Data

The study utilized secondary data. The secondary data was obtained from the World Bank, World Development Indicators, UNDP database, and individual countries database between January 2011 and December 2020 on an annual basis. The annual interval was chosen as the World Bank publishes its data on financial inclusion and financial deepening annually. The data on HDI index from UNDP was also available on an annual basis.

Data on financial inclusion was bank branches per 100,000 adults, ATMs per 100,000 adults, deposit accounts per 1000 adults and loan accounts per 1000 adults and was
obtained from the World Bank and individual countries database on an annual basis. The data on human development was the HDI on an annual basis, and it was obtained from the UNDP database.

3.2. Data Analysis

In this study, ARDL was used to estimate the long-run and short-run effects of financial inclusion, deepening, and macroeconomic factors on human development. The ARDL model allowed the researcher to test for the existence of a long-run relationship between these variables while also accounting for the short-term dynamics and possible causal relationships between them.

A multiple linear regression technique was used to model the relationship between human development and the independent variables, which were the four indicators of financial inclusion: bank branches per 100,000 adults, ATMs per 100,000 adults, deposit accounts per 1000 adults, and loan accounts per 1000 adults. The multiple linear regression model estimated the coefficients of the independent variables, which provided information on the direction and magnitude of their effect on the dependent variable.

4. RESULTS AND DISCUSSION

4.1. Descriptive Results

Descriptive analysis aided in the meaningful interpretation of the results, allowing the researcher to draw meaningful conclusions and make informed decisions. Table I presents descriptive statistics for 5 variables: Branches, ATMs, deposit accounts, loan accounts, and human development index. For each variable, the table reports the number of observations (N), the minimum and maximum values, the mean, the standard deviation, the skewness, and the kurtosis. The valid number of observations (listwise) for all variables was 520 (52 x 10), as Somalia and Eritrea did not have data.

4.2. Hypothesis Testing

The objective of this study was to establish the effect of financial inclusion on human development among African countries. The indicators of financial inclusion considered in this study were bank branches per 100,000 adults, ATMs per 100,000 adults, deposit accounts per 1000 adults, and loan accounts per 1000 adults. Human development was measured using the HDI. The hypotheses tested were:

- **H₀₁**: Financial inclusion has no effect on human development among Africa countries.
- **H₀₁a**: Branches per 100,000 adults have no effect on human development among Africa countries.
- **H₀₁b**: ATMs per 100,000 adults have no effect on human development among Africa countries.
- **H₀₁c**: Deposit accounts per 1000 adults have no effect on human development among Africa countries.
- **H₀₁d**: Loan accounts per 1000 adults have no effect on human development among Africa countries.

Table II presents the results of a panel least squares regression analysis with the dependent variable being the HDI. The analysis includes 10 time periods and 52 cross-sections, resulting in a total of 520 balanced observations. The R-squared value of 0.704450 indicates that the independent variables collectively explain approximately 70.45% of the variation in the HDI. The adjusted R-squared value of 0.702155 accounts for the degrees of freedom and penalizes model complexity. The F-statistic of 306.8787 is significant (p-value = 0.0000), suggesting that the overall regression model is statistically significant. This leads to the rejection of H₀₁, which implies that financial inclusion has a significant positive effect on human development in African countries.

For bank branches per 100,000 adults, the results reveal that for each additional unit increase in the number of branches per 100,000 adults, the HDI is estimated to increase by 0.002569. This coefficient is statistically significant at a 5% significance level (t-statistic = 2.093230, p-value = 0.0000), indicating a strong positive relationship between the number of branches and HDI. This leads to the rejection of H₀₁a, implying that bank branches per 100,000 adults have a significant effect on human development among African countries.

The results also reveal that each additional unit increase in the number of ATMs per 100,000 adults is associated with an estimated increase in HDI by 0.000548. This coefficient is also statistically significant at a 5% significance level (t-statistic = 5.986031, p-value = 0.0000), indicating a strong positive relationship between the number of ATMs and HDI. This leads to the rejection of H₀₁b and a conclusion made that ATMs per 100,000 adults have a significant effect on human development among African countries.

The results further reveal that an increase of one unit in the number of deposit accounts per 1000 adults is estimated to lead to a 0.031340 increase in HDI. This coefficient is statistically significant (t-statistic =...
4.425555, p-value = 0.0000), indicating a positive association between the number of deposit accounts and HDI. This leads to the rejection of H01c, which implies that deposit accounts per 100,000 adults have a significant effect on human development in African countries.

In addition, a one-unit increase in the number of loan accounts per 1000 adults is associated with an estimated increase in HDI by 0.097289. This coefficient is statistically significant (t-statistic = 15.26280, p-value = 0.0000), suggesting a strong positive relationship between the number of loan accounts and HDI. This leads to the rejection of H01d implying that loan accounts per 100,000 adults have a positive and significant effect on human development among African countries.

5. Conclusion and Recommendations

In conclusion, the study revealed that financial inclusion has a positive and significant effect on human development. This underscores the importance of expanding access to financial services across the continent to empower individuals and communities, ultimately contributing to broader socioeconomic development. The high levels of financial exclusion in Africa, as highlighted in the study, imply that concerted efforts are needed to bridge these gaps and extend the benefits of financial inclusion to underserved populations.

Governments across Africa should prioritize policies aimed at enhancing financial inclusion. This includes facilitating the establishment of bank branches, ATMs, and other financial access points, particularly in rural and underserved areas. Simultaneously, efforts should be directed toward improving financial literacy and consumer protection to ensure that individuals can effectively utilize financial services. Governments need to play a proactive role in creating an enabling environment that encourages financial institutions to reach out to marginalized populations and offer affordable and accessible financial products and services.

6. Limitations

Data limitations were encountered during the research. African countries often have variations in data availability and quality. This study required extensive and consistent data for a substantial number of years across all 54 African countries. To address this, data from reputable international organizations such as the World Bank, IMF, and regional financial bodies were carefully curated and cross-verified. Data imputation techniques were employed when necessary, and missing data points were minimized through careful selection of variables.

7. Suggestions for Further Research

Future studies could consider adopting a mixed-methods approach that combines quantitative and
qualitative methods. While the current study relied on quantitative data, incorporating qualitative research methods such as interviews, focus groups, or case studies can provide a more in-depth understanding of the mechanisms and processes underlying the observed relationships. Qualitative research can uncover nuanced perspectives, contextual factors, and individual experiences that quantitative analysis may not capture fully.

**Conflict of Interest**

The authors declare that they do not have any conflict of interest.

**References**


