Determinants of Economic Growth in Africa with Emphasis on the Role of Financial Intermediaries Using Bayesian Averaging of Classical Estimates

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Abstract

This paper examines variables, which significantly determine long-run growth in Africa. Emphasis is put on financial intermediaries. The study used 37 countries and 14 variables. It employed an approach, which was introduced by Sala-i-Martin and D. Miller (2000) called Bayesian Averaging of Classical Estimates (BACE). This method constructs estimates by averaging Ordinary Least Squares (OLS) coefficients across models and weights given to individual regressions have a Bayesian justification similar to the Schwarz model selection criterion. Results vary from period to period but the most recent evidence shows that determinants of growth in Africa are Foreign Direct Investment (FDI) and population growth. Of 14 explanatory variables, FDI shows the strongest evidence. Unexpectedly, all used three financial intermediary indicators were not significant except for Liquid liabilities/ GDP (llgdp), which was significant from 1992 to 1998.

Keywords: Financial intermediaries, economic growth, Bayesian averaging of classical estimates.

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Introduction

Recent empirical literature on economic growth has identified many variables, which are correlated with the rate of economic growth. Researchers usually run cross-country or panel regressions of vectors of explanatory variables on the vector of economic growth. The chosen explanatory variables vary across researchers and across papers. This is mainly due to the fact that growth theories do not clearly specify the explanatory variables to include in the "true" regression. As a result, researchers have come up with models that show that variables like market distortions, weather and many others should be included in the growth regression. Many of those variables like measures of financial intermediaries, initial level of income and investment rate, among others, have been found to significantly correlate with economic growth. In particular, a long debate has been on-going as to whether financial development causes growth or it simply follows it.

Existing research suggests that countries with better functioning banks and markets grow faster than those with poor ones and those better functioning financial systems ease the external financing constraints that hinder firm and industrial expansion hence, affecting economic growth. Due to the fact that there is asymmetric information between savers and investors, financial systems have been found to influence resource allocation. They alter allocation of credit through acquisition of information about firms and managers. Financial systems also influence savings and investment decisions and hence, there is growth through their functions as they get information as well as reduce transaction costs. Their main functions include producing information about possible investments and allocation of capital, monitoring investing and exerting corporate governance after providing finance, facilitating trade, diversifying and managing risk and mobilizing and pooling savings. On the other hand, though banks may influence economic growth, they can also negatively impact on growth if there is no

transparency with instituted inappropriate policies. In fact, some researchers like Robinson (1952) found that financial development did not influence growth rather, it followed growth.

Classical theory classifies the problem of having many explanatory variables in regression of growth as a small-sample problem and suggests that the sample size should simply be increased since as the number of observations becomes large, the coefficients of the variables, which do not belong in the regression, converge to zero. However, in most instances, it is not possible to have a large sample size either due to the high cost of collecting data or the data are simply not available. For example, while using cross-section data, the number of proposed explanatory variables exceeds the number of countries in the world, making the whole computation impossible.

Due to this problem, many empirical researchers have resorted to combinations of variables they think significantly determine economic growth and have reported their results accordingly. According to Sala-i-martin (2004), this is a model of uncertainty problem. In other words, the true model is unknown and the best way to go about it is to attach probabilities to different possible models. Attaching probabilities to possible models is not classical theory but rather, Bayesian theory. Researchers like Carmen Fernandez and colleagues (2001) as well as Sala-i-martin (2004) have used the Bayesian approach due to its advantage over and above the classical approach of taking into consideration all possible models. However, the Bayesian approach requires specification of prior distributions of all of relevant parameters conditional on each possible model and this is difficult especially when the number of variables is large. It is for this reason that the Bayesian approaches remain unpopular.

This paper adopted a Bayesian approach developed by Sala-I-martin (2004) called Bayesian Averaging of Classical Estimates (BACE) to determine significance of variables in cross-country growth regressions in

Africa. The BACE combines averaging of estimates across models with classical Ordinary Least Squares (OLS) estimation. Its advantages over model-averaging are in contrast to a standard Bayesian approach that requires specification of a prior distribution for all parameters. BACE requires specification of only one prior hyper-parameter of the expected model size k and estimates are calculated using only repeated OLS.

Regardless of whether neo-classical approach or endogenous growth model is used, most researchers have found a relationship between development of financial systems and economic growth but the casual relationship differs. Research on the finance-growth relationship has increased with availability of new data sets but even then the relationship remains a fundamental problem for studying. Some researchers like Robinson (1952) found that finance simply follows growth. This could be due to wrong measurements of financial market indicators, inadequate availability of the data or even poor methods of analyzing the data. In this paper, BACE is adopted and like King and Levine (August, 1993), Pagano (1993) and Fritzer (2004) financial markets could be one of the determinants of growth. From the literature review, no work has been done on this topic using BACE in Africa. The hypothesis of this study is that financial intermediaries determine economic growth in Africa.

The remaining paper is organized as follows: Section 2 provides the theoretical framework and empirical literature about financial markets and economic growth. It provides the discussion of evidence obtained by other researchers. Section 4 provides the description of the data used in this paper as well as the empirical results. Finally, Section 5 deals with concluding remarks of empirical results and policy implications.

Literature Review

Using both neo-classical and endogenous models, many researchers have established that there is a relationship between financial intermediation and

economic growth. However, to date, the causal relationship between economic growth and financial development is unclear. Some authors, for example, King and Levine (1993), Spiegel (2001), Fritzer (2004), Odhiambo (2009), McKinnon (1989), Arestis and colleagues (2001) as well as Ghani (1992) found that finance causes growth and that high levels of finance led to growth through many different ways like monitoring and allocating funds to the best investors. Other authors including Robinson (1952) found that the relationship was the other way round. That is, financial intermediaries simply followed economic growth. Some researchers concluded that the causal link between growth and finance is determined by nature and operation of financial institutions and policies pursued in each country such that it differs from country to country. (Fritzer, 2004). Demetriades and Hussein (1996) and Arestis, P. and Demetriades, P. (1997). Odhiambo (2009) also noted that the relationship between financial development and economic growth is sensitive to the proxy used for measurement of financial development.

Theoretical Framework

The main regression model used in this study is

$$y = \beta_0 + \beta_1 x_1 + - - - + \beta_n x_n + \varepsilon \quad (1)$$

where y is the column vector of growth rates, β_0 is a constant,

$x_1, - - -, x_n$ are column vectors of explanatory variables,

$\beta_1 - - - \beta_n$ are the corresponding coefficients and ε is the error term.

Bayesian inference is a method of statistical inference where observations are used to calculate the probability that an hypothesis may be significant

or otherwise update its previously calculated probability. In general, Bayesian inference refers to use of a prior probability of hypotheses to determine the likelihood of a particular hypothesis given some observed evidence. The new determined probability is referred to as posterior probability. Bayesian approach has been applied by so many researchers who include Doppelhofer, Miller and Sala-i-Martin (2004) as well as Jones and Joel Schneider (2005). The BACE is a special method of Bayesian inference, which combines averaging of estimates and classical OLS estimation. It was started by Sala-i-Martin (2004). The BACE limits the effect of prior information and uses classical econometrics. The method requires only specification of one prior hyper-parameter, the model size.

From Lancaster's (2004) "An introduction to modern Bayesian econometrics," the following are details of the Bayesian statistics used in this section of the paper:

$$p(M_j/y) = \frac{p(M_j)T^{-k_j/2}SSE_j^{-T/2}}{\sum_{i=1}^{2^k} p(M_i)T^{-k_i/2}SSE_i^{-T/2}} \quad (2)$$

Where: T= number of observation

k_i is the number of regressors in model M_i

$p(M_j/y)$ is the posterior probability of the j[th] model. It is the probability of that model conditional on the data.

is the prior probability of model j.

The posterior model weights in the above equation are equal to the prior model weights times the Bayesian Information Criterion (BIC) developed

by Schwarz (1978) divided by the sum of prior weights times the BIC of all possible models. The BIC weights penalize large models through the term $T^{-k_j/2}$. This helps address the problem of collinearity in large models. Similar variables usually explain relatively less variation in the dependent variable and BIC implies less weight on such models.

In getting the prior probabilities of each model M_j, let model M_j be described by a (K*1) binary vector $\gamma_j = (m_{j1} - - - m_{jk})$ where one indicates inclusion and zero indicates exclusion of a variable x_i in regression (1) above. X_j is the set of regressors included in model . The prior probability of model is given as below.

$$p(M_j) = \prod_{i=1}^{K} \pi_i^{m_{ji}} (1 - \pi_i)^{1-m_{ji}}$$

where π_i is the prior inclusion probability of variable x_i in model M_j. Sala-i-Martin and Miller (2000) specified their model prior probabilities by choosing a prior mean model size $\bar{k}$ and the corresponding prior probability $\pi_i = \bar{k}/k$ of being included, independent of any other variables. If all variables have equal prior inclusion probabilities, then;

$$p(M_j) = \left(\frac{\bar{k}}{K}\right)^{k_j} \cdot \left(1 - \frac{\bar{k}}{K}\right)^{K-k_j} \qquad (3)$$

If the set of possible regressions is small enough to allow exhaustive calculations, equation (3) is substituted into equation (2) to get the posterior model probabilities.

Posterior inclusion probability of a variable gives the posterior probability that a particular variable is in the regression. It indicates the manner a certain variable is important in explaining the dependant variable. It is

calculated as the sum of the posterior model probabilities for all of the models including that variable.

$$p(i/y) = \sum_{j=1}^{2^k} 1(\gamma_i = 1/y, M_j)p\left(M_j/y\right) \tag{4}$$

Important variables must have a higher posterior inclusion probability than their prior one.

Data

Out of many variables that have been found by researchers to correlate with economic growth, 14 were chosen for this paper. Three financial indicators were chosen because the main objective of this paper was to find the effect of financial intermediaries on economic growth in Africa. Data on the following variables: price level of investment (pi), investment share of real GDP (ki), openness in current prices (openc) and real GDP per capita in current prices (cgdp) were obtained from Penn world tables. Population (Pop) from which the population growth rate (popg) was calculated and GDP per capita from which GDP per capita growth rate (gdpg) was calculated was got from Maddisson data set. Finally, data on the financial market indicators: liquid liabilities/GDP (llgdp), central bank assets/GDP (cdagdp) and private credit by deposit money bank/GDP (pcrdbgdp) were obtained from financial structure dataset constructed by Thorsten Beck, Asli Demirguc-Kunt and Ross Eric Levine. The data used in this study were from 1986 to 2007.

Most African countries lack data for years before the study period especially for the financial market indicators. In Africa, different countries miss data for different variables and this problem led to the chosen number of countries. Data on 37countries and 15 variables including the explanatory variable were used.

Table 1 shows used descriptive statistics of variables, whereas the list of countries used in this study is shown in Appendix I.

Table 1: *Descriptive Statistics of Variables Used*

Variables	Mean	Maximum	Minimum	Standard Deviation
CBAGDP	0.12	0.62	0	0.13
FDI	4.202	66.34	-0.07	10.81
FERT	5.202	7.62	2.043	1.344
GDPG	0.014	0.139	-0.02	0.027
INFL	11.46	53.92	2.033	12.17
LCGDP	3.112	3.759	2.595	0.326
LIFE	3.874	4.46	1.681	0.553
LLGDP	0.306	0.809	0.109	0.19
LPI	1.829	2.334	1.391	0.182
LPOP	3.84	5.05	1.88	0.69
OIL	0.081	1	0	0.277
OPEN	0.71	1.58	0.24	0.36
PCRDBGDP	0.171	0.584	0.029	0.133
POPG	0.025	0.035	0.01	0.006
SCHO	56.732	99.639	19.83	23.618

Empirical Results and Interpretation

Using Sala-i-Martin and D. Miller (SMD) programme, which computes Posterior Inclusion Probabilities (PIPs), PIPs of the used 14 variables were computed. Variables were sorted in descending order of the posterior probability, that is, according to whether seeing the data causes to increase or decrease inclusion probability relative to the prior probability. Posterior inclusion probability is the sum of the posterior probabilities of all of the regressions including that variable. Therefore, it is a measure of the weighted average goodness-of-fit of models including a particular variable, relative

to models excluding that variable. Once again, the goodness of fit measure is adjusted to penalize highly parameterized models in the same way as the Schwarz model selection criterion, which implies that variables with high inclusion probabilities are variables that have high marginal contribution to the goodness of fit of the regression model. Since the expected model size equals 5, the prior inclusion probability is 5/14 = 0.3571.

Table 2: *BACE Results*

Variable	Posterior probability	Posterior Unconditional		Posterior Conditional		Sign cert probability
		Mean	st. dev.	Mean	st. dev	
FDI	1	0.0021	0.0002	0.0021	0.0002	1
Llgdp	0.4108	0.0136	0.0197	0.0332	0.0173	0.9583
Lcgdp	0.2995	-0.0071	0.0142	-0.0239	0.0166	0.9202
Popg	0.2792	-0.2317	0.4688	-0.83	0.5391	0.9242
Fert	0.2608	-0.0016	0.0038	-0.0063	0.0051	0.8879
INFL	0.1929	0.0001	0.0002	0.0003	0.0002	0.876
Pcrdbc	0.1873	0.006	0.0172	0.0321	0.0272	0.8702
Oil	0.1498	-0.0014	0.0048	-0.0091	0.0092	0.8265
Scho	0.1214	0	0.0001	0.0001	0.0002	0.6919
Lpop	0.1026	0.0002	0.0016	0.0015	0.0047	0.6278
Cbagdp	0.1004	0.0002	0.0086	0.0021	0.0271	0.5627
Lpi	0.0872	0.0002	0.0043	0.0025	0.0144	0.568
Open	0.0855	-0.0001	0.0029	-0.0007	0.0099	0.5329
Life	0.0844	0	0.002	-0.0001	0.0069	0.5072

The variables, whose inclusion probability increases after seeing the data are FDI and llGDP. The remaining 12 variables have little or no support of economic growth in Africa: looking at the data further reduces initial inclusion probability. Columns (5) and (6) show the posterior mean and standard deviation of the variable, conditional on the variable being included in the model. The true (unconditional) posterior mean and the (unconditional) posterior standard deviation are reported in columns (3) and (4), respectively. The true posterior mean is a weighted average of the OLS estimates for all regressions, including regressions in which the variable does not appear and thus, has a coefficient of zero. Column (7) shows the sign certainty and it is another way of testing for significance of a variable. Only variables that are "significantly" related to growth are analyzed. The FDI was the most significant variable related to economic growth in Africa with posterior inclusion probability of one. It was positively related to economic growth with mean of 0.021 and standard deviation 0.0002 conditional being included in the model. This positive effect could be due to international mobility of capital and technology.

The second significant variable was the measure of financial development llgdp. It had a posterior inclusion probability of 0.4108. This variable was positively related to economic growth with conditional mean 0.0332 and standard deviation 0.0173. Therefore, conditional on being included into the model, a unit increase in financial development increases economic growth by 3.32 percent, other factors held constant. The sign certainty probability for this variable was 0.9583

The remaining variables were weak or not related to economic growth. Surprisingly, among these insignificant variables was the initial level of per capita GDP, a measure of conditional convergence, which had an inclusion probability of 0.2995. Conditional on inclusion, the posterior mean coefficient was -0.0239 (with a standard deviation of 0.0173). The sign certainty probability of this variable as shown in column (7) was 0.9203.

The negative coefficient shows conditional beta convergence in Africa.

This paper also sought to find out what happens in different sub-periods of the time period under study. Therefore, the data under the study were divided into 18 sub-periods, each with 5 overlapping years. Still using SMD program, PIPs of all the 14 variables were computed. Only PIPs of each variable in each study period are reported in Table 3.

Table 3: *Posterior inclusion Probabilities (PIPS) of the Explanatory Variables*

Study period	**lcgdp**	**Scho**	**LIFE**	**Pcrdbg**	**Open**	**FDI**	**lpop**
86-'90	0.9996	0.9992	0.9929	0.7544	0.6863	0.3606	0.2389
87-'91	0.9125	0.1577	0.1294	0.7455	0.9218	0.123	0.1647
88-'92	0.6811	0.1205	0.1063	0.3532	0.844	0.1405	0.157
89-'93	0.4076	0.1258	0.1155	0.4723	0.8135	0.205	0.1494
90-'94	0.2877	0.1247	0.1029	0.1562	0.3962	0.4081	0.2977
91-'95	0.1199	0.1083	0.1269	0.1072	0.3658	0.717	0.1581
92-'96	0.1142	0.1021	0.164	0.1226	0.2227	0.9869	0.104
93-'97	0.1205	0.114	0.2011	0.1196	0.1274	1	0.1084
94-'98	0.1502	0.1939	0.1498	0.1498	0.1016	1	0.1007
95-'99	0.1087	0.122	0.1092	0.1349	0.0863	1	0.0871
96-'00	0.1379	0.1138	0.1032	0.2375	0.0886	1	0.1132
97-'01	0.167	0.1042	0.0881	0.2084	0.2366	1	0.1128
98-'02	0.1778	0.1867	0.1031	0.1592	0.6473	1	0.1186
99-'03	0.1019	0.2433	0.1059	0.1719	0.3226	1	0.2784
00-'04	0.0937	0.225	0.0984	0.1143	0.2353	1	0.3761
01-'05	0.097	0.1673	0.1067	0.0933	0.1477	0.9999	0.3189
02-'06	0.0949	0.2164	0.115	0.0946	0.1248	0.9926	0.359
03-'07	0.1009	0.1728	0.089	0.1109	0.1172	0.9998	0.6945

Study period	Fert	Cbagdp	INFL	Llgdp	Popg	Lpi	Oil
86-'90	0.1389	0.138	0.1335	0.1244	0.1088	0.0942	0.0936
87-'91	0.9449	0.0982	0.1724	0.0965	0.1654	0.136	0.0936
88-'92	0.6185	0.1246	0.1665	0.1247	0.4697	0.0943	0.1064
89-'93	0.6309	0.1498	0.1749	0.1364	0.2213	0.156	0.1232
90-'94	0.7835	0.0959	0.1013	0.1415	0.7714	0.0898	0.098
91-'95	0.2022	0.1282	0.1314	0.202	0.1097	0.4014	0.0894
92-'96	0.1245	0.1016	0.0986	0.818	0.1055	0.8316	0.0973
93-'97	0.1311	0.0876	0.0849	0.6355	0.1174	0.7325	0.0908
94-'98	0.1507	0.1111	0.0971	0.4598	0.0904	0.6293	0.0959
95-'99	0.134	0.1309	0.1259	0.282	0.3147	0.5517	0.125
96-'00	0.1372	0.0874	0.1026	0.3117	0.0925	0.1954	0.116
97-'01	0.1217	0.0879	0.0911	0.1383	0.0833	0.1118	0.17
98-'02	0.1418	0.1	0.0886	0.1003	0.2641	0.1347	0.2815
99-'03	0.1088	0.0962	0.0915	0.1254	0.168	0.1577	0.1684
00-'04	0.1005	0.086	0.0881	0.126	0.0882	0.2663	0.0894
01-'05	0.1014	0.087	0.0894	0.1039	0.1079	0.2442	0.0848
02-'06	0.1094	0.0904	0.118	0.1129	0.0983	0.7388	0.0921
03-'07	0.1134	0.1026	0.2043	0.0978	0.2733	0.2638	0.0861

From Table 3, it can be seen that different periods have different variables that significantly affect economic growth. Once again, variables, whose PIP was greater than the prior inclusion probability (0.357) were those referred to as significant. Since the aim of this study was to emphasize on the importance of financial intermediaries in Africa, it was important to focus on results of financial indicators. The financial indicator llgdp only became significant for three periods 1992 to1996, 1993 to 1997 and 1994 to 1998, pcrdbg was significant for the first four periods, which ran

from 1986 to 1993 and cbagdp was not significant at all in the entire period under study. In the recent years, none of them was significant. Hence, according to these results, financial intermediaries did not determine economic growth in Africa. In line with the above results, it is noted that the most significant variable was FDI. It was significant from 1990 till the end of the study period. When FDI became significant, other variables like openness became less important and others like IPi became more important. On average, there were three variables per period, which significantly explained economic growth in Africa. The FDI dominates all the other variables and this was because it leads to improved technology and efficiency in a short time and, in turn, it leads to economic growth. Investment price became significant when FDI became significant but after a while, it was not significant any more.

The results indicated that financial intermediaries are necessary but insufficient to cause economic growth in Africa. This is mainly because roles played by financial intermediaries are not of great importance in Africa. For instance, issuing credit to the private sector is not that important since people invest their personal savings. It is also due to the fact that financial markets are still underdeveloped in Africa. In recent years, significant determinants of growth in Africa were FDI, total population and investment price. At the very beginning of the study period, the significant variables were initial GDP, years of schooling, life expectancy, private credit by deposit money bank/GDP (pcrdbgdp), openness of the economy and FDI. Hence, significant determinants of economic growth in Africa varied from period to period.

Robustness of Results

Table 4: Posterior Probabilities with Different Prior Model Sizes

Variable	Kbar=3	Kbar=5	Kbar=7	Kbar=9	Kbar=11
Prior inclusion probalility	**0.2143**	**0.3571**	**0.5**	**0.6429**	**0.7857**
FDI	**1**	**1**	**1**	**1**	**1**
Llgdp	**0.3369**	**0.4108**	***0.4733***	**1**	**1**
Popg	***0.2071***	0.2792	0.3352	**1**	**1**
Fert	0.1704	0.2608	0.3618	**1**	**1**
Lcgdp	0.1492	0.2995	***0.4936***	**1**	**1**
Pcrdbc	0.1197	0.1873	0.2656	**1**	**1**
INFL	0.1003	0.1929	0.2955	**1**	**1**
Oil	0.0743	0.1498	0.215	**1**	**1**
Scho	0.0706	0.1214	0.1702	**1**	**1**
Lpop	0.0557	0.1026	0.1573	**1**	**1**
Cbagdp	0.0509	0.1004	0.1514	**1**	**1**
Life	0.0492	0.0844	0.151	**1**	**1**
Lpi	0.0454	0.0872	0.1489	**1**	**1**
Open	0.0443	0.0855	0.1452	**1**	**1**

The value of the prior model size k=5 is arbitrary and the results are derived using this single value. Therefore, to see effects of the prior model size on the conclusions, Table 4 reports the PIPs when k equal to 3, 5, 9 and11. The corresponding value of the prior probability of inclusion for each value of k is reported in the first row of Table 4. This is to help see whether a variable improves its probability of inclusion relative to the prior

by comparing the posterior probability to the corresponding prior probability. Variables that were important are shown in "bold" while those marginally important (miss the critical value by just a small margin) are shown in "bold" and "*italics*." From the above evidence, it can be seen that FDI was not sensitive to the choice of prior model size. It remained with a high inclusion probability and a positive coefficient estimate. In addition, the ratio of financial liquidities to GDP (llgdp) also remained significant or at least marginally significant with different values of k. The remaining variables remained not significant until the prior model size was increased above 9. At this point, all variables become significant.

This suggests that in Africa, most determinants of growth require many other conditioning variables so as to display their importance to economic growth. All variables had the expected coefficient signs. In particular, conditional convergence was present at all times. In conclusion, results computed using prior model size 5 were robust enough since the aim was to get the major determinants of economic growth.

Conclusion

The debate of whether finance leads or follows economic growth still leaves us with lot to answer. This study has contributed to this debate by finding that in Africa with the exception of the ratio of liquidity liabilities to GDP (a measure of financial depth), financial development/intermediary was not a significant determinant of economic growth. However, this does not mean financial development retards economic growth because it has a positive effect on it even though not significant. To reach this conclusion, the study used BACE method proposed by Sala-i-Martin and D. Miller (2000) to determine variables that are significantly related to economic growth in African countries with emphasis on financial markets. Unlike the standard Bayesian Model Averaging, the BACE method does not require specification of prior distribution of parameters. But rather, it has only one

hyper-parameter, the expected model size, k. The method also takes into account all existing models and hence, it is not biased.

Unlike Levine and Renelt (1992) where all determinants of economic growth were found to be fragile, this study found that some economic variables had significant effects on long-run growth. The strongest evidence in Africa was found for FDI. It was significant in all regressions, especially recent periods.

Finally, non-significant results of financial market indicators on economic growth in Africa suggest that Africa has not yet reached the required minimum development level of financial markets. These results also suggest that Africa bears banks, which lack transparency and good management. On the other hand, the positive relationship between financial development and economic growth is in line with findings of King and Levine (1993), Odhiambo (2009) as well as Ghani (1992) among other researchers.

Recommendations

These results suggested that formulated government policies should put into consideration FDI as a major determinant of economic growth in Africa. Financial intermediaries need to develop their products so as to see their effects of economic growth more precisely. The author recommends that further research on economic growth should concentrate on FDI because it had the highest evidence as its determinant.

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Appendix I

List of the 37 African Countries Included in the Regressions

Algeria	Lesotho	Tanzania
Botswana	Madagascar	Togo
Burkina Faso	Malawi	Tunisia
Burundi	Mali	Uganda
Cameroon	Mauritania	Zambia
Cape Verde	Mauritius	
Central African Republic	Morocco	
Chad	Niger	
Cote d`Ivoire	Nigeria	
Egypt	Rwanda	
Equatorial Guinea	Senegal	
Ethiopia	Seychelles	
Gabon	Sierra Leone	
Gambia, The	South Africa	
Ghana	Sudan	
Kenya	Swaziland	