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Determinants of Banks Expansion in the East African Community: An Empirical Analysis of Kenyan Banks Consumer Protection

Lucas Njoroge and Shem Ouma*

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Abstract

The study examines the determinants of banks expansion in the East African Community (EAC) using data for Kenyan banks. The study estimates both a probit model based on a binary choice of expanding to the region or not, and a pooled panel regression model based on a bank's actual flow of foreign direct investments in associates, subsidiaries and joint ventures in the region.

The results show the importance of factors associated with the need to follow bank clients abroad, efficiency and size of the banks, and the potential market opportunities of the host countries. Larger, profitable and more efficient Kenyan banks have been at a competitive advantage to expand to the region. However, this does not imply that the smaller banks are not expanding to the region, rather, that the expansion of larger banks is more conspicuous. Consistent with other studies, Kenyan banks seem to prefer to expand to a country where inflation is relatively low and less likely to cause macroeconomic instability. The findings support the on-going deeper economic integration in terms of more trade and investment. This suggests that most Kenyan banks are expanding to the region in order to provide their home clients with the services on site and to take advantage of the large potential for business of the regional economies.

Key words: cross-border banking, Banks expansion, EAC economies, deeper integration

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Introduction

Cross-border banking has become an increasingly important structural feature of the East African Community (EAC) especially with Kenyan Banks. Deepening regional integration have seen cross-border banking in the EAC pick up considerably. Recent statistics indicate that eleven Kenya banks have a regional presence in the EAC and South Sudan. In particular, as at December 2012, there were a total of 282 subsidiaries of these Kenyan banks in the region. Uganda hosts 124 branches, Tanzania 70 branches, Rwanda 52 branches, Burundi 5 branches and South Sudan 31 branches of Kenyan banks.

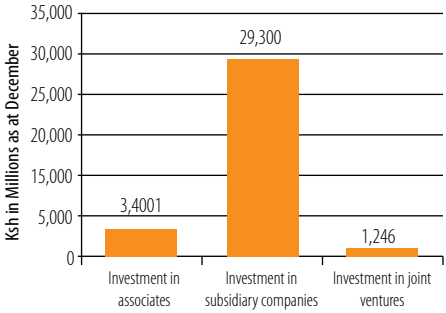
In terms of assets, the branch network operating in Tanzania accounts for 37% of the total assets, while those in South Sudan and Uganda each accounts for 24% of the total assets, Rwanda accounts for 14% and Burundi accounts for only 1%. By contrast, other EAC members have nearly no presence in Kenya with only Bank of Kigali establishing a representative office in Nairobi in February, 2013. All the other countries have no bank presence in Kenya.

Banks like other enterprises expand to other countries if they have competitive advantage with respect to host country banks. Competitive advantage ensures both comparative advantage as well as differential advantage. Comparative advantage is normally a cost advantage where the expanding bank has the ability to offer its services/products at a lower cost than the local competitors, while differential advantage is created when the expanding bank offer services/products that differ from its local competitors and are seen as better than a local competitor's services/products by customers. Otherwise, if local banks were to be more competitive, there would be no point for a bank to expand abroad since such banks would crowd it out of the market.

The growth of cross-border banking may also be influenced by high degree of banks' concentration and reduced barriers to cross-border bank activities. The reduction in the barriers to cross border banking have been due to on-going technological developments and related opportunities to create IT synergies; several changes in the regulatory framework as facilitated by deepening regional integration, which enables cross-border banking groups to benefit more fully from the risk-reducing effects of capital diversification; and the on-going harmonisation towards the East African Monetary Union. The basic consideration in this regard are macro level variables where cross-border activities provide a major tool for banks to realise their optimal size, to reap economies of scale and scope, to diversify activities and to spread risk and revenues. This in turn enables them to improve resource allocation and risk management and increase profitability. Through the regional expansion of banks and interbank competition, these beneficial effects are expected to spread to the entire EAC region, fostering closer convergence towards better, more efficient banking practices, deepened integration and greater breadth, depth and liquidity of the financial markets.

The presence of Kenyan Banks among the EAC economies brings to the fore the need to establish factors behind this drive. This study investigates the factors that determine a bank's decision to expand its activities to the EAC region. The paper utilizes bank level data for banks in Kenya that have a regional presence[1]. As of 2012, the main mode of entry of Kenyan banks to the region was by investing in subsidiaries or associates and to a lesser extent through joint ventures.

Figure 1: Mode of entry of Kenyan Banks in the EAC region



The study's main contribution to the literature is threefold. First, even though the region has been implementing various initiatives aimed at deepening economic integration, just a few studies have been done on cross border banking for banks in Kenya. Secondly, the study uses a rich data set from the Central Bank of Kenya. The data permits examining jointly the motivations of cross-border banking making comparisons between banks with and without cross-border branches. Finally, the study

1 Different organizational structures available to a bank that wants to expand activities abroad include representative offices, agencies, branches and subsidiaries. However, in practice, a bank either opens a new branch or buy equity share of operating banks (Goldberg and Saunders, 1980).

incorporates individual bank characteristics variables key to unmask bank specific characteristics and also the macro variables important in determining decision to expand to the region.

Hypothesis

- The decision of a bank in Kenya to expand to the East African Community
  - Is positively related to following its home clients abroad;
  - Is positively related to market opportunities in the host country; and
  - Is positively related to its size and efficiency

02 TWO

Literature Review

The theoretical underpinning of why banks expand across borders can be traced to two main theories, namely the internalization theory and the eclectic theory. The internalization theory broadly argues that the advantages of multinational enterprises are derived from the possibility of limiting the cost of market failures by carrying out a share of their transactions outside the boundaries of the firm (Dunning, 1988).

The eclectic theory on the other hand emphasizes on ownership specific advantages (for example, access to the endowments of the parent company at costs below market price) and location advantages (for example, barriers to trade or institutional arrangements) to the incentives related to internalization (Williams, 1997). The two theories corroborate the need to incorporate bank level data and macro data, assuming the main objective function of a bank's decision to expand abroad is the maximization of the stream of expected profits.

However, empirical literature is diverse and mostly focuses on developed countries, with few studies on developing countries. A number of studies on cross border banking suggest that the main reason for banks expanding their operations abroad is economic integration. With increased economic integration, banks may follow their customers abroad by providing international services to their home- country clients. Afterwards when such firms have better understood their new environment especially institutional and regulatory aspects, develops a relationships with local financial institutions. Such relationships increase the range of their operation to provide services to the local population as well (Moshirian and Van der Laan, 1998).

Other studies focus on the relationship between the degree of internationalization of banks and their sizes. Ursacki and Vertinsky (1992), using a sample of Japanese banks with investment in South Korea, find a positive relation between a bank's asset size and the number of branches. Williams (1996 and 1998) finds similar results for Japanese banks and other foreign banks with shareholdings in Australia.

Berger *et al*, (1999) examines domestic banking consolidation and banks efficiency. They find that although domestic banks in France, Germany, Spain, the United Kingdom and the United States are on average more cost efficient and more profit efficient than foreign-owned banks, this is not true of foreign-owned banks from the United States. For most mergers and acquisitions, larger and more efficient institutions tend to take over smaller, less efficient firms. They attribute this to the need to spread expertise and operating procedures over additional resources by larger and more efficient firms. Consolidation may also enhance efficiency if greater diversification improves the risk-expected return trade off. Berger *et al*. (1999) investigate whether cost efficiency matter for internationalization of banks.

A different strand of literature examines the relationship between flow of bank foreign direct investment and various proxies for economic integration. They include: Grosse and Goldberg (1991) use of geographical distance; Brealey and Kaplanis, (1996), Yamoori (1998) use of volume of bilateral trade flows; and Williams (1998), Yamori (1998), Miller and Parkhe (1998), and Buch (1999) use of value of bilateral foreign direct investment as proxies for the degree of economic integration. Findings from these studies show a positive and significant correlation between the flow of bank foreign direct investment and the measures of bilateral integration between countries.

Several studies have explored the role of local market opportunities in determining cross border banking. Fisher and Molyneux, (1996) finds stable macroeconomic conditions as a key determinant in cross border banking. Yamori (1998) finds that Japanese multinational banks prefer to locate in countries with higher per capita income. Goldberg and Johnson (1990) corroborate this finding for US banks in a number of countries. Similarly, Buch (1999) concludes that the activity of foreign subsidiaries is related to capital market activities after finding a positive relationship between host country GDP and the presence of foreign banks.

In sum, there are diverse factors that determine a bank's decision to expand abroad. Most studies are currently for developed countries and just a few for developing countries with none for EAC economies. This paper fills this gap in the literature by contributing to the debate through identifying factors that are important for the EAC economies, focusing on Kenyan banks. A quick summary of the literature is provided in ***Appendix B.***

03 THREE

Methodology

There are two approaches in the empirical literature for analysing the determinants of cross border banking. On one hand, studies analyze home country characteristics that drive domestic banks to expand abroad, and on the other hand, some studies examine host country characteristics that attract foreign banks to expand to a country. The two approaches emphasizes on bank-specific factors and macroeconomic or banking system level factors (location-specific).

This study merges the two approaches in deciding the choice of macro variables based on the former approach and at the same time focuses on the role of specific bank characteristics that determine the decision for a bank to expand its activities in the EAC region as advocated by the latter approach. The interest is to examine what drives Kenyan banks to increase their foreign operations in a host country. This is viewed in two ways.

First, for each bank the study examines whether it has any branch (subsidiary) in each of the EAC host country. The decision to expand abroad in this case is modelled as a binary choice, based on all the available information used to forecast the expected profitability of the investment . The binary choice of expanding across EAC or not is determined by both bank specific characteristics and home country characteristics modelled as;

$$Pr(Y_i = 1) = f(X_i, Z_j), \qquad (1)$$

where: Y_i equals one when the bank i has a foreign branch and zero otherwise, X_i is a vector of bank-specific variables and Z_j is a vector of country-specific variables. A probit specification of equation

1 is estimated since this is a single country model and therefore there is no concern for random effects that would justify other estimation techniques like random effect logit, random effect probit etc. (Buch, 1999).

Second, the study examines the actual foreign direct investment by individual banks (FDIBANK) to the EAC host country in terms of Investment in associates, Investment in subsidiary companies and Investment in joint ventures. A pooled OLS regression of the determinants of FDIBANK is estimated as;

$$FDIBANKit = f(X_{it}, Z_{jt}), \qquad (2)$$

where X_{it} is a vector of bank-specific variables and Z_{jt} is a vector of country-specific variables. The i subscript denotes the cross section dimension, and t denotes the time series dimension. The advantage of this approach is that it related the determinants of banks expansions to the actual funds banks devote to their foreign activities.

Choice of variables

i. Bank specific Variables

Profitability

Profitability is used as a proxy for efficiency on the premise that cross border expansion of banks is often possible for more efficient banks; otherwise, a bank will not have a competitive advantage over their competitors in the destination market. Return on assets, used to measure profitability suggest that innovative banks look for new profit opportunities and, therefore, have both a larger share of revenues from non-traditional activities and a higher propensity to expand abroad. The paper uses the level of the return on assets as a measure of profitability.

Size of the bank

A number of factors justify why size is an important consideration for banks to expand across the borders. First, larger banks are more likely to enjoy economies of scale and scope in some specific activities such as portfolio management and investment banking. These activities usually involve high start-up costs required to develop human capital and expertise that places such banks at a competitive advantage over their local rivals. This has favoured the development of networks of multinational banks, capable of offering highly innovative services at a marginal cost that is almost zero. Second, the customers of larger banks are generally larger and more internationally diversified, creating an incentive for the banks to follow them abroad. Third, Kenya's oligopolistic structure of banking where a few large banks hold a very large share of total credit means that large banks are more exposed to credit risk. Large banks therefore have a stronger incentive to extend their activities abroad as a way of either diversifying their portfolio or smoothing the effects of asynchronous fluctuations of loans and deposits (Berger, Kashyap and Scalise, 1995). The size is measured by total assets.

ii. Macro variables and banking system level variables

Follow up variables

The degree of economic integration between countries enhances financial and trade linkages that in turn promotes foreign direct investments including cross border banking. Banks often extend their activities abroad in order to provide bank services to their home clients who operate in a foreign country as they take advantage of enhanced financial and trade linkages. The variables that capture this aspect of banks following their clients in the region are referred to in this paper as FOLLOW UP variables proxied by Foreign Direct Investments (FDI), the ratio of exports to GDP and the ratio of trade (exports plus imports) to GDP.

Market Opportunities

The host country characteristics are relevant to cross border banking in as far as determining profit opportunities in the destination market. As alluded to in the literature, local market opportunities are determined by the economic growth which is measured by GDP growth rate . A bank investing in a foreign country with high growth rate provides evidence that banks' search for profitable opportunities that exists beyond those offered by traditional banking activity in their home market. The higher the growth rate of the destination economy, the higher the probability for cross border banking. However, this variable must be interpreted with caution because bank profits are likely to be lower in the relatively more developed countries (with lower growth rates), where the banking sector is usually more competitive but with lesser risks to investments. At the same time, for countries with similar characteristics as the EAC and where relatively smaller economies have higher levels of economic growth, the positive relationship may not exist since such economies could pose higher risks that dampen profits for banks expanding to these economies, contrary to expectations. The study uses the difference in growth rates between Kenya and any other EAC country, as a proxy for local market opportunities.

Inflation

Empirical studies show that inflation has a negative temporary impact upon long- term growth rates. This effect may be significant and could generate a permanent reduction in the level of per capita income. Inflation may also reduce the level of investment and the efficiency with which productive factors are used. Inflation generally reflects the degree of macroeconomic instability (Barro 1995). Banks tend to avoid countries with high degrees of macroeconomic instability.

The Data Sources

Due to lack of comparable bank level data for the entire EAC region, this study focuses on Kenyan Banks that fall under the regulation of the Central Bank of

Kenya (CBK). Cross border banking in the EAC has so far been dominated by Kenyan banks. Central Bank of Kenya as the regulator of the banking sector has been collecting data on banks financial statements. This study uses quarterly data for the period 2000 Quarter 4 to 2012 Quarter 4. The Central Bank of Kenya was not compiling continuous and reliable bank level data before this period. The study could not benefit from Bank Scope data base due to lack of institutional assess. Such access could have made data collection process much faster and easier. Macroeconomic data is sourced from the International Financial Statistics and the World Development Indicators. The exact definitions of variables and sources of data are provided in ***Appendix A.***

Empirical Estimation

The results from probit estimation of equation 1 are presented in table 1

Table 1: Probit Specification Results

The Dependent Variable Yi =1, when a bank has a branch in the EAC, =0 otherwise						
Models	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Bank Specific						
Log Total Assets	0.486**	0.524***	0.488*			
	(2.58)	(4.60)	(1.90)			
Log ROAs				0.909***	0.932*	0.901***
				(3.55)	(1.74)	(5.11)
Follow Up						
Log FDI	0.021***			0.799*		
	(2.75)			(1.85)		
Exports/GDP		1.568**			1.415**	
		(2.20)			(2.25)	
Trade/ GDP			1.437*			1.602***
			(1.84)			(3.08)
Other Variables						
DiffGDP growth	0.05**	0.06**	0.0597	0.047***	0.0611**	0.103
rate	(2.28)	(2.14)	(0.0257)	(3.96)	(2.57)	(0.0389)
Inflation	-0.897**	-0.87*	-0.907*	-0.952*	-0.878*	-0.821***
		(-2.09)	(-1.88)	(-1.71)	(-1.77)	(-3.86)

Note: t-values in parentheses; ***=significant at the 1% level, **=significant at the 5% level, *=significant at the 10% level

The results for the pooled OLS estimation of equation 2 are presented in table 2

Table 2: Pooled Specification Results

The Dependent Variable log FDIBANK				
Models	**(1)**	**(2)**	**(3)**	**(4)**
Bank Specific				
Log Total Assets	0.568*	0.5590*		
	(1.91)	(1.96)		
Log ROAs			0.997*	0.823***
			(1.67)	(4.34)
Follow Up				
Exports/GDP	1.258***		1.891**	
	(5.67)		(2.59)	
Trade/GDP		1.723***		0.087**
		(2.74)		(3.92)
Other Variables				
DiffGDPgrowth	0.089**	0.081	0.006***	0.197
Rate	(2. 41)	(1.14)	(2.92)	(0.31)
Inflation	-0.146***	-1.912***	-1.268**	-0.471*
	(-3.68)	(-2.80)	(-6.29)	(-2.02)

Note: t-values in parentheses; ***=significant at the 1% level, **=significant at the 5% level, *=significant at the 10% level

Models 1 to 6 of the probit estimation show results based on different categories of variables. Models 1 to 3 use total assets as a measure of bank size while models 4 to 6 use return on assets to capture profitability. The estimation procedure does not use the two variables in the same model to avoid a host of econometric problems including multicollinearity and autocorrelation. Each of these two sets of models use different follow up variables. The same approach is used in the pooled regression. In the pooled regression, it is important to note that only four equations are estimated since the follow up variable FDI is dropped to avoid its possible correlation with the dependent variable FDIBANK and likely endogeniety problem.

Bank specific variables

The size of the bank, in both probit and pooled regressions, (measured by the logarithm of its total assets) is statistically significant and positively correlated with the decision of a Kenyan bank expanding to the region. This implies that larger banks in terms of total assets are more likely to expand to the EAC region. This can be justified on the grounds that corporate clients are mostly customers of large banks. Such corporate clients have been taking advantage of the on-going implementation of the East Africa Common Market and Custom Union to have their presence in other EAC countries. In addition, large banks in Kenya are more likely to have a strong incentive to search for risk diversification and new profit opportunities beyond the Kenyan borders. Large banks are also favoured by some activities that exhibit increasing return to scale, such as portfolio management and investment banking, which characterize cross border banking. Alternatively, the positive correlation between the total assets and the decision to expand banking activities to the region could be associated with the Kenya's oligopolistic banking structure. The result verifies the hypothesis that banking systems with fewer and larger banks are more likely to expand to other countries than more fragmented systems (Nigh, *et al*. 1986).

Similarly, the return on assets is statistically significant and positively correlated with the decision of a Kenyan bank to expand to the EAC region; this result is consistent with the hypothesis that efficiency, here proxied by profitability (as measured by return on assets), positively affects the decision to expand to the region. These results confirm that banks from Kenya being more profitable and coming from a more developed banking sector, are more likely to have a competitive advantage with respect to their competitors in the EAC region. These results provide evidence that the choice to expand to the EAC region by Kenyan banks is driven by the banks' search for profit opportunities beyond those offered in the home market. That is, when the financial sector is more developed, exploiting additional profit opportunities at home entails offering more innovative and expensive financial services and products, which increases the incentive to expand to the regional EAC economies, where such effort is relatively less.

The results suggest that Kenyan banks operating in the EAC have gained a growing understanding of the region and are increasing the range of their operation and services. Thus, the pattern of Kenyan banks presence has some characteristic that are peculiar to the Kenyan banking industry, yet the choice of expanding abroad depends on a wider range than just one single factor. However, mostly the large banks in terms of size as measured by total assets or their efficiency proxied by their profitability (which is measured by Return on Assets) are key factors considered when expanding to the region.

Follow up variables

In both probit and pooled regressions, all the follow up variables (FDI, Exports and Trade) are positive and significantly different from zero. The degree of trade

openness (measured by the ratio of exports to GDP or ratio of Exports to GDP) is positively correlated with the probability that a Kenyan bank expands to the EAC region. The results are consistent with the hypothesis that one of the main determinants of banks expanding abroad is the incentive for banks to "follow their clients" when they operate in foreign markets. Similarly, the FDI variable is statistically significant and positively related to the decision for a Kenyan bank to expand its activities to the EAC region to cater for its customers. The findings also support the on-going deeper integration of the region in terms of more trade and investment, suggesting that most Kenyan banks are expanding to the region in order to provide their home clients with the services on site.

Other Macro variables

In both the probit and pooled regression, the variable difference in growth rates (DiffGDP growthrate) is positively and statistically significant in all the models that have exports as a control variable and insignificant in all models that have trade as a control variable. The difference in the growth rate between Kenya and the other EAC economies indicates that the higher the difference (the higher the growth rate of a destination EAC country), the higher the probability of an entry into such a country. This is consistent with other studies that find a positive and significant relationship between the decision to expand abroad and the difference in economic growth (DiffGDP growthrate) indicating that the real economic growth and the level of development of domestic banking determine banks' presence in the host countries (Weller and Scher, 2001). In this case, however, the results suggest that although Kenyan banks may expand to the region to follow their clients (especially exporters), their clients contribution is significant enough to impact on growth. However, since these clients contribution to the total trade is small, the growth differential may not necessarily drive banks expansion elsewhere.

Finally, in both probit and pooled regressions, the negative and statistically significant inflation coefficient suggests that Kenyan banks seem to be keen in avoiding high inflation neighbouring countries. Besides the adverse effects of inflation on banks' operations, a higher rate of inflation weakens the exchange rate and therefore makes expanding to the region more expensive and therefore unattractive.

05 FIVE

Conclusion

Several factors that influence banks decisions to expand their activities abroad have been identified in the literature. This paper adds to this literature by utilizing bank level data for banks regulated by the Central Bank of Kenya to determine why Kenyan banks have greater presence in the EAC. The results show the importance of factors associated with; the need to follow bank clients abroad, efficiency and size of the banks, and the potential market opportunities of the host countries.

Results show that the search for higher profits subsumed by higher expected economic growth and the prospect of reducing local banks' inefficiency are important determinants for cross border banking. In addition, the deepening integration of regional economies is playing a significant role in enhancing cross border banking, as depicted by follow up variables.

The size of the bank is a key determinant of the decision to expand abroad. Larger Kenyan banks are more likely to expand to the EAC region, partly reinforced by their high efficiency as measured by profitability. The degree of openness is shown to be an important determinant in the decision of a Kenya bank to expand to the region, as confirmed by the positive and significant coefficient on the share of export over GDP and trade over GDP and corroborated by the significance of the FDI variable. The results also suggest that Kenyan banks seem to follow their clients who are taking advantage of the deeper integration of the EAC economies to set up businesses across the region. The progressive implementation of the customs union and the common market protocols is presenting banks with new opportunities in regional economies.

Contrary to the empirical studies for developed countries that show that banks expand to countries with developed financial and banking system, the result of empirical estimation show that Kenyan banks are attracted by large potential of the region's economies as captured by the difference in economic growth rates. The Kenyan banking sector being fairly more developed than that of the neighbouring countries, imply that the larger and more profitable banks, have been at a competitive advantage to expand to the region. The results suggest that the other EAC economies are offering a wider range of possibilities for Kenyan banks to achieve higher profits. Finally, consistent with other studies, Kenyan banks seem to prefer to expand to a country where inflation is relatively low and less likely to cause macroeconomic instability (Fisher and Molyneux, 1996) . This has been deterrent for Kenyan Banks to expand as rapidly as they would to the other EAC countries.

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22.

Appendix

A) Description of variables and Data sources

Variable	Definition	Source
Dependent Variables		
Pr(Yi=1)	Yi equals one when the bank i has a foreign branch and zero otherwise	CBK
FDIBANK	Log of FDI by individual banks given as the sum of Investment in associates, Investment in subsidiary companies and Investment in joint ventures	CBK
Bank Specific Variables		
Total Assets	log of total assets of bank i used as a measure of size	CBK
ROAs	Log of return on assets of bank i used as a measure of profitability (which is a proxy for efficiency)	CBK
Follow Up		
FDI	Log of outwards Foreign Direct Investment (FDI) used to capture Kenya's investments in the region assuming that over 90% of Kenya's outward investments goes to the EAC region	CBK
Exports	Ratio of Kenya's exports to GDP	CBK/WDI/IFS
Trade	Ratio of Kenya's exports plus imports to GDP	CBK/WDI/IFS
Other Variables		
DiffGDP growth rate	Difference in growth rates between Kenya and any other EAC country used as a proxy for local market opportunities	CBK/WDI/IFS
Inflation	The overall inflation of the other EAC country used as a proxy for macroeconomic instability	CBK/WDI/IFS

B) Summary of Literature

Theoretical	**Internalization theory**
	Possibility of limiting the cost of market failures , Dunning, 1988.
	Eclectic theory
	Ownership specific advantages
	Location advantages
	Williams, 1997.
	The two theories corroborates the need to incorporate bank level data and macro data
Empirical	**Diverse and mostly focuses on developed countries**
	Economic integration variables
	Geographical distance
	Foreign direct investment
	Bilateral trade flows;
	Bilateral FDI
	Moshirian and Van der Laan, 1998; Grosse and Goldberg (1991)
	Brealey and Kaplanis, (1996), Yamoori (1998)
	Williams (1998), Miller and Parkhe (1998),Buch (1999)
	Bank size variables
	Assets
	Number of branches
	Ursacki and Vertinsky (1992)
	Banks efficiency
	Profitability
	return on assets
	Yamori (1998), Goldberg and Johnson (1990),

Empirical	**Local market opportunities**
	Per capita income
	Capital market activities
	Host country GDP
	Difference in GDP growth rates
	Fisher and Molyneux, (1996), Yamori (1998), Goldberg and Johnson (1990), Buch (1999)
	Fills this gap by identifying factors that are important for the EAC economies, focusing on Kenyan banks

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