Financial Development and Income Inequality Across Different Income Brackets in Africa

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Abstract

The income inequality gap has persisted and worsened in African nations, posing significant socio-economic challenges to the continent. Financial development has been proposed as a potential mechanism for reducing income inequality. However, various studies have produced inconsistent results regarding the finance-income inequality nexus. Against this background, this paper employs a two-step system GMM on a panel of 20 African countries for the period 2004–2017 to investigate this nexus. The analysis was conducted on the overall sample and across different income categories of African nations. The study reveals that the relationship between various aspects of financial development and income inequality differs between market (pre-transfer) and net (post-transfer) inequality measures, and across different income groups in African countries. The study highlights that policymakers in African countries need to prioritize comprehensive financial sector development strategies that go beyond merely increasing access to financial services. Policies should aim to enhance financial depth while simultaneously improving efficiency and stability, with a particular focus on the transition from low to middle-income status.

Keywords: Income inequality; financial development; income category; GMM
JEL Classification Codes: D63, E44, G20

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1. Introduction

Statistics on inequality in Africa indicate growing disparities among the poor and rich. About 36.5% of national income is held by 60.8% of the poor while 4.8% of the rich account for 18.8% of total income (African Development Bank, n.d.). African disparity, particularly acute in Africa, stands in stark contrast to the region's recent economic growth narratives. As countries across the continent strive for economic development, the growing gap between the rich and poor raises critical questions about the nature and sustainability of this progress. Some empirical works document inadequate financial resources as a contributor to income inequality in Africa (Jauch & Watzka, 2016a; Odusola et al., 2017). Seminal work by Kuznets (1955) also acknowledges inequality narrowing role of financial development. Greenwood and Jovanovic (1990) also emphasis the significant role economic development plays in in reducing income inequality.

Finance-income inequality nexus, however, remains complex and contentious. Extant literature draws mixed results (Bolarinwa et al., 2021; Jauch & Watzka, 2016; Mbona, 2022; Mushtaq & Bruneau, 2019; Odusola et al., 2017; Omar & Inaba, 2020; Ouechtati, 2020; Seven & Coskun, 2016). In the context of Africa, where financial systems are rapidly evolving amidst unique socio-economic challenges, understanding this relationship becomes crucial for informed policymaking. Evidence on finance-income inequality nexus is therefore imperative for researchers and policymakers in Africa. Additionally, whether the effect of financial development differs with income categories of African countries is important in tailoring policies that are specific do different level of economic development in the context of Africa. This inquiry could provide valuable insights into how financial development influences income inequality and whether the patterns observed in other regions apply similarly in Africa,

Given the unique characteristics of African economies, including high levels of informal economic activity, limited access to traditional banking services, and the rapid adoption of mobile financial technologies, the dynamics of financial development in this region may differ significantly from those observed in more developed economies. These distinctive features necessitate a nuanced examination of how various dimensions of financial development such as access, depth, stability, and efficiency interact with income inequality in the African context. Furthermore, the heterogeneity among African countries in terms of economic structures, institutional quality, and stages of financial sector development suggests that finance-inequality nexus may not be uniform across the continent. This study, therefore, investigated financial development-income inequality nexus by paying close attention to heterogeneity in income group for African countries. By doing so, the study sought to contribute to a deeper understanding of the mechanisms through which financial development impacts income distribution in developing economies, potentially informing more effective policy interventions to promote inclusive growth in Africa.

The novelty of this study is threefold. First, it employs a multidimensional approach to financial development in examining its impact on income inequality in Africa. This multifaceted approach allows for the analysis and understanding of which financial development indicators require much attention in framing of financial policies that aim to narrow widening income inequality gap in Africa. Secondly, analyzing finance-inequality nexus across different income categories of Africa helps in understanding if the effect of financial development on income inequality is uniform across all income levels or if it exhibits distinct patterns in low versus middle-income African countries. This in line with Jauch Watzka (2016a) study that shows that finance-income inequality

nexus varies with income category of economies. Lastly, by employing a panel dynamic approach, this study accounts for the potential endogeneity and persistence in income inequality, providing more robust estimates of the relationship between financial development and income distribution over time.

Subsequently, the study finds that finance-income inequality nexus differs between market and net inequality measures and across different income group for African Countries. The remainder of this paper is organized as: section 2 covers review of existing literature, part 3 discusses analytical approach and data, section 4 presents results while section 5 ends with conclusion and policy.

2. Literature review

Extensive extant literature has documented finance-income inequality nexus. The seminal work of Kuznets (1955) was the first to study the link between financial development and income inequality. Kuznets curve, as is popularly known in the literature, postulates a non-linear relationship between financial development and income-inequality. According to this hypothesis, economies at the nascent stage of development experience widening income inequality but eventually realize lower income inequality at the maturity stage. Greenwood and Jovanovic (1990) later extended the works of Kuznets and developed the GJ hypothesis also known as U-shaped hypothesis. This hypothesis also predicts nonlinear relationships of finance-inequality nexus.

A study by Jauch and Watzka (2016b) contrast Kuznets's inverted U-shaped hypothesis. The study found that inequality narrows at the primary stage of financial development but widens after surpassing a certain threshold. Secondly, even after performing several robustness checks, the study found that better financial development widens inequality. However, Kuznets' hypothesis only holds true for the low-income category countries. The study findings however reinforce the first part of Greenwood–Jovanovich (GJ) hypothesis and show that the use of financial development raises inequality.

A study by Seven and Coskun (2016) predicts a positive finance-inequality nexus. Development in the banking sector leads to higher income inequality since most financial services are concentrated in towns that are beyond the reach of the poor segment of society. This is compounded by lack of collateral by the poor, government policies that do not favor marginalized groups, and inadequate access to credit markets. However, Cong Nguyen et al.(2019) highlighted that income inequality is reduced as emerging economies realize financial development.

Destek et al. (2020) study supports GJ hypothesis. The study found that as the banking sector develops in Turkey, income inequality tends to widen. However, inequality narrows as systematic risks in the banking sector are minimized. Similar findings are presented by (Kavya & Shijin, 2020) who found a U-shaped pattern between finance-income inequality nexus in high income economies. Shahbaz et al. (2015) study also confirmed GJ hypothesis for Iranian economy. The authors propose an inclusive economy where economic and financial sector provides access to financial services to the poor at cheaper cost and provision of capital, human capacity building, and technological innovation to reduce income inequality. Access to capital is beneficial to the poor through development of entrepreneurial skills, re-allocation of resources increases income access to the poor, while innovation is key in human capital development.

In the context of Africa, two studies stand. Okafor et al. (2023) investigated finance-income inequality nexus. The findings are in consensus with other previous studies in other economic regions. The study found that financial development has an income inequality-reducing effect in Africa. This was observed across different dimensions of financial development. Accessible financial products and services can reduce income inequality. Another study by Tita & Aziakpono (2016) concluded that finance-inequality nexus is non-linear and ranges from an inverted u-shape to a u-shape depending on the measure of financial development. To decrease income inequality, the paper proposes an inclusive policy that focuses on the quality of suitability of financial products that encourages usage and protects consumers.

The preceding review highlights several gaps in the literature. First, the finance-income inequality nexus remains contentious. The Kuznets and GJ curve hypotheses apply in some economies but fail to hold in others. Second, previous studies often use various dimensions of financial development, which can yield conflicting results. For instance, one study focusing solely on Africa used only a single dimension of financial development. Given that financial development is multifaceted, relying on only one proxy may lead to misleading conclusions. Third, while a few studies have explored the relationship between financial development and income inequality in Africa, they generally fail to account for the economic dynamics across different income categories within the continent. Unlike emerging and developing economies in other regions, no study has yet investigated how financial development affects income inequality across low- and middle-income African countries. Therefore, this study addresses these gaps by answering the following research questions: (1) What are the effects of different financial development indicators on income inequality in Africa? (2) Does the effect of financial development on income inequality vary by income category within African countries?

3.0 Methodology and Data

3.1 Analytical lens

Given that T=14 and $N = 20$ such that $T < N$ and the dynamic behavior of income inequality, the dynamic two-step system generalized methods of moments (GMM) proposed by Blundell and Bond (1998) and Roodman (2009) are the preferred estimation approach. The two-step system GMM superiority as an efficient estimator emanates from: (i) use of instruments to correct endogeneity (ii) ability to control fixed effects and omitted variable biases, and (iii) accommodates the dynamic behavior of income inequality. To solve the problem of instruments overfitting biases that comes with the system GMM, the paper implemented instruments collapse (Roodman, 2009). The test for robustness of the estimates was evaluated by conducting the serial correlation $AR(2)$, the Sargan test and the Hansen tests. The dynamic empirical linear and non-linear model is presented as:

$$Gini_{it} = \theta_0 + \theta_1 Gini_{it-1} + \sum_{k=2}^{5} \theta_k lnFS_{it} + \sum_{w=5}^{8} \theta_w lnFS_{it}{}^2 + \theta_9 lnGDP\_capita_{it} + \theta_{10} lnGDP\_capita_{it}^2 + \sum_{j=11}^{13} \theta_j X_{it} + \mu_{it} \qquad (1)$$

In equation (1), the income inequality is measured by both gross and net Gini coefficient ($Gini_{it}$). θ_k $(k = 4)$ is a set of coefficients for the four financial dimensions namely: financial access, financial depth, financial efficiency, and financial stability while $\theta_w (w = 4)$ is the coefficient of

their squares respectively. Following the hypothesis of a linear negative finance-income inequality relationship, the priori expectation is that $\theta_k < 0$ and statistically significant. However, inverted U-shape hypothesis or non-linear relationship between financial development and income inequality is observed if $\theta_k > 0$ and $\theta_w < 0$ holds and significant. Equally, GJ hypothesis holds if $\theta_9 > 0$ and $\theta_{10} < 0$. X_{it} is a set of control variables namely: inflation, trade openness, and dependency ratio (Okafor et al., 2023). GDP per capita, financial development, trade openness, and dependency ratio were log transformed to correct for skewness in their distribution. Lastly, each financial development indicator was estimated in a separate model along with the sets of control variables to isolate the confounding effects from other indicators of financial development. We include income category dummy in equation (1). Dummy variable $\{D = 1\ if\ middle - income\ category\ and\ zero\ if\ low - income\ ategory\}$ together with its interactions with the financial development is incorporated in equation (1). The modified equation is specified as:

$$Gini_{it} = \theta_0 + \theta_1 Gini_{it-1} + \sum_{k=2}^{5} \theta_k lnFS_{it} + \sum_{k=5}^{8} \theta_g D * lnFS_{it} + \sum_{w=9}^{12} \theta_w lnFS_{it}{}^2 + \theta_{13} lnGDP\_capita_{it} + \theta_{14} lnGDP\_capita_{it}^2 + \sum_{j=15}^{17} \theta_j X_{it} + \theta_\lambda * D + \mu_{it} \qquad (2)$$

In equation (2), D measures the differences in the intercepts such that $\theta_\lambda = (\theta_{1i} - \theta_{0i})$ while θ_g tests whether the effect of financial development on income inequality differs between middle-income and low-income African countries.

3.2 Data

The study analyzed data from 20 African countries spanning 2004-2017. Income inequality indicators were sourced from Slot's Standardized World Income Inequality Database (SWIID) (2020) version 9.6 of the SWIID while financial development variables were sourced from the Global Financial Development Database (GFDD). The remaining variables were gathered from the World bank data indicator (WDI). Table 1 presents a brief definition of the variables.

Table 1: Overview of Variables and Data Sources

Variable	Definition	Proxy		Data sources
Gini	Income inequality Measurements	(i)	Post-tax, post-transfer income (Net Gini)	SWIID
		(ii)	Pre-tax, pre-transfer income (Market Gini)	
Financial Development	(i) Number of commercial banks branch per 100,000 adults	(i)	Financial Access	GFDD
		(ii)	Financial Depth	
	(ii) Private credit by deposit money banks to GDP (%)	(iii)	Financial Efficiency	
	(iii) Bank's net interest margin (%)	(iv)	Financial Stability	
	(iv) Bank Z-score, capturing the probability of default of a commercial banking system			
GDP per capita (Constant 2015 $)	Gross domestic product in USD divided by midyear population			WDI
Dependency ratio	The ratio of dependent (younger than 15 or older than 64) to working population (between 15–64)			WDI
Trade openness	Ratio of total of export and import to GDP (%)			WDI

Note:

(i) WDI denotes World Development Indicators
(ii) GFDD denotes Global Financial Development Database
(iii) SWIID denotes Standardized World Income Inequality Database

The variation in the mean suggests heterogeneity across the two income categories. For instance, income inequality (50.359) is higher in middle-income African countries than the low-income categories (45.530). Equally, financial development significantly differs between the two subsamples (Table 2).

Table 2: Descriptive statistics

	Overall sample			Low-income African Countries			Middle-income African Countries		
	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.	Obs	Mean	Std.Dev.
Net_gini	274	45.5	12.3	193	43.5	12.0	81	50.4	11.5
Market_gini	274	48.0	11.9	193	45.4	10.2	81	54.2	13.4
Financial access	271	9.9	14.1	192	3.6	1.8	79	25.2	18.6
Financial depth	275	24.9	20.1	191	16.5	6.4	84	43.9	26.8
Financial efficiency	255	6.4	2.6	190	7.0	2.6	65	4.6	1.5
Financial stability	269	15.1	5.5	193	14.8	5.3	76	15.9	6.0
GDP per capita	280	2987.4	3452.5	196	1076.4	726.3	84	7446.5	3175.1
Inflation	279	5.9	5.4	195	6.1	5.3	84	5.3	5.5
Dependency ratio	280	79.8	18.2	196	89.6	9.8	84	57.1	11.8
Trade Openness	280	73.5	37.1	196	59.1	20.5	84	107.2	44.7

4. Results

This section represents the econometric results from the two-step system GMM. Both gross (market) and net Gini were used as measures of income inequality. Table 3 and Table 5 (***see appendix***) presents estimates for the overall sample with each indicator of financial development modelled separately. We report mixed results for each indicator of financial development. The coefficients for financial access and its squared term are not statistically significant across models (1) and (5). This indicates that the relationship between financial access and income inequality, whether linear or non-linear, does not significantly income inequality. The lack of significance suggests that financial access alone might not be a strong determinant of market-based income inequality.

Financial depth has a significant positive effect on the market Gini and net Gini (model 3 and 6), suggesting that increased financial depth is associated with higher income inequality. However, the squared term for financial depth is negative and significant, indicating an inverted U-shape relationship. This implies that while initial increases in financial depth exacerbate income inequality, further increases eventually lead to a reduction in inequality. This result highlights the complex and non-linear relationship between financial depth and income inequality. Financial efficiency is negatively associated with market Gini (model 3), although the coefficient is only marginally significant ($p<0.1$). The squared term for financial efficiency is positive and marginally significant, suggesting a non-linear relationship where initial increases in financial efficiency reduce inequality, but further increases may lead to a rise in inequality. However, financial efficiency does not significantly impact net Gini (model 7). This lack of significant results for financial efficiency in the context of net income inequality suggests that efficiency might not be a critical factor in determining net income inequality.

Financial stability does not show a significant effect on both market and net Gini (models 4 and 8). The results suggest that variations in financial stability might not have a substantial impact on inequality in the overall sample of African countries. The effect of the effects of inflation are inconsistent and not statistically significant in all models, while trade openness has mixed significance, indicating varied impacts on inequality.

Table 3: The effect of financial development on inequality (Market gini)

VARIABLES	(1) market Gini	(2) Market Gini	(3) Market Gini	(4) Market Gini
L. Market Gini	-0.325***	-0.285**	-0.129	-0.216
	(0.0569)	(0.113)	(0.103)	(0.127)
Financial access	0.632			
	(0.542)			
Financial access squared	-0.000973			
	(0.00784)			
GDP per capita	0.00426***	0.00331	-0.000627	0.00327
	(0.00127)	(0.00238)	(0.00580)	(0.00202)
GDP per capita squared	-4.23e-07***	-2.82e-07**	-3.45e-07**	-2.59e-07**
	(8.62e-08)	(1.23e-07)	(1.53e-07)	(9.74e-08)
Inflation	0.193	-0.00866	0.566	0.0805
	(0.386)	(0.594)	(0.837)	(1.042)
Log age dependency	16.35	-8.670	-58.33	-13.34
	(10.45)	(7.836)	(39.32)	(9.795)
Log trade openness	7.725**	-1.035	29.30	-3.923
	(3.299)	(3.057)	(17.06)	(5.354)
Financial depth		0.895***		
		(0.232)		
Financial depth squared		-0.00948***		
		(0.00200)		
Financial efficiency			-20.24*	
			(11.08)	
Financial efficiency squared			1.550*	
			(0.765)	
Financial stability				-4.003
				(2.559)
Financial stability squared				0.123
				(0.0728)
Constant	-50.87	87.25**	233.4*	157.1**
	(58.40)	(32.67)	(119.2)	(68.15)
Observations	245	248	230	244
Prob > F	0.000	0.000	0.000	0.000
AR (1): (Pr > Z)	(0.001)	(0.002)	(0.001)	(0.001)
AR (2): (Pr > Z)	(0.654)	(0.124)	(0.025)	(0.005)
Hansen: (Pr > χ2)	(0.440)	(0.756)	(0.796)	(0.496)

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

GDP Per capita estimates meet the priori expectations such that the coefficient of the linear form is significant and positive while the coefficient for the non-linear form is significant and negative. The influence of GDP per capita therefore mirrors the Kuznets curve or the GJ inverted u-shaped hypothesis (***Figures 1 and 2***). The results point to the significance of economic growth in alleviating income inequality in society

Figure 1:GJ Inverted U-shaped Curve (Net Gini)

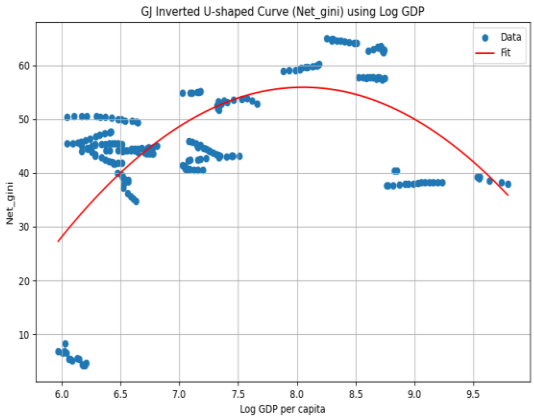
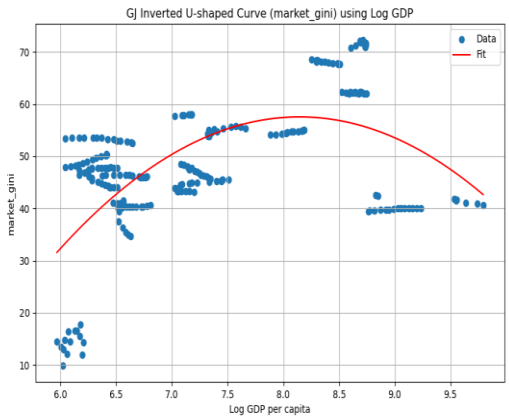


Figure 2:GJ Inverted U-shaped Curve (market Gini)



Tables 4 (and Table 6; ***see appendix)*** presents the interaction of financial development indicators with the income categories of African countries. This is to assess whether finance-income inequality differs across the middle- and low-income African countries. The interaction terms between financial development indicators and the middle-income dummy variable presents a clear pattern across both net and market Gini models. Most of these interactions lack statistical significance, suggesting that the effects of financial development on inequality are largely consistent across different income categories in African countries. This consistency is observed for financial access, financial depth, and financial stability, as well as for financial efficiency.

However, there is one notable exception that stands out: the interaction term for financial efficiency is statistically significant at the 5% level and does not conform to Kuznets u-shape hypothesis. In other words, income inequality in middle income countries will narrow by more than 5.924 units but widens by more than 10.38 as compared to low-income countries afterwards. This significant interaction reveals that the effect of financial efficiency is more pronounced in middle-income African countries than in low-income African countries. Conclusively, the finance-income inequality nexus varies with the level of economic development in African nations

Table 4: The effect of financial development on inequality (Market Gini) in different income categories of African countries

VARIABLES	(9) net Gini	(10) net Gini	(11) net Gini	(12) net Gini
L.net_Gini	-0.416***	-0.402***	-0.835***	-0.368***
	(0.0602)	(0.0653)	(0.197)	(0.0648)
Financial access	0.550			
	(0.607)			
Financial access*middle	-0.206			
	(1.607)			
Dummy (middle income)	0.668	2.577	-70.91	-19.21
	(32.52)	(19.59)		(40.39)
GDP per capita	0.00498***	0.00411**	-0.000556	0.00409***
	(0.00145)	(0.00156)	(0.00412)	(0.00106)
GDP per capita squared	-4.34e-07***	-3.32e-07***	-1.05e-07	-3.22e-07***
	(7.34e-08)	(1.02e-07)	(1.79e-07)	(8.34e-08)
Inflation	0.249	0.177	0.473	0.394
	(0.353)	(0.261)	(0.503)	(0.249)
Log age dependency	23.40**	-3.021	21.13	2.211
	(8.255)	(15.58)	(16.08)	(4.808)
Log trade openness	10.96**	5.773	41.37**	7.066
	(5.044)	(7.403)	(16.30)	(5.247)
Financial depth		0.00707		
		(0.603)		
Financial depth*middle		-0.132		
		(1.611)		
Financial efficiency			-5.924**	
			(2.047)	
Financial efficiency*middle			10.38**	
			(4.033)	
Financial stability				-0.268
				(1.303)
Financial stability*middle				1.230
				(3.401)
Constant	-96.00***	45.77	-139.8*	19.20
	(31.19)	(65.35)	(76.12)	(41.19)
Observations	245	248	230	244
Prob > F	0.000	0.000	0.000	0.000
AR (1): (Pr > Z)	(0.004)	(0.014)	(0.000)	(0.005)
AR (2): (Pr > Z)	(0.008)	(0.010)	(0.752)	(0.036)
Hansen: (Pr > χ2)	(0.118)	(0.279)	(0.203)	(0.161)

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5. Conclusion

Based on the analysis of financial development and income inequality in African countries, several key conclusions and policy implications can be drawn. The study reveals that the relationship between various aspects of financial development and income inequality differ between market (pre-transfer) and net (post-transfer) inequality measures and across different income group for African Countries. Notably, financial depth demonstrates an inverted U-shaped relationship with both market and net Gini indices, suggesting that while initial increases in financial depth may exacerbate inequality, further development eventually leads to a reduction in income disparities. This finding underscores the importance of sustained and comprehensive financial sector development in African countries.

The analysis also highlights significant differences in how financial development impacts inequality across income categories. Particularly noteworthy is the differential effect of financial efficiency on net inequality between middle-income and low African countries. While improved financial efficiency tends to reduce net inequality in middle income African nations, this effect is more in middle income than in low-income African countries. This finding emphasizes the need for tailored policy approaches that account for a country's stage of economic development when implementing financial sector reforms aimed at reducing inequality.

Considering these findings, policymakers in African countries should prioritize comprehensive financial sector development strategies that go beyond merely increasing access to financial services. Policies should aim to enhance financial depth while simultaneously improving efficiency and stability, with a particular focus on the transition from low to middle-income status. Furthermore, given the persistent significance of GDP per capita in shaping inequality patterns, efforts to reduce income disparities should be integrated with broader economic development strategies. Policymakers should also be mindful of the potential short-term increases in inequality that may accompany initial stages of financial development and consider implementing complementary social policies to mitigate these effects while the long-term benefits of financial development materialize.

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Appendix

Table 5: The effect of financial development on inequality (Net Gini)

VARIABLES	(5) net Gini	(6) net Gini	(7) net Gini	(8) net Gini
L.net_Gini	-0.431***	-0.372***	-0.350	-0.755**
	(0.0664)	(0.0664)	(0.256)	(0.319)
Financial access	0.497			
	(0.707)			
Financial access squared	-5.11e-05			
	(0.0104)			
GDP per capita	0.00473***	0.00390***	0.00814	0.00946*
	(0.00134)	(0.00112)	(0.00474)	(0.00444)
GDP per capita squared	-4.17e-07***	-2.97e-07***	-4.64e-07**	-6.51e-07**
	(7.56e-08)	(4.96e-08)	(1.88e-07)	(2.68e-07)
Inflation	0.331	0.0200	0.755	-1.333
	(0.525)	(0.321)	(1.515)	(1.396)
Log age dependency	23.25**	-1.537	20.53	31.45
	(9.501)	(11.44)	(38.62)	(27.66)
Log trade openness	11.67***	2.602*	1.236	20.14
	(3.558)	(1.312)	(14.95)	(12.69)
Financial depth		0.705***		
		(0.0911)		
Financial depth squared		-0.00770***		
		(0.000952)		
Financial efficiency			-1.775	
			(8.039)	
Financial efficiency squared			0.149	
			(0.607)	
Financial stability				0.0353
				(2.727)
Financial stability squared				-0.00408
				(0.0851)
Constant	-97.41*	42.86	-49.11	-159.3
	(53.14)	(48.87)	(163.0)	(181.6)
Observations	245	248	230	244
Prob > F	0.000	0.000	0.000	0.000
AR (1): (Pr > Z)	(0.004)	(0.001)	(0.002)	(0.054)
AR (2): (Pr > Z)	(0.113)	(0.021)	(0.120)	(0.110)
Hansen: (Pr > χ2)	(0.215)	(0.521)	(0.336)	(0.040)

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6: The effect of financial development on inequality (Net Gini) in different income categories of African countries

VARIABLES	(13) market Gini	(14) market Gini	(1) market Gini	(16) market Gini
L.market_Gini	-0.310***	-0.340***	-0.301***	-0.285**
	(0.0464)	(0.0616)	(0.0736)	(0.120)
Financial access	0.570			
	(0.410)			
Financial access*middle	0.0602			
	(1.129)			
Dummy (middle income)	-2.455	-11.19	10.15	-99.48
	(13.72)	(39.69)	(43.14)	(253.0)
GDP per capita	0.00449**	0.00365**	0.00603	0.00393
	(0.00168)	(0.00134)	(0.00389)	(0.00248)
GDP per capita squared	-4.54e-07***	-3.42e-07***	-3.83e-07**	-2.89e-07
	(1.00e-07)	(5.27e-08)	(1.45e-07)	(1.79e-07)
Inflation	0.187	0.0258	0.518	0.385
	(0.298)	(0.431)	(0.717)	(0.417)
Log age dependency	17.70**	-11.49	9.320	-7.453
	(7.788)	(13.47)	(23.73)	(7.575)
Log trade openness	9.122*	3.535	1.026	-1.220
	(4.438)	(3.909)	(7.478)	(12.03)
Financial depth		-0.122		
		(0.400)		
Financial depth*middle		0.306		
		(1.124)		
Financial efficiency			0.412	
			(1.830)	
Financial efficiency*middle			-2.010	
			(6.570)	
Financial stability				-1.636
				(4.043)
Financial stability*middle				5.396
				(13.62)
Constant	-62.75	99.71	3.502	120.8
	(40.48)	(64.39)	(94.52)	(110.4)
Observations	245	248	230	244
Prob > F	0.000	0.000	0.000	0.000
AR (1): (Pr > Z)	(0.001)	(0.003)	(0.002)	(0.514)
AR (2): (Pr > Z)	(0.004)	(0.003)	(0.015)	(0.420)
Hansen: (Pr > χ2)	(0.391)	(0.638)	(0.627)	(0.687)

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1