

FIRM SPECIFIC FACTORS AND ACCESS TO FINANCIAL SERVICES

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Abstract

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An inclusive financial system is critical to economic development, poverty alleviation and reducing inequality. Access to finance is therefore integral to economic and human development. This paper, using data of Kenyan banks examines firm-specific determinants of access to financial services. Results indicate that firm (total assets and capitalisation) is strongly and positively associated with access to financial services. A case study review of growth trajectory of a local Kenyan bank corroborates the empirical findings.

1. Introduction

An inclusive financial system is critical to economic development, poverty alleviation and reducing inequality. Access to finance is therefore integral to economic and human development. With only 19% of Kenyans having access to formal financial system (Financial Access Survey, 2006), in the Kenyan context the topic of access to finance is a vital economic issue to be addressed if Kenya is to achieve aspirations outlined in the Vision 2030.

Kenya's Vision 2030 is the economic blue print for transforming Kenya into a newly industrialising "middle-income country providing high quality of life to all its citizens by the year 2030" (Vision 2030, p. 1). The financial sector through its intermediation function is the engine and driver of the realisation of the goals outlined in the Vision 2030. The financial sector as the important component of economic transformation hinges on three essential pillars: access, efficiency and stability. His Excellency the President of the Republic of Kenya at silver jubilee celebration of local bank remarks:

"In Kenya this is one [Financial] sector that has helped in the attainment of our development aspirations, and will continue to play a pivotal role in the realisation of vision 2030" (Office of Public Communication – Available online)

There is substantial and conclusive empirical evidence that finance matters for economic development (Claessens, 2006). This is true for all economies, developing and developed, and at all levels of economic development. In view of this robust evidence, in the past decade, there is clearly a case for inclusive financial sector as a development paradigm (Imboden, 2005). Financial exclusion have adverse effects on economic growth, exacerbates poverty and income inequalities (Beck, Demirguc-Kunt, and Peria, 2006). The United Nations (UN) in one of its major publication on this subject – *The Blue Book* reaffirms the need for building inclusive financial sector. The former UN secretary General announcing year 2005 as the International Year states:

"The stark reality is that most poor people in the world still lack access to sustainable financial services, whether it is savings, credit or insurance. The great challenge before us is to address the constraints that exclude people from full participation in the financial sector...Together; we can and must build inclusive financial sectors that help people improve their lives (United Nation - The Blue Book p.1).

Inclusive financial sector is therefore analogous to financial deepening. As documented in Imboden (2005), there is convincing evidence that there is positive link between financial deepening and growth. Thus, access to finance could be the real impetus to spur economic growth. Banking sector development are in particular associated economic development and poverty alleviation (King and Levine, 1993; Beck et al. 2007)

This paper addresses one of the important pillars of Kenya's financial sector, namely, access to financial services by the populace in playing active part in economic and national development. To finance investment projects, the Kenya government plans to raise saving levels from 17% to 30% of GDP, and one of the measures explicitly stated is to raise bank deposits from 44% to 80% of GDP. These finances can only be tapped if large segment of the Kenyan population are banked.

The paper makes a number of contributions to literature and country-specific policy discourse in the development of the financial sector. As envisaged in Kenya's Vision 2030 access to finance is a key plank in savings mobilisation, and therefore at firm-level determinants of access to financial services is important for policy discussion. In addition, in literature, it has been noted that there are limited research studies on access to financial services (Beck, Demirguc-Kunt, and Peria, 2006) due to data availability. This study therefore adds to body of research on access to finance. Moreover, as cited in (Beck, Demirguc-Kunt, and Peria, 2006), a large body of research has examined association between indicators of financial sector depth and other important variables such as GDP per capita growth, productivity growth, poverty, firm growth and entry rates. Globally, in both developed and developing the issue of financial inclusion is gaining prominence with a shift towards policy research and focused approached to expanding access frontiers (for example, Bangkok based Alliance for Financial Inclusion, Financial Access Initiative in New York, and Centre for Financial Regulation and Inclusion in Cape Town). This paper thus, adds to the literature and attempts to close the gap.

The rest of the paper is organised as follows. Section two discusses Kenya's financial sector and issues associated with access to financial services. Section three discusses literature review, hypothesis development and section four research designs. In section five empirical results are presented whereas section six documents case study and section seven discuss conclusions and policy implications.

2. The Kenyan financial sector and access debate

In last few years there has been deliberate Government focus on access to financial services by Kenyan. This is in part is influenced by the Vision 2030, and access is one of the critical pillars of the financial sector. While access to finance enables saving mobilisation, it also anticipated that access to finance will impact strongly and positively on poverty reduction.

The Kenyan financial sector comprises of banks, insurance companies, stock brokers, investment banks and fund managers. The banking sector, relative to others is well developed, and is the principal driver of access frontiers. The Kenyan banking sector comprises 44 financial institutions. It comprise of 31 locally owned banks and 13 foreign owned banks. According to the Central Bank, Bank Supervision Report 2008, there are 887 bank branches in Kenya. In spite of the large number, there are significant distribution disparities across regions. Consistent with these disparities, for instance, in a study of financial exclusion covering Kenya and Uganda, Johnson and Nino-Zarazua (2009) notes: “Those living in the remote and difficult terrain of North-Eastern Province in Kenya are 69 times more likely to be excluded compares to those living in Nairobi”(p.15). The finding therefore indicates that access to financial services differs significantly across provinces. This has implication especially with respect to the role of informal financial sector to bridge this apparent access divide.

Table 1 present bank branch distribution by province as well population and poverty data. A cursory review of the table indicates that bank branches are concentrated in urban centres and areas with higher income levels.

Table 1: Branch distribution and regional data

Province	No. of branches – 2008*	% branches*	Adult Population (Million)**	% below poverty line**	% banked**
Nairobi	353	40.00	1.88	34	38
Central	100	11.30	2.23	30	24
Coast	111	12.51	1.61	70	15
Eastern	75	8.50	2.75	51	15
North Eastern	10	0.01	0.59	74	0.1
Nyanza	61	6.90	2.45	48	12
Rift Valley	137	15.50	4.09	49	20

Western	40	4.60	1.81	52	11
TOTAL	887	100.0	17.41		

SOURCE: *Central Bank, and **FinAccess Survey 2007 (See Arora and Ferrand 2007)

The last column of Table 2 clearly indicates that in all provinces the percentage of Kenyan having access to formal financial services is below 50%. The situation is worse in North-Eastern province with few people banked. Similarly, in Nyanza and Western provinces, limited numbers of people have access to formally banking system.

Given the situation as illustrated in Table 2, the issue of access to finance is a significant national concern as well as regions, especially in the context of finance and economic development. Against this background, this study examines institutional factors that determine access to financial services.

3. Literature Review and Hypotheses development

There are limited studies that has examined access to financial service in Kenya specifically and Africa generally. A recent study, under the auspices of Financial Access Initiative (FAI)⁴ by Dupas and Robinson (2009) examine saving constraints and microenterprise development in rural Kenya. They deployed field experiment to a sample comprising market vendors, bicycle taxi drivers and self-employed artisans to study importance of saving constraints for self-employed in rural Western Kenya. The researchers worked with a village bank (Financial Services Association – FSA in Bumula market). The study deduced a number of important findings, some of these are: that formal savings have positive impact on business investment for women, but not men, and informal saving mechanisms available in rural are ineffective in allowing part of the sample population to save. Also, saving women (control group) were able to cope with health shocks and therefore smooth their labour supply over illness. An important conclusion that begs for further study is that 92% of the participants note that ‘it is hard to save at home’, and thus indicating saving constraints. Given the dearth of savings and credit opportunities in rural regions, banks may be better placed to serve these markets. Consistent with this argument, they conclude: “

Rau (2004) documents broad theoretical review of financial intermediation and access to finance in Sub-Saharan Africa. He categories factors that are impediments to access into macro and micro.

⁴ FAI is a research oriented institution comprising consortium of leading development economist researchers at New York, Yale, and Harvard Universities.

Macro factors highlighted in the paper include: macroeconomic fundamentals, financial sector development and political factors. Micro factors documented in the study relate to firm (institutional factors), and technological adoption. Social factors such as religion and cultural factors are highlighted. Given the theoretical concentration of the paper, the study is quite limiting with little policy relevance.

Beck, Demirguc-Kunt and Martinez Peria (2006), investigate barriers to bank access using information from 193 banks in 58 countries. The data for the study was collected via web-based survey instrument comprising 75 questions. Arguably, given the global context and breadth, this is one of the most comprehensive studies on barriers to access. An important aspect of the study is the access indicators evaluated relating to vital services, namely, deposit, credit and payments. Results of the study indicate that bank size and physical infrastructure are the most robust predictors of barriers. In addition, more competition, open and transparent economies, better contractual and information networks are associated with lower barriers.

Johnson and Noni-Zarazua (2009) using financial access national survey data for Kenya and Uganda examined patterns of access and socio-economic, geographic and demographic variables associated with access to finance. The surveys are nationally representative comprising of 4418 observations (4214 used in the analysis) and 2959 observations for Kenya and Uganda respectively. All respondents are over 18 years of age. Results indicate that age, employment, education and gender are key factors explaining access to formal financial services. Finding also suggests that informal financial sector contributes substantially to access.

Honohan and King (2009) using national financial access surveys data of several African countries conducted cross-country pooled analysis of causes and effects of financial access. Preliminary result suggest that urban penetration rates are considerably higher than rural areas, greater penetration among men than women, education is a clear predictor, and middle-aged tend to have more usage than youngest and oldest age categories. They further modelled determinants of financial access, where the probability of a household or individual in a country having an account. Nine explanatory variables, namely, bank trust, risk aversion, financial sector knowledge, having a mobile, income, location (urban/rural), education, age and gender are employed to evaluate economic behaviour. Using probit and OLS regression models, except for gender, all variables are significant at very high levels.

Review of the literature indicates mixed results with a strong focus on individual or household. This study examines firm (supply side) attributes that explains access to finance. The financial sector as the principal intermediary between savers and borrowers is an essential link in access to financial services. This study therefore, investigate relationship between firm factors, namely size (total assets and capitalisation), profitability, ownership, years in banking, and access to financial services.

4. **Research Design**

The Model

This study employs Ordinary Least Square (OLS) as a multivariate test to examine relationship between firm characteristics and access to financial services. The test is based on the following statistical model:

$$ACFIN = \beta_0 + \beta_1 YBUS + \beta_2 PROF + \beta_3 OWN + \beta_4 SIZE + \beta_5 + e_i$$

Where:

ACFN = Proportion of bank branches in rural area

YBUS = denotes years in banking business

PROF = Profit after tax and extraordinary items

OWN = Ownership is binary, 1 local and 0 foreign

SIZE = Total assets

e_i = the error term

Sample and variables

The sample for this study comprises all financial institutions licensed by the Central Bank of Kenya as at 31st December 2008. There are 43 banks operating in Kenya as 31st December 2008, out of which 33 are local and 10 foreign owned financial institutions. The data for detailed branch locations and years in banking business was collected from the Bank Supervision Department, whereas data

on profitability, size (total asset) and ownership (local or foreign) was gathered from published audited accounts.

The dependent variable, access to financial services is measured as proportion of bank branches located outside major urban towns⁵. The explanatory variables are: years in banking, profitability, ownership and size (total assets). Years in banking business is based on number of years from the first licensing of the business as a bank, whereas ownership is categorised into local or foreign. Profitability⁶ is measured as bank's profit after tax and adjusting for extraordinary items. Size⁷ is measured by a firm's total assets.

5. EMPIRICAL RESULTS

Descriptive summary statistics

Table 2 provides summary of the descriptive statistics of the dependent and predictor variables.

Variables	Minimum	Maximum	Mean	Std. Dev
Access to finance	0	82	21	24
Years in Business	2	113	33	21
Profitability	-0.097	0.071	0.021	0.032
Ownership	0	1	0.770	0.430

Table 2: Descriptive statistics of dependent and independent variables

⁵ For the purpose of the study, major Kenya towns are Nairobi (Capital city), Mombasa, Kisumu, Nakuru and Eldoret.

⁶ Profit tend to be more variable for larger banks (for instance a profit of 100 is a lot for a small bank but insignificant for a large bank). Hence profit is standardized by dividing profit figure by total assets

⁷ A total asset as surrogates for size is highly skewed, and therefore size is measured to logarithm based 10 of total assets.

Size (Total assets) (millions Kenya shillings)	538	191212	28234	42683
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The mean of the dependent variable, access to financial services, measured as number of bank branches locates in rural area is 21. This suggests that only 21% of 887 bank branches as 31st December 2008 are located in rural areas. Interestingly too, whereas some banks have no branches in rural areas (concentrating solely in urban centres), a number of financial institutions have extensive branches in rural areas as high as 82% as shown in Table 2. There appears to be significant variation of firms' years in banking business, with some institutions having in this business for over a century, and others only 2 years old. Profitability too indicates variation from dismal performance of loss making to higher profit levels for majority of the financial institutions. Examining the data set further 5 of the 43 financial institutions reported losses. As with other dependent variables, size is highly skewed and varied among financial institutions.

Table 3 presents results of Pearson correlations analysis between the dependent and independent variables. The Pearson correlations indicate association between the dependent variable and two explanatory variables: years in banking business and size. This offers initial support to the hypothesised relationships. It is also evident that there are significant relationships among the independent variables: profitability and years in banking business, as well as profitability and size.

Table 3: Pearson Correlation

VARIABLES	1	2	3	4	5
(1) Access to finance	1.000	0.338*	0.132	0.070	0.451**
(2) Years in Business	0.338*	1.000	0.320*	-0.239	0.611***
3) Profitability	0.132	0.320*	1.000	-0.089	0.445**
(4) Ownership	0.070	-0.239	-0.089	1.000	-0.178
(5) size	0.451**	0.611***	0.445**	-0.178	1.000

*, **, and *** denote statistical significance at the 0.05, 0.01 and 0.001 level respectively.

The highest correlation value is between size and years in banking business (Person Correlation 0.611). This is below the threshold of 0.8 that is considered undesirable for multivariate test (Hair, Anderson, Tatham and Black 1995). In addition, the *Variance Inflation Factors* as shown in Table 4 are all below 2 (see Madalla, 1992), indicating that multicollinearity is not a serious problem in conducting regression analysis.

Regression analysis

Regression analysis is used to examine relationship between firm characteristics and access to financial services. The OLS regression results are presented in Table 4.

TABLE 4
Regression results
(Dependent variable: Access to finance)

Independent Variables	Predicted sign	Standardised Coefficient	t- statistics	P-value	VIF Values
Years in business	+	0.143	0.791	0.434	1.648
Profitability	+	-0.092	-0.0585	0.562	1.253
Ownership	-	0.174	1.196	0.239	1.062
Size	+	0.435	2.304	0.027	1.796

R-square	25%
Adjusted R-square	17%
F-value	3.076
Sig. F	0.027

Results as presented in Table 2 indicate that of the four variables, size is the only variable positively and strongly associated with access to finance. Interestingly, though not significant profitability is negatively associated with access to finance.

6. CASE STUDY

Equity Bank

Equity Bank was established in 1984 as a building society. The initial vision of the financial institution was to provide mortgage finance to low income people. In fact the society's logo of a house was a reflection of the founders' mission to pool financial resources to intermediate in provision of mortgage loans for home ownership by the low income population. Although a very noble business model with societal concerns, Equity Building Society (EBS) was faced with a number of challenging circumstances that contributed to its demise.

Should Equity Bank be associated with expanding access frontiers? A definitive aspect of Equity Bank's access frontiers is the phenomenal growth in branch network. By 2004, Equity Bank had only 15 branches in Nairobi and Central Province. In barely 5 years, that is, by 2009, Equity Bank through its branch network is represented in all provinces in Kenya. Evidently therefore, as shown in Table 5 below, Equity Bank has vast branch network across the country thereby enhancing access to financial services by the Kenyan populace, especially in the rural and remote trading centres.

Table 5: Equity Bank branch network, 2008

Province	No. of branches
Nairobi	24
Central	21
Rift Valley	23
Eastern	15
Coast	6
North Eastern	3
Western	7
Nyanza	8
Total	107

Source: Central Bank of Kenya

An important growth trajectory is evidently illustrated in Table 6. For instance, total assets, which also includes the bank's loan portfolio increased substantially, by 510% between 2003 and 2006. It is this growth in assets that impacts on the firm's ability to broaden and hence access to financial services. Growth in branch network, for example from as low as 18 in 2003 to 107 in 2008 is an indication of the way firm size systematically transforms financial access frontiers.

Table 6: Equity Bank Performance Indicators

	Dec. 2003	Dec. 2006	Dec. 2007	Dec. 2008	Dec. 2009
Depositors	3,351m	16,363m	31,623m	49,089m	65,825m
Total Assets (Kshs Million)	3,927m	20,034m	53,203m	77,458m	96,972m
Gross Loan Portfolio (Kshs)	1,734	11,429m	22,228m	42,138m	62,053m
Branches (number)	14	41	81	102	102

Source: Central Bank of Kenya

7. CONCLUSION AND POLICY IMPLICATIONS

This study main thrust is access to financial services, examining specifically firm factors associated with expanding access to financial services. Branch networks is utilised as a surrogate for access to financial services, whereas firm factors, namely, years in business, profitability, ownership and size are predictor variables. Regression results indicate that size is the most significant determinant of access to financial services, that is larger banks have proportionately more branches in rural areas than smaller banks. Qualitative review of phenomenal growth of a local bank also corroborates the empirical evidence.

The findings have policy implications. It is evident that access to financial services can best be championed by larger banks. Thus, the Kenyan national aspirations of access to financial services as one of the critical pillars of the financial sector may need to be revisited in light of the empirical evidence. Capitalisation is an important size parameter that impacts on banks' expansion programs either in terms of lending portfolio or geographical reach. Recently (August 2010), Kenya Commercial Bank raised additional capital of Kenya Shillings 12.4 billion through rights issues. According to KCB Chief Executive Officer, the capital injection will enable the bank to cover full breadth of the market across Eastern African Region (Business Daily). This experience is a testimony of the bank size as a principal determinant of promoting access to financial services. In the Finance Bill 2009, banks capital has been raised to Kshs. 1 billion prorated to 2012. This increase in capital levels from Kshs. 250 million to 1 billion appears to be consistent with research findings of size as an essential parameter. However, whether this will enhance access to financial services is yet to be established. It is equally important to learn from experiences of other jurisdiction such as Central Bank of Nigeria that increased banks core capital 12.5 times reducing number of banks from 89 to 24, but larger and stronger institutions. This may partly be attributable to size effect that has enabled Nigerian banks to not only trade in West Africa, but has moved into Eastern Africa. This demonstrates potential of bank size to expand access outreach not only within national border, but also beyond.

The Global Partnership of Financial Inclusion (GPII) comprising G20 countries recognise financial inclusion has critical pillar of global financial development. GPII was set up in 2010 to champion financial inclusion agenda globally. For the Kenya, one of the mandates of the Central Bank of Kenya is to foster stability and solvency of financial systems. Promotion of inclusive financial system is one of the ways of fostering stability. Although not covered by this research study, policy initiative undertaken in Kenya to promote financial inclusion are worthy of mention. These other policy options been undertaken include introduction of agency banking, and licensing of deposit taking microfinance institutions.

Beyond Kenya, the study has policy implications in terms of explaining firm factors that determinant financial institutions intermediation role through establishment of bank branches. In addition, for instance, agency banking currently implemented in Kenya has taken root in the South American countries, such as, Brazil, Mexico and Colombia. Agent banking allows commercial banks to engage

third party agents to provide specified financial services. According to the Central Bank of Kenya, as at December 2011, eight commercial banks have contracted nine thousands seven hundred and forty eight (9748) active agents facilitating over eight million transactions valued at over Kenya shillings forty four billion. It is therefore timely, to draw country experiences and lessons on financial inclusion so as to inform policy choices for global action in developing and developed countries. Also, the role of telecommunication technology and in particular mobile phone use in provision of financial service is certainly. M-pesa started in the Kenyan in 2007 is a successful policy intervention that has been replicated in many countries across regions and continents. In 2012, a mobile banking product, M-Shwari was started by a commercial bank primarily to encourage savings using mobile banking platform. In one year, this initiative raised over Kenya Shillings 1 billion (USD 11.8 Million) with over 1 million clients. This type of policy initiative has immense potential to promote and actualise financial inclusion across various segment of socio-economic class of a society.

This research is limited to the extent that it is country and industry specific. However, the topic of access to financial services is important especially in the context of economic development and poverty alleviations. Other research studies to explore these issues will broaden policy discussions. Structural issues on the Kenyan financial system raised by Beck and Fuchs (2004) may also impact on access to finance, and requires further examination.

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