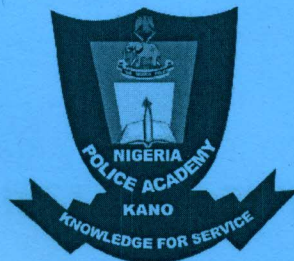


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Financial Inclusion in Africa: Do Creditors' Rights Protection and Information Sharing Matter?

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Abstract

Using the Global Findex database, we examine whether creditors' rights protection and information sharing matter for financial inclusion in a sample of 36 countries in Africa. Our findings show that only information sharing is important for financial inclusion, particularly when country-level characteristics such as legal origin, income, population density, political stability, and bank competition are not controlled for. We suggest that better information sharing may lead to greater financial inclusion in African countries.

Keywords: Financial inclusion; Creditors' rights protection; Information sharing; Africa JEL classifications: G21; O16

Introduction

A core aspect of financial sector development is financial inclusion. Financial inclusion is the process of ensuring that individuals have access to and use financial services offered by formal financial institutions. Financial inclusion begins with owning a deposit account at a formal financial institution or through a mobile service provider (Demirgüç-Kunt, Klapper & Singer, 2017). Improvements in individuals' ability to have access to financial services tend to increase the quality and quantity of financial services and this may enhance the efficiency of the financial sector. Bruhn and Love

(2014) note that financial inclusion provides opportunities for less privileged individuals to be employed and increase their income. Financial inclusion has been identified as crucial for alleviating poverty and promoting inclusive economic growth (Demirgüç-Kunt *et al.*, 2017; Demirgüç-Kunt, Klapper, Singer & Van Oudheusden, 2015). Allen, Demirgüç-Kunt, Klapper and Peria (2016) argue that financial exclusion is harmful to the economy when individuals are involuntarily excluded from the financial system due to barriers such as high account fees, large distances and lack of suitable products among others. The prevalence of financial

exclusion in most countries was attributed as a cause of the global financial crisis (Chakrabarty, 2012). This is because financial inclusion is a key policy to ensuring financial stability.

Financial inclusion is low in Africa (Zins & Weill, 2016; Beck & Cull, 2015). Many African countries have introduced different policies geared towards reducing financial exclusion in recent years. For example, Nigeria launched the National Financial Inclusion Strategy in 2012 aimed at reducing the financial exclusion rate from 46.3% in 2010 to 20% by 2020 (Central Bank of Nigeria, 2012). Similarly, Uganda and Sierra Leone recently introduced the National Financial Inclusion Strategy 2017-2020 and National Strategy for Financial Inclusion 2017-2020 respectively. Despite these financial inclusion strategies, the rate of financial inclusion may not significantly improve due to the weak protection of creditors' rights and poor information sharing inherent in most countries in Africa, which may cause individuals to be involuntarily excluded from the financial system.¹

Our study is novel because it is the first to follow an empirical approach to understand the role of creditors' rights protection and information sharing in financial inclusion in Africa. The rest of this study is organised as follows. Section 2 provides the theoretical background and Section 3 focuses on the data. Section 4 presents the empirical results and Section 5 concludes.

¹ McDonald and Schumacher (2007) argue that countries with better protection of creditors' rights and information sharing have deeper financial sector.

Theoretical Background

Power Theory of Credit

The power theory of credit was first espoused in the work of Townsend (1979) and later developed by Aghion and Bolton (1992). The theory argues that formal financial institutions (creditors) would be averse to lend if they do not have the power to enforce loan repayment by borrowers and take over collateral in the event of default. Granting of credit depends on the existence of laws that protect the right of the creditors and on the quality of procedures that leads to repayment (McDonald & Schumacher, 2007). The power of creditor is reflected in the extent to which the legal system is able to enforce contractual arrangements via protection of creditors' rights. Djankov, McLeish and Shleifer (2007) show that the credit market expands after improvements in creditors' rights. Better protection of creditors' rights makes formal financial institutions willing to lend and this may encourage more individuals to source credit from them, thus fostering financial inclusion.

Information Theory of Credit

The information theory of credit is grounded in the works of Jaffe and Russell (1976), and Stiglitz and Weiss (1981). This theory argues that information asymmetry limits the volume of lending by formal financial institutions. Information asymmetry is a situation where borrowers have more or better information than lenders. Information sharing improves lenders' knowledge of borrowers, hence reducing information asymmetry. Information sharing refers to the joint use of

borrowers' information by lenders to assess loan applications. The lenders share information among themselves through public and private credit registries. Information sharing may increase the lending activity of formal financial institutions (Pagano & Jappelli, 1993). Djankov *et al.* (2007) argue that lenders are not much concerned about providing credit to finance nonviable projects when adequate credit information is available about the borrower. Information sharing reduces the incidence of adverse selection by lenders (Pagano & Jappelli, 1993), reduces credit risk (Jappelli & Pagano, 2002), encourages borrowers to fulfill loan obligations (Behr & Sonnekalb, 2012), and reduces financing constraints (Brown, Jappelli & Pagano, 2009). Morscher, Horsch and Stephan (2017) show that information sharing spur financial inclusion.

Data

Based on the World Bank's 2014 Global Findex database, we focus on a sample of 36 African countries.² The 2014 Global Findex database provides data on financial inclusion indicators drawn from survey data obtained from almost

150,000 randomly selected people aged 15 and above in 143 countries.

Financial Inclusion: Following Allen, Carletti, Cull, Qian, Senbet and Valenzuela (2014), we measure financial inclusion using account at a formal financial institution and loan from a formal financial institution in the past year. An account at a formal financial institution refers to the percentage of respondents with either a self or joint account at a bank, credit union, another financial institution, or the post office (if applicable) including respondents who reported having a debit card. Loan from a formal financial institution represents the percentage of respondents who report obtaining credit from a bank, credit union, microfinance institution, or another financial institution in the past 12 months.

Creditors' Rights Protection: This is measured by legal rights index which shows the extent to which collateral and bankruptcy laws protect the rights of borrowers and lenders. The index measures the power of creditors and ranges between 0 and 12, with higher scores indicating better protection of creditors' rights.

Information Sharing: It is measured by the depth of credit information index. The index measures the rules affecting the scope, accessibility, and quality of credit information available through public or private credit registries. It ranges from 0 to 8, with higher scores indicating availability of more credit information.

Control Variables: These include some country-level characteristics

²The 2014 Global Findex database covers 37 countries in Africa. The countries are: Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Chad, Congo Democratic Republic, Congo Republic, Cote d'Ivoire, Egypt, Ethiopia, Gabon, Ghana, Guinea, Kenya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia and Zimbabwe. Somalia is exempted from our sample due to non-availability of data on creditors' right and information sharing for 2014.

which have been argued to be important for financial inclusion. They are legal origin, income, population density, political stability, and bank competition. In Africa, countries are either of British or French legal origin. Morscher *et al.* (2017) show that the rate of financial inclusion tends to be greater in British legal origin countries than French legal origin countries. British and French legal origins are captured using dummy variables. British (French) legal origin dummy variables are constructed by assigning a value of 1 if a country has either British (French) legal origin or 0 if French (British) legal origin. There is evidence that income promotes financial inclusion (Allen *et al.*, 2014; Sarma & Pais, 2011). We measure income by the logarithm of GDP per capita. Allen *et al.* (2014) argue that

population density is crucial for financial inclusion in Africa. Population density is measured by the number of people per square kilometre and it is used in its logarithm form. Political stability leads to greater financial inclusion (Allen *et al.*, 2016). Political stability is measured by Political stability index. The index score lies between 0 and 100, with higher scores indicating higher levels of political stability. Love and Peria (2012) find that countries with competitive banking systems experience higher levels of financial inclusion. We measure bank competition using the Boone indicator which measures the degree of competition based on profit efficiency in the banking market. The higher the value, the lower the degree of bank competition.

Table 1. Summary Statistics

Data	Source	Mean	Standard deviation	Minimum	Maximum
Account at formal financial institution (% age 15+)	2014 Global Findex	25.57	19.01	3.49	82.21
Loan from a formal financial institution in the past year (% age 15+)	2014 Global Findex	5.90	4.14	1.37	17.06
Legal rights index	World Development Indicators (WDI)	5.03	1.95	1	10
Depth of credit information index	WDI	2.03	2.91	0	8
British legal origin	Global Development Network (GDN)	0.36	0.49	0	1
French legal origin	GDN	0.64	0.49	0	1
GDP per capita (in logarithm)	WDI	7.29	1.01	5.66	9.29

Population density (in logarithm)	WDI	3.83	1.32	1.07	6.43
Political stability index	World Governance Indicators	27.95	20.33	3.81	84.29
Boone indicator	Global Financial Development Database	-0.00	0.21	-0.26	1.13

Empirical Results

We estimate the model using the ordinary least squares (OLS) method. The constant parameter is suppressed when British and French legal origins are incorporated into the model in order to avoid dummy variable trap. Table 2 reports the cross-sectional regression results. Concerning creditors' rights protection and

information sharing, the results show that only information sharing has a positive and statistically significant effect on account at formal financial institution and loan from a formal financial institution when the control variables are not included in the model. This means that information sharing promotes financial inclusion when country-level characteristics are not controlled for.

Table 2. Cross-sectional Regression Results

	Account at a formal financial institution		Loan from a formal financial institution	
Constant	17.02(8.31)**		3.40(1.14)*	
Creditors' rights protection	0.10(1.72)	0.94(1.18)	0.27(0.29)	0.16(0.27)
Information sharing	3.97(1.34)*	0.40(1.26)	0.57(0.25)*	0.04(0.26)
British legal origin		-95.15(29.02)*		-13.28(7.72)***
French legal origin		-100.78(29.53)*		-15.99(8.08)***
Income		13.56(3.45)*		1.93(0.83)**
Population density		4.18(1.94)*		1.41(0.62)**
Political stability		0.10(0.14)		0.02(0.04)
Bank competition		-4.71(7.93)		-5.22(2.19)**
<i>Model Diagnostics</i>				
F-statistic	6.37*	41.60*	4.82**	47.73*
R ²	0.37	0.90	0.20	0.84

Notes: *, ** and *** indicate statistically significant at 1%, 5% and 10% significance level. Also, standard errors are presented in parentheses and clustered by country.

Source: Computed by authors

Regarding the control variables, British legal origin has a lesser negative effect on account at a formal financial institution and loan from a formal financial institution than French legal origin. These

findings indicate that more individuals are financially included in British legal origin countries than French legal origin countries. Income and population density are positively relatively to account at a formal

financial institution and loan from a formal financial institution. This implies that higher income and densely populated countries tend to experience greater financial inclusion. Bank competition has a negative

Conclusion

Literature suggests that creditors' rights protection and information sharing are important for financial sector development. In this paper, we examine whether creditors' rights protection and information sharing matter for financial inclusion in a cross-section of 36 countries in Africa. Our empirical results show that only information sharing promotes financial inclusion by promoting account ownership and use of formal credit. However, creditors' rights protection and information sharing are not important for financial inclusion when country-level characteristics such as legal origin, income, population density, political stability, and bank competition are controlled for. In terms of policy implication, we suggest that better information sharing may lead to greater financial inclusion in African countries.

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Appendix I. Correlation Matrix

	A	B	C	D	E	F	G	H	I	J
A	1									
B	0.72*	1								