

Financial inclusion in the CEMAC: Analysis of its effects on the standard of living

ABSTRACT:

Aims: This study aims to examine the effects of financial inclusion on living standards as measured by per capita income and consumption in CEMAC countries.

Place and Duration of Study: The paper uses a sample of 6 CEMAC countries from different sources (WDI, GFDD and WGI databases) for the period 2004-2017 to carry out the analysis.

Methodology: Using the instrumental variables (IV) method, we establish the causal link between financial inclusion and living standards, demonstrating that the latter exerts a positive and significant effect on per capita income and consumption in the CEMAC region. To consolidate these findings, we subjected our results to a robustness test using the generalised equation estimation (GEE) method, thus confirming the beneficial effect of financial inclusion on living standards in the CEMAC zone.

Results: These results highlight the importance of implementing incentive policies aimed at reducing barriers to access to banking services, in order to enable low-income individuals to benefit from these services and thus improve their quality of life.

Keywords: *Financial inclusion - Standard of living - CEMAC - Banking services.*

1. INTRODUCTION

Over the last decade, financial inclusion has received increasing attention among researchers and policymakers. The Sustainable Development Goals (SDGs) proposed by the United Nations refer to financial inclusion as a support mechanism for inclusive economic growth (Jahan et al., 2019). In essence, financial inclusion is generally considered to be the extent of the population that has access to and uses formal financial services. In this context, research and policy attention has focused on who is socially excluded from the financial system and how strategies can be designed to enable "unbanked" segments of the population to strengthen their involvement in the financial system. The development of financial inclusion can benefit the poor through different channels, including the ability to accumulate savings and access credit that allows them to smooth their consumption, better manage financial risk to cope with uncertainties and invest in productive assets (Demirgüç-Kunt et al., 2018).

The concept of financial inclusion has emerged as a critical factor influencing economic growth, poverty reduction, and overall societal well-being. Within the Central African Economic and Monetary Community (CEMAC), a regional economic organization consisting of six member countries, the pursuit of financial inclusion holds particular significance. Much of the empirical literature exploring the potential benefits of financial inclusion on development outcomes has focused on economic growth, poverty, and income inequality, where research findings generally reveal the positive effects of financial inclusion. However, there is a dearth of empirical literature examining the effect of financial inclusion on other important development outcomes. Accordingly, one of the main objectives of this paper is to broaden the range of development outcomes analyzed by examining

the effect of financial inclusion on living standards as measured by income and consumption. This is particularly important from a policy perspective because the effect of financial inclusion on some economic development outcomes may be stronger than others, which may vary from one region to another depending on their demographic and institutional characteristics.

Ultimately, this paper seeks to contribute to the existing body of knowledge by providing insights into the effects of financial inclusion and the standard of living in the CEMAC region. We use data from the World Development Indicators (WDI) and Worldwide Governance Indicators (WGI) over the period 2004 - 2017 and adopt two estimation methods. First, we use dynamic panel estimation (DPE) and the results show that financial inclusion has a positive and significant effect on living standards as measured by per capita income and consumption in the CEMAC. The results show that access to a bank branch, deposits and credit leads to an increase in income and consumption. This work distinguishes itself from others by considering several dimensions of financial inclusion. As the global community increasingly recognizes the importance of inclusive economic growth, this research aims to inform policymakers and stakeholders on potential avenues for fostering financial inclusivity and, consequently, improving the overall well-being of the population in the CEMAC countries.

The theoretical underpinnings of the financial inclusion-welfare nexus are based on the idea that a formal account opened in a financial institution, which serves as a store of value, gives households the possibility of accumulating funds to invest in income-generating activities such as microenterprises, purchasing inputs or intermediate products, investing in education, planning for retirement and managing potentials unforeseen (Radcliffe and Voorhies, 2012). A formal account held by a household to save or secure capital is a safe place to store money outside of their usual activity (or home) to avoid impulse spending. Today, we talk a lot about electronic payment with technological advances. Ehrbeck et al (2010) list the advantages that result from the electronic payment system apart from saving time and costs. This electronic payment system helps increase sales, reduce transaction costs and creates a reliable link between government, employers, employees and families for the direct payment of social benefits, wages and remittances to friends and families abroad, all intending to improve well-being.

On the empirical front, Outreville (1999), examines the relationship between the level of financial development and socio-economic variables reflecting different levels of development in the light of the literature on the role of human capital in the economic development process. The empirical results, based on a cross-sectional analysis of 57 developing countries, indicate that human capital and socio-political stability are important factors explaining the level of financial development in these markets. Then studies on human capital impacts (Hakeem and Oluitan, 2012; Evans et al, 2002) show that financial development is at least as important as human capital in the growth process.

The process of financial inclusion strengthens the process of human development. There is, in fact, a two-way causality between financial inclusion and human development; one leads to the other and vice versa. Giri (2014) finds causality from financial development to human development, and Ivanic et al (2012) find that causality operates between financial indicators and human capital except for credit to the private sector but not vice versa.

Similarly, [Ozcan and Kiliç \(2018\)](#) analysis show the existence of a positive relationship between financial development and human capital in emerging economies. Financial inclusion is an attempt to bring the weak and vulnerable in society into the midst of the organised financial system. An inclusive financial system would certainly increase efficiency and welfare by providing avenues for secure and safe saving practices and by facilitating a full range of effective financial services. According to [Beck et al \(2007\)](#), financial inclusion reduces income inequality and alleviates poverty. Naturally, the lower the level of poverty, the higher the level of human development.

[Banerjee et al \(2021\)](#) show that including the poor socially and especially financially will allow them not only to stabilize and develop but also to start or begin an income-generating activity. In the same vein, authors such as [Macharia and Attoumane \(2005\)](#), [Khandker \(2005\)](#) in their work think that microfinance has positive effects on income; in other words, the evolution or development of the microfinance sector has a positive impact on the improvement of people's living conditions. [Abdelkhalek \(2006\)](#) goes further by testing the merits of financing small and micro-projects in the fight against poverty. He uses a statistical approach and concludes that MFIs contribute to poverty reduction because they finance household activities and then create jobs and increase the income of the poor.

More recently, [Addury \(2018\)](#) examines the influence of financial inclusion, measured as the amount of credit and deposits/investments, on income, consumption expenditure, and living facilities of the household. The results of the panel data regression show a significant effect of the amount of credit on household income and consumption expenditures. But the effect on household residence facilities is not significant. Applying matching methods, [N'dri and Kakinaka \(2020\)](#) analyze the effects of financial inclusion and mobile money use on an individual's nonmonetary welfare. They conclude that access to financial services by the household through mobile money has a significant impact on poverty alleviation. Still, to enrich the scarce literature on the link between financial inclusion and welfare, this paper analyzes this relationship while considering several dimensions of financial inclusion on income and consumption.

The remainder of this document is presented as follows. Section 2 presented data and methodology used while section 3 presented the results. Section 4 concludes the paper.

2. METHODOLOGY

This study considers a linear model using the Generalized Method of Moments (GMM) proposed by [Blundell and Bond \(1998\)](#) to address the issue of causality that may exist between financial inclusion and standard of living¹. For example, countries experiencing strong economic growth may experience an increase in financial inclusion. Higher economic growth leads to higher living standards, reduced poverty, better access and greater use of financial products.

To analyze the effects of financial inclusion on the standard of living, the following equation is estimated by the GMM dynamic panel method and the generalized equation estimation method.

Thus, the general model can be specified as follows:

$$y_{ct} = X_{ct} + Z_{ct} + \varepsilon_{ct} \quad (1)$$

with y_{ct} the group of variables encompassing the standard of living indicators (consumption and income) of country c at the period t considered. X_{ct} and Z_{ct} are respectively the groups of variables defined by the financial inclusion indicators and the control variables at period t . ε_{ct} is the error term.

Several studies have shown that financial inclusion follows a dynamic process ([Oyelami and Ogundipe, 2020](#); [Tchoffo et al., 2020](#)). Therefore, taking into account the dynamism based on recent developments in financial instruments remains interesting. This manoeuvre allows us to capture the different transmission channels through which financial inclusion affects the standard of living of populations in the CEMAC zone. The empirical model can be specified as follows:

$$Y_{ct} = \alpha_0 + \lambda Y_{ct-1} + \delta FI_{ct} + \gamma Z_{ct} + \varepsilon_{ct} \quad (2)$$

where Y , the dependent variable, represents the standard of living for country c at time t . It is captured by income and consumption. FI_{ct} represents the financial inclusion of a country c at time t and includes the dimensions of access, availability, and use. Z_{ct} a vector of control variables defined below and summarized in table 6 in the appendix and ε_{ct} the error term.

Gdp: Annual Average per capita income (Annual Gross Domestic Product/Population).

GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. It is in current local currency and it is transformed in logarithm.

Depcons: Final consumption expenditure (formerly total consumption) is the sum of household final consumption expenditure (private consumption) and general government final consumption expenditure (general

¹ We also performed generalized equation method (GEE panel) regressions as a robustness check and find that the results are qualitatively similar.

government consumption). This estimate includes any statistical discrepancy in the use of resources relative to the supply of resources.

2.1 Explanatory and Control Variables

Based on the existing literature (Datta and Singh, 2019, Peria and Shin, 2020) and depending on the availability of data, the following variables are retained in this study.

FI is the dimensions of financial inclusion. The proxies used are: **Deposit**: number of depositors in commercial banks per 1,000 adults; **Borrow**: number of borrowers from commercial banks per 1,000 adults; **Branch**: the number of bank branches per 100,000 adults.

Z_{ct} is the group of control variables supposed to influence the standard of living. It englobes:

GovEff the quality of governance. It reflects the perception of the quality of services and the degree of its independence from political pressures, the quality of the formulation and implementation of policies, and the credibility of the government's commitment to these policies. The estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from -2.5 to 2.5. The highest scores are awarded to countries where the bureaucracy has the strength and expertise to govern without radical policy changes or disruption to public services when governments change.

FDI: foreign direct investment. It refers to direct investment equity flows in an economy. It is the sum of equity capital, reinvestment of earnings, and other capital.

AIDS: official development assistance. It refers to foreign official development assistance received by the country. It is in logarithm.

Mil-exp: military expenditure includes all current and capital expenditures on the armed forces, including peacekeeping forces; defense ministries and other government agencies engaged in defense projects; paramilitary forces, if these are judged to be trained and equipped for military operations; and military space activities.

Pop-growth: population growth rate. Annual population growth rate for year t is the exponential rate of growth of midyear population from year $t-1$ to t , expressed as a percentage.

Infl: Inflation rate, as a percentage of GDP.

2.2 Source of data

The data used in this study come from the World Bank, in particular from the World Development Indicators (WDI) and Global Financial Development Database (GFDD) over the period from 2004 to 2017 in a sample of 6 CEMAC countries. The governance indicators are obtained from World Governance Indicators (WGI).

3. Results and interpretation

3.1 Descriptive statistics

Table 1 shows that the data are fairly scattered for most of the variables. The standard deviations are quite large for most of the variables, suggesting some heterogeneity in the data. For example, the "**Borrow**" variable has a high standard deviation, which means that the amounts borrowed vary considerably from one country to another. The minimum and maximum values give an idea of the range of possible values for each variable. For example, for the variable "**Deposit**", we observe deposits ranging from 0.47 to 280.07.

The same applies to the "**Borrow**" variable, which has a standard deviation of 47,038, meaning that the values of "**Borrow**" vary considerably from one individual to another. On average, individuals borrowed 23,792 units. The amounts borrowed varied between 2 and 233,292 units. On average, individuals deposited 83,393 units. The amounts deposited vary between 0.47 and 280.07 units. For the variable "**Branch-bank**" as the number of bank branches per inhabitant. A high standard deviation for this variable would suggest a wide disparity in the density of the banking network between the different countries. Table also show that the average income per capita is 2241684.4 in the CEMAC countries with a minimum of 163047.77 and a maximum of 9576211.7.

Table 1: Descriptive statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
Borrow	84	19.943	39.135	.2	233.292
Deposit	84	80.393	76.461	.47	280.07
Depcons	84	5.621	11.268	-40.868	53.51
Fdi	84	3.449	3.768	-4.846	16.758
Gdp	84	2241684.4	2534071.3	163047.77	9576211.7
GovEff	84	-1.259	.33	-1.879	-.606
Infl	84	6.208	12.227	-20.83	59.329
Mil exp	84	1.849	1.355	.656	7.956
Pop growth	84	3.118	.933	-.077	4.78
branch bank	84	2.513	3.359	.302	17.851
AIDS	84	3.423e+08	3.814e+08	519999.98	1.898e+09

Source: Authors' calculations based on data obtained from WDI, GFDD, and WGI.

After presenting the descriptive statistics, we'll move on to the econometric results.

3.2. Financial inclusion and standard of living

Sous-section 4.2 presents the empirical results for each of the specifications of financial inclusion outcomes measured by depositors in commercial banks per 1,000 adults (**Deposit**), borrowers in commercial banks per 1,000 adults (**Borrow**) and the number of banking branches per 100,000 adults (**Branch**), on the standard of living, i.e. per capita income and consumption (**Gdpc, Depcons**) using instrumental variables method.

3.2.1. Effect of financial inclusion on per capita income in CEMAC

Table 2 presented summarises the results of a multiple regression where the dependent variable is the natural logarithm of Gdpc (**InGdpc**). The use of the instrumental variables method suggests that the authors sought to resolve potential endogeneity problems, i.e. situations where the explanatory variables are correlated with the error term, thereby biasing the coefficient estimates.

Results show that the variable **Borrow** has a positive and significant effect on Gdpc. All other things being equal, having access to **Borrow** leads to an increase in per capita income. The positive and significant coefficient on "**Deposit**" suggests that an increase in domestic deposits has a positive effect on economic growth, even after controlling for other factors. This is in line with the economic intuition that greater availability of funds stimulates investment and consumption.

The positive and highly significant coefficient on branchbank indicates that expansion of the banking network is associated with higher GDP growth. This could be explained by improved access to credit and financial services, thereby promoting economic activity. Thus, all other things being equal, having access to a banking branch leads to an increase of 0.023% in per capita income. Indeed, this result is explained by the fact that the holding of an account and the availability of banking branches make it possible to maintain or improve the standard of living (Datta and Singh, 2019; Peria and Shin, 2020).

Analysis of the results reveals some interesting conclusions regarding the impact of financial variables on economic growth. As for domestic deposits, their positive and significant coefficient clearly indicates that their increase stimulates economic growth. This result is in line with economic intuition: greater availability of funds encourages investment and consumption. Finally, the expansion of the banking network, measured by the number of branches, is strongly associated with higher GDP growth. This positive correlation can be explained by improved access to credit and financial services, which boosts economic activity.

The governance in CEMAC (**GovEff**) is a boon to improving the standard of living of the populations. Indeed, governance has a positive and significant effect on income. This result can be explained by the fact that CEMAC countries are generally classified among the countries where bad governance is present in Africa. These results corroborate those obtained by Boettke and Subrick (2003) according to which, rules of law improve human development in developed countries. The other variables (**Fdi, Infl**, etc.) appear to have similar effects to those observed in other studies, although the intensity and significance of these effects may vary.

Table 2: Effect of financial inclusion on per capita income in CEMAC

Variables	(1) lnGdp	(2) lnGdp	(3) lnGdp
Fdi	.038** (.018)	.031** (.016)	.03* (.017)
Borrow	.005*** (.002)		
GovEff	.874*** (.221)	.293 (.225)	.563** (.227)
Infl	.01* (.006)	.009* (.005)	.01** (.005)
Mil-exp	-.055 (.05)	-.08* (.044)	-.07 (.047)
Pop-growth	.525*** (.084)	.51*** (.072)	.536*** (.078)
InAids	-.379*** (.047)	-.125** (.061)	-.309*** (.048)
Deposit		.008*** (.001)	
Branch-bank			.105*** (.023)
_cons	20.354*** (1.093)	14.414*** (1.456)	18.503*** (1.152)
Observations	84	84	84
R-squared	.797	.845	.822

Source: Authors' calculations based on data obtained from WDI, GFDD, and WGI.

Standard errors are in parentheses

*** $P < .01$, ** $P < .05$, * $P < .1$

3.2.2. Effect of financial inclusion on consumption in CEMAC

Table 3 presented reports the results of a multiple regression where the dependent variable is the dependent neperian logarithm of consumption (*InDepcons*). The use of the instrumental variables method suggests that the authors sought to correct potential endogeneity problems associated with the explanatory variables, in particular those linked to credit (*Borrow*, *Deposit*, *branch-bank*).

The negative and highly significant coefficient on the '*Borrow*' variable suggests that an increase in debt is associated with a decrease in dependent consumption. This can be explained by the fact that higher debt reduces the purchasing power available for current consumption. The negative and weakly significant coefficient of the variable "*Deposit*" in model (2) could indicate an ambiguous effect of deposits on consumption. One possible interpretation is that households prefer to save rather than consume when their deposits increase. However, the effect is weak and could be due to other factors not taken into account in the model.

The negative and highly significant coefficient on the '*branch bank*' variable suggests that an increase in the number of bank branches is associated with a decrease in dependent consumption. This may seem counter-

intuitive, but it is possible that an increase in the number of bank branches is linked to a greater supply of credit, which would encourage households to take on more debt and reduce their current consumption.

Foreign direct investment has a positive and significant effect on dependent consumption, suggesting that the arrival of new foreign companies stimulates economic activity and increases household incomes. The perception of the quality of governance in CEMAC (**GovEff**) has an insignificant effect on consumption. This result can be explained by the fact that CEMAC countries are generally classified among the countries where poor governance is prevalent in Africa. This affects the living standard of population in the area. The other variables (**Infl, Mil-exp, Pop-growth, InAids**) have more nuanced effects and require more detailed analysis depending on the specific context of the study.

Table 3: Effect of financial inclusion on consumption

Variables	(1) lnDepcons	(2) lnDepcons	(3) lnDepcons
Fdi	.072** (.029)	.065** (.03)	.073** (.029)
Borrow	-.01*** (.004)		
GovEff	.615* (.374)	.451 (.458)	.792* (.414)
Infl	.009 (.01)	.015 (.01)	.011 (.01)
Mil-exp	.15* (.083)	.16* (.087)	.163* (.084)
Pop-growth	.127 (.164)	.209 (.17)	.166 (.164)
InAids	-.056 (.079)	-.089 (.125)	-.118 (.088)
Deposit		-.002 (.003)	
Branch-bank			-.119** (.047)
_cons	2.493 (1.911)	2.634 (3.021)	3.841* (2.182)
Observations	71	71	71
R-squared	.291	.22	.278

Source: Authors' calculations based on data obtained from WDI, GFDD, and WGI.

Standard errors are in parentheses

*** $P < .01$, ** $P < .05$, * $P < .1$

3.3. Robustness tests of the implications of financial inclusion in CEMAC

To confirm the robustness of the previous effects of financial inclusion on the standard of living in CEMAC, it was a question of operating the choice of the method of generalized estimating equations and the results obtained are similar to those obtained previously.

The results presented in Table 4 above using the GEEs confirm the positive and significant effect of financial inclusion on per capita income in CEMAC countries. Indeed, access to the banking branch (**Branch**) has a positive and significant effect at the 1% threshold. The same is true for loans per 1000 adults (**Borrow**) and bank deposits (**Deposit**). These results confirm our expectations and join the work of authors such as [Outreville \(1999\)](#), [Ahmad et al. \(2012\)](#) and [Datta and Singh \(2019\)](#) who highlighted comparative analyzes between developed and developing economies on the implications of financial inclusion on social, economic and human development variables respectively. For most of the effects obtained from the sample of CEMAC economies, the subsequent results corroborate with certain works, however under the constraints of a strong consideration of institutional variables.

Table 4: Effect of financial inclusion on income

DEPENDENT VARIABLE: GDP PER CAPITA

Variables	(1) lnGdp	(2) lnGdp	(3) lnGdp
GovEff	-0.1476** (0.0680)	-0.0841 (0.0819)	-0.0855 (0.0886)
Aids	-0.0491 (0,0543)	-0.0074 (0,0640)	0.0007 (0,0690)
Fdi	-0,0027 (0,0023)	0,0002 (0,0028)	-0,0008 (0,0030)
Infl	-0,0005 (0,0006)	-0,0004 (0,0008)	-0,0011 (0,0008)
Mil-exp	0,0304*** (0,0085)	0,0349*** (0,0101)	0,0335*** (0,0109)
Pop-growth	0,1323*** (0,0247)	0,0548** (0,0289)	0,0661** (0,0310)
Branch-bank	0,4661*** (0,0448)		
Borrow		0,1810*** (0,0245)	
Deposit			0,1786*** (0,0298)
Cons	2.6009 (0.5329)***	2.4528 (0.6107)***	2.2430 (0.6504)***
Observations	84	84	84
Prob > F	0.0000	0.0000	0.0000

Source: Authors' calculations based on data obtained from WDI, GFDD, and WGI. * P < 0,10; ** P < 0,05; *** P < 0,01 are standard significance levels.

The results presented in the table above using generalized least squares estimators confirm the positive and significant effect of financial inclusion on consumption in CEMAC countries. Indeed, access to the banking branch (**Branch**) has a positive and significant effect at the 1% threshold. The same is true for bank deposits (**Deposit**) and access to bank credit (**Borrow**). These results confirm our expectations and join the work of authors such as [Outreville \(1999\)](#), [Ahmad et al. \(2012\)](#) and [Datta and Singh \(2019\)](#) who highlighted comparative analyzes between developed and developing economies on the implications of financial inclusion on social, economic and human development variables respectively. For most of the effects obtained from the sample of CEMAC economies, the subsequent results corroborate with certain works, however under the constraints of a strong consideration of institutional variables. However, despite these positive and significant effects of financial inclusion on the standard of living in CEMAC, it should be noted that inclusion remains weak in this region.

Table 5: Effect of financial inclusion on consumption

DEPENDENT VARIABLE: DEPCONS			
Variables	(1)	(2)	(3)
	lnDepcons	lnDepcons	lnDepcons
GovEff	-0.0741 (0.0601)	0.0204 (0.0827)	0.0213 (0.0972)
Aids	0.0067 (0.0479)	0.0728 (0.0646)	0.0969 (0.0755)
Fdi	-0.0060*** (0.0020)	-0.0016 (0.0028)	-0.0032 (0,0033)
Infl	-0,0003 (0,0005)	-0,0002 (0,0008)	-0,0012 (0,0009)
Mil-exp	0,0314*** (0,0075)	0,0383*** (0,0102)	0,0365*** (0,0120)
Pop-growth	0,1408*** (0,0218)	0,0312 (0,0291)	0,0518 (0,0339)
Branch	0,6646*** (0,0396)		
Borrow		0,2660*** (0,0248)	
Deposit			0,2590*** (0,0328)
Cons	9.2209*** (0.4508)	8.9520*** (0.6027)	8.5368*** (0.6887)
Observations	84	84	84
Prob > F	0.0000	0.0000	0.0000

Source: Authors' calculations based on data obtained from WDI, GFDD, and WGI. * P< 0,10; ** P< 0,05; *** P< 0,01 are standard significance levels.

4. Conclusion

This paper aims at examining the effect of financial inclusion on the standard of living in the CEMAC zone. To do this, we used two estimation methods. First of all, we used a dynamic panel estimation (GMM). The results obtained show that financial inclusion has a positive and significant effect on the standard of living measured by per capita income and consumption in CEMAC countries. It appears that access to a banking branch, deposits and loans leads to an increase in income and consumption. This result confirms our expectations. However, to confirm these results, we carried out a robustness test using the Generalized Equation Estimation (GEE) method and the results obtained confirm the positive effect of financial inclusion on the standard of living in the area.

CEMAC. However, despite this rather satisfactory result, it should be noted that financial inclusion remains low in the sub-region compared to West African countries. It is, therefore, necessary to implement policies allowing poor people to have access to financial services to improve their living conditions.

References

1. Jahan, S., De, J., Jamaludin, F., Sodsriwiboon P., Sullivan C. (2019). The Financial Inclusion Landscape in the Asia-Pacific Region: A Dozen Key Findings. IMF Working Paper No. 19/79. <https://doi.org/10.2139/ssrn.3442887>.
2. Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J, (2018). *The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution*, The World Bank. <https://doi.org/10.1596/978-1-4648-1259-0>.
3. Radcliffe, D. and Voorhies, R. (2012). "A digital pathway to financial inclusion", Available at SSRN 2186926. <https://doi.org/10.2139/ssrn.2186926>.
4. Ehrbeck, T., Lochan, R., Sinha, S., Tahliyani, N. and Zainulbhai, A. (2010). "Inclusive growth and financial security: The benefits of e-payments to Indian society", New York: McKinsey & Company.
5. Outreville, J. F. (1999). Financial development, human capital and political stability. United Nations Conference on Trade and Development. Financial development, human capital and political stability.
6. Hakeem, M., & Oluitan, O, (2012). Financial development and human capital in South Africa: a time-series approach, *Research in Applied Economics*, 4(3), 18. <https://doi.org/10.5296/rae.v4i3.1498>.
7. Evans, D, A., Green, C, J., & Murinde, V, J, (2002). Human capital and financial development in economic growth: new evidence using the translog production function, *International Journal of Finance and Economics*, 7(2), 123-140. <https://doi.org/10.1002/ijfe.182>.
8. Giri, S, M, A, (2014). The relationship between financial development indicators and human development in India, *International Journal of Social Economics*.
9. Ivanic, M., Martin, W., & Zaman, H, (2012). Estimating the short-run poverty impacts of the 2010–11 surge in food prices, *World development*, 40(11), 2302-2317. <https://doi.org/10.1016/j.worlddev.2012.03.024>.
10. Ozcan, B., & Kiliç, C, (2018). The Impact of Financial Development on Human Capital: Evidence From Emerging Market Economies, *International Journal of Economics and Financial Issues*, 8(1), 258.
11. Beck, T., Demirgüç-Kunt, A., & Levine, R, (2003). Law, endowments, and finance, *Journal of financial Economics*, 70(2), 137-181. [https://doi.org/10.1016/S0304-405X\(03\)00144-2](https://doi.org/10.1016/S0304-405X(03)00144-2).

12. Banerjee, R., Donato, R., & Maruta, A. A. (2021). The effects of financial inclusion on development outcomes: New insights from ASEAN and East Asian countries. In *Financial inclusion in Asia and Beyond* (pp. 54-97). Routledge.
13. Macharia, G. & Attoumane, A. S. (2005). « Renforcement des capacités des institutions de microfinance en Afrique : enjeux et perspectives », . *Techniques Financières et développement*, 78/mars,, pp.193-203.
14. Khandker, S. (2005). Micro-Finance and Poverty: Evidence Using Panel Data from Bangladesh World Bank Policy Research Working Paper 2945. <https://doi.org/10.1596/1813-9450-2945>.
15. Abdelkhalek T. (2006). "Efficiency Tests of Micro and Small Enterprise Financing in the Fight against Poverty: A Statistical Approach", in *Financial Development Facing Poverty* (dir .Mourji F, Decaluwé B, Plane P), *Economica*, Paris, pp. 140-166, <https://doi.org/10.22515/jfib.v1i2.1450>.
16. Addury, M. M. (2018). Impact of financial inclusion for welfare: Analyze to household level. *Journal of Finance and Islamic Banking*, 1(2), 90-104.
17. N'dri, L.M., Kakinaka, M. (2020). Financial inclusion, mobile money, and individual welfare: The case of Burkina Faso. *Telecommunications Policy*, Vol. 44 No. 3, p. 101926. <https://doi.org/10.1016/j.telpol.2020.101926>.
18. Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of econometrics*, 87(1), 115-143. [https://doi.org/10.1016/S0304-4076\(98\)00009-8](https://doi.org/10.1016/S0304-4076(98)00009-8).
19. Oyelami, L. O., & Ogundipe, A. A. (2020). An empirical investigation of remittances and financial inclusion nexus in Sub-Saharan Africa, *Cogent Business and Management* 7(1). <https://doi.org/10.1080/23311975.2020.1712126>.
20. Tchoffo, T. G., Nembot, N. L., & Djimoudjiel, D. (2020), Dynamic analysis of determinants of financial inclusion in Cameroon, *European scientific Journal*, 16(1), 106-121. <https://doi.org/10.19044/esj.2020.v16n1p106>
21. Datta, S. K., & Singh, K. (2019). Variation and Determinants of Financial Inclusion and association with Human Development: A Cross Country Analysis, *IIMB Management Review*. <https://doi.org/10.1016/j.iimb.2019.07.013>.
22. Peria, M. S. M., & Shin, M. Y. (2020). Financial Inclusion and Human Development, In *Oxford Research Encyclopedia of Economics and Finance*.
23. Boettke, P., & Subrick, J. R. (2003). Rule of law, development, and human capabilities. *Supreme Court Economic Review*, 10, 109-126. <https://doi.org/10.1086/scer.10.1147140>.
24. Outreville, J. F. (1999). Financial development, human capital and political stability. United Nations Conference on Trade and Development. Financial development, human capital and political stability.

25. Ahmad, Z., Khan, A, A., & Tariq, A, (2012). Stock market development and economic growth: A comparative study of Pakistan and Bangladesh, *African Journal of Business Management*, 6(8), 2985. <https://doi.org/10.5897/AJBM11.2188>.
26. Datta, S, K., & Singh, K, (2019). Variation and Determinants of Financial Inclusion and association with Human Development: A Cross Country Analysis, *IIMB Management Review*. <https://doi.org/10.1016/j.iimb.2019.07.013>.
27. Outreville, J. F. (1999). Financial development, human capital and political stability. United Nations Conference on Trade and Development. Financial development, human capital and political stability.
28. Ahmad, Z., Khan, A, A., & Tariq, A, (2012). Stock market development and economic growth: A comparative study of Pakistan and Bangladesh, *African Journal of Business Management*, 6(8), 2985. <https://doi.org/10.5897/AJBM11.2188>.
29. Datta, S, K., & Singh, K, (2019). Variation and Determinants of Financial Inclusion and association with Human Development: A Cross Country Analysis, *IIMB Management Review*. <https://doi.org/10.1016/j.iimb.2019.07.013>.