

Financing Development Without Tears: An Empirical Investigation on Sub-saharan Africa



Akpan H. Ekpo

Abstract We examined both traditional and ‘innovative’ sources of financing development in SSA. The panel results for 36 SSA countries showed mixed results. While revenues, savings and remittances had a positive relationship with growth and per capita income, inflation, governance and external debt indicated negative relationship with growth. It is apparent that SSA economies must improve on governance and strive to mobilize domestic resources such as savings, tax revenues and private–public partnership arrangements to finance development.

1 Introduction

Most countries in Sub-Saharan Africa (SSA) are commodity-dependent. Some of the countries depend on one commodity while others have two or more commodities. The revenues earned from the exports of these commodities (minerals, agriculture) in raw form are used in importing finished goods from developed countries as well as in financing development. The revenues from export of commodities generate foreign reserves, for example, in Nigeria, oil revenues constitute about 85% of foreign exchange.

In almost all SSA, only South Africa can boast of a seemingly manufacturing sub-sector in the production chain. The prices of the export commodities are both volatile and unstable depending on the vagaries of the global economic market. In most cases, the price and output are under the control of a Cartel, for example, the Organization of Petroleum Exporting Countries (OPEC) and crude oil. However, whether it is oil, cocoa, diamond, rubber, etc., the prices are determined outside the continent of Africa.

Paper delivered at the ACRIA 10 Conference organized by CREPOL and < WAIFEM, WAMI and WAMA, July 8-10, 2019, WAIFEM Headquarters, Lagos, Nigeria.

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D. Seck (ed.), *Financing Africa's Development*, Advances in African Economic, Social
and Political Development, https://doi.org/10.1007/978-3-030-46482-0_2

The volatility of prices and output implies volatility of revenues thus financing various development projects in SSA from such revenues remain a big challenge. Despite the revenues from commodities and the industrialization policies of import substitution, export promotion and more recent import-based policy, SSA remains backward and underdeveloped even within the neo-liberal economic framework. Most of the economies in SSA rely on official and other overseas development assistance (ODA) to finance the development process. Several studies have shown that ODA alone will not be adequate for financing development. In the last 40 years, ODA to several African countries has not had any significant impact on the countries of SSA (Ekpo 1992, 2011).

In SSA, both individual and national savings are generally low and efforts to generate internal revenues have been relatively difficult given the problems of tax administration. Nonetheless, tax efforts have improved and governments have pursued alternative sources of financing development. However, more often these ‘new’ sources are derived from fine-tuning the traditional methods of financing (Nwokoma and Akpan 2017; Senbet 2009).

SSA countries borrow from various multilateral institutions; some of the economies have established national development banks to finance their infrastructural needs. In recent times, the debt profile of most countries has been trending upwards (Ekpo 2012; Ekpo and Afangideh 2012).

The objective of this paper is to examine the sources of financing development in Sub-Saharan Africa in order to ascertain whether countries in the continent can borrow without tears. The paper is organized as follows: Sect. 2 discusses the stylized facts as regards resource mobilization while Sect. 3 briefly examines related studies, concepts and methodology. The empirical results are analyzed in Sects. 4 and 5 concludes the paper. It is expected that discussion in the paper would provide insights on the subject matter as well as guide policy.

2 Mobilizing Resources: Stylized Facts

The rate of inflation which averaged single-digit from 1980 to 2000 rose to double-digit between 2001 and 2018. Throughout the period, inflation exceeded the growth in GDP. Between 2011 and 2018, inflation stood at almost 16%. It must be noted that each country in SSA has its own inflationary threshold. There is no doubt that SSA economies were better managed from the mid-2000s (Ekpo 2016, pp. 12–23). The growth of the economy of SSA has remained not only sluggish since the global financial crises but also dependent on prices of commodity exports (Fig. 1).

The Table 1 summarizes the trend of some financial resources in SSA for the period 1980–2018. External debt which averaged about \$26 billion between 1980 and 1985 rose to \$31.58 billion between 1996 and 2000 and remained at the same level up to 2006–2010 but declined thereafter to about \$19.54 billion between 2011 and 2018. The external debt profile remained high during the structural and post-structural adjustment period. The rising external debt is not unconnected with the

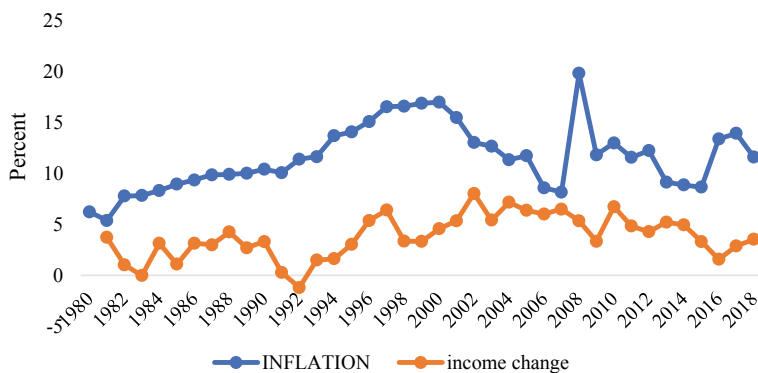


Fig. 1 Trends in inflation and growth in GDP in sub Sahara Africa

desire to mobilize funds for infrastructural development. On the other hand, savings have remained almost flat for the period 1980–2018 (see Figs. 2, 3 and Table 1). But savings/GDP which was at its lowest in 2000 rose steadily with a peak in 2008 and thereafter trending downwards as a result of the global economic recession.

Revenues mainly from commodity exports averaged \$30 billion during the period 1980–2010 and declined thereafter. Remittances have become an important source of financing development in SSA. It increased steadily from 1980 to 2010. Nigeria, Ghana, Kenya and Zimbabwe and Senegal show increased remittances during the period under review.

3 Concepts, Related Studies and Methodology

Within the neo-liberal concept of the theory of¹ comparative advantage (static or dynamic) and its vent-for-surplus element, it is argued that a country would gain more by exporting commodities that it produces using its abundant factors of production most intensively while importing goods whose production needs relatively require scarce factors of production. The first implication of this position is that any economy can engage in and benefit from international trade, including the world's highest cost and lowest cost producers of any good. This is not possible because factor endowments are different among countries. The contention here is, for example, that SSA countries can export primary commodities with perhaps its labour-intensive methods and import finished goods such as computers, radios and cars. Moreover, trade between SSA and developed countries is often unequal regarding accrued benefits.

Hence, the revenue earned from exporting primary commodities is central to the development process and is the basic engine for economic growth. For example, revenues earned from exports would be used in importing capital goods (machinery,

¹This section draws heavily from Ekpo (2012).

Table 1 Selected financial resources in SSA, 1980–2018 (averages)

Period	1980–1985	1986–1990	1991–1995	1996–2000	2001–2005	2006–2010	2011–2018
External debt (\$Bn)	26.59	31.72	31.61	31.58	31.62	31.36	19.54
Savings (\$Bn)	23.15	27.75	27.74	27.71	27.70	27.79	17.22
Inflation	6.15	4.66	8.12	9.05	11.98	13.66	15.81
Revenues (\$Bn)	26.76	32.07	32.02	31.99	31.93	31.81	19.24
Remittances (\$Bn)	2.09	2.51	2.51	2.52	2.51	2.52	1.87

Source computed from World Bank: African economic indicators and African Development Bank Statistical Yearbook, various issues

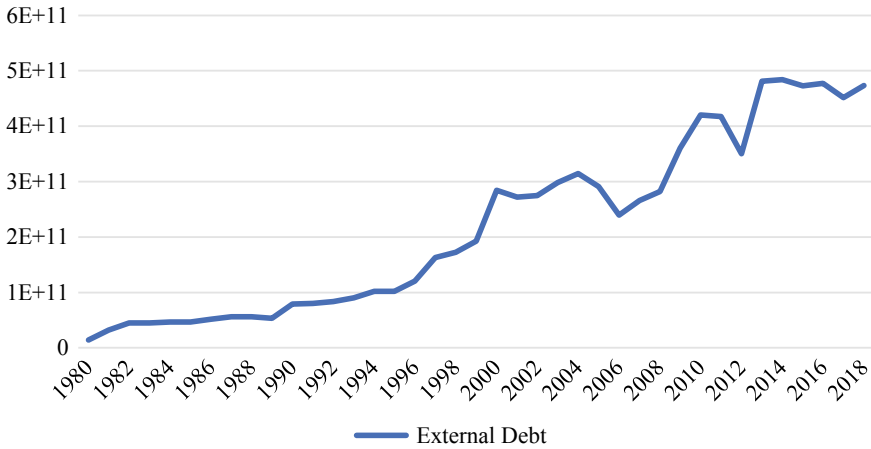


Fig. 2 Trend in external debt in sub Sahara Africa

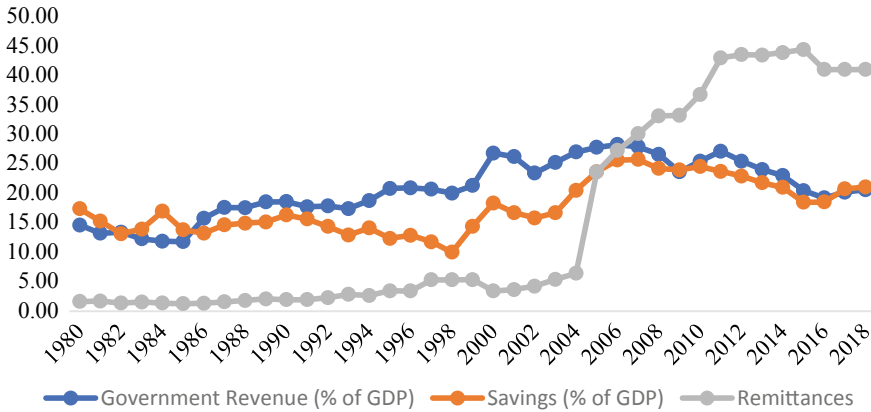


Fig. 3 Trends in government revenue, savings and remittances in sub Sahara Africa

etc.) for development resulting in structural change and income growth. The strategies meant to drive this process include import substitution and export promotion. Primary export-led growth has three broad advantages to developing countries: (i) improved utilization of existing factors of production, (ii) expanded factor endowment and (iii) linkage effects.

However, series of empirical evidence shows that except for Botswana, primary exports have not effectively transformed the economies of SSA, that is, there has been no economic development. The reasons for this include

- Sluggish demand growth.
- Declining terms of trade.
- Fluctuating export earnings.

- Ineffective linkages.
- Rent seeking and corruption.
- Dutch disease.

It seems that the situation would have been different if leaders in SSA were interested in development. Leaders in Malaysia, Indonesia, etc., exported primary products but in addition built a semi-manufactured export economy. The leadership in these countries were developmental in orientation. Revenues earned from primary exports were utilized in creating the enabling environment for the individual, public and private sectors to drive the development process. The direct participation and intervention of the public sector were qualitative. In other words, matters of development go beyond financing; there must exist good governance coupled with the commitment to positively transform an economy through comprehensive planning with space for the private sector to play its role.

The literature on the importance of finance to growth is vast and hence cannot be adequately summarized in this paper. Finance is a crucial input to growth and this assertion can be traced to the works of Schumpeter (1983) which have been supported by historical evidences, cross-country regressions, within-country studies that use variances across regions and industries as well as combinations of the various approaches (Rousseau 2003; Goldsmith 1969; Mckinnon 1973; Montiel 2003). King and Levine (1993), for example, formalized the link between finance and growth by utilizing cross-country regressions to demonstrate that higher levels of banking system development are positively linked with faster rates of physical capital accumulation and economic growth. According to their study, finance does not follow economic activity; it leads it. An excellent summary of the literature is in (Haber 2010).

Another interesting aspect of the finance–growth nexus is that it seems to also have positive effects on the distribution of income and the well-being of the poor. Financial development reduces income inequality, enhances the growth rate of the income share of the poorest quintile of the population and is associated with poverty alleviation (Honohan and Beck 2007). Consequently, “the question of the relationship between financial development and growth is now a settled matter. There is a broad consensus that finance plays a crucial role in the process of growth and that it does so through a variety of mechanisms.” Our interest goes beyond growth because the latter is not development. Therefore, it would be interesting to examine the impact of sources of finance on growth and economic development using per capita income as a proxy for latter over-time, among other variables.

3.1 Sources of Financing Development

Arising from the above analysis, the conventional external sources of financing development in commodity-dependent economies of SSA include, inter alia:

- Own revenues from commodity export.

- Official aid (loans, grants).
- Private debt flows.
- FDI flows.
- Portfolio equity flows.
- Personal remittances.
- Institutional remittances.

These sources are rather unstable and therefore cannot be relied upon particularly for longer term development projects.

In order to ascertain the impact of some of these sources, we state the following relationship:

$$\Delta y_{it} = \beta \delta + X_{it} + U \quad (1)$$

where:

Δy = change in GDP;

δ sources of finance;

X = control variables such as inflation and governance.

Due to paucity of data, Eq. (1) would be estimated for 36 SSA countries (the list of countries is in the appendix).

3.2 *'Innovative' Sources of Financing Development*

(i) Diaspora bonds.

A Diaspora bond is a debt instrument issued by a country—or, potentially by a sub-sovereign entity or by a private corporation to raise financing from its overseas diaspora (Ratha et al. 2008). These bonds are usually issued in times of crisis and often at what has been described as a 'patriotic' discount. Asian countries particularly India, Malaysia, etc., and Israel have raised billions from their diaspora abroad. It is the contention that the diaspora more often have a strong desire to assist in the development of their home countries and are thus more likely to buy diaspora bonds. Nigeria is contemplating issuing diaspora bonds to finance development.

Table in the appendix below indicates estimates of diaspora stock of SSA countries and their yearly savings. By creating the right incentive, SSA governments can tap into potential diaspora savings. These diaspora bonds can provide instrument for repatriation of Africa's flight capital which is estimated at more than \$170 billion. Some challenges that SSA countries may encounter in issuing diaspora bonds include (i) weak and non-transparent legal systems for contract enforcement, (ii) a lack of national banks and other institutions in destination countries which can ease the marketing of the bonds and (iii) a lack of clarity on regulations in the host countries that either allow or restrain diaspora members from investing in the bonds.

(ii) Reducing remittance costs.

It is believed that SSA countries have the highest share of remittances flowing through informal channels compared to other regions (Page and Plaza 2006). This is partly due to the high cost of sending remittances in SSA thus reducing remittance costs would increase remittance flows to SSA. “For example, the average cost, including foreign exchange premium, of sending \$200 from London to Lagos, Nigeria in mid-2006 was 14.4% of the amount, and the cost from Cotonou, Benin to Lagos was more than 17%.” Therefore, reducing remittance fees would increase the diaspora income of remitters, encouraging them to remit large amounts at greater frequencies. It may, in addition, encourage remittances to shift from informal to formal channels.

(iii) Innovative structuring.

There exists series of new guaranteed and conditionalities introduced by multi-lateral institutions like the Multilateral Investment Guarantee Agency (MIGA) of the World Bank, IMF, etc., to facilitate the financing of development in low-income countries—especially given the impact of the global financial crisis. For details (see Go and Page 2008).

(iv) Public–private partnership (PPP).

Industrialized countries finance their infrastructure and economic growth largely with funds from the private sector especially from capital markets. The PPP approach is suitable for large infrastructural projects. It requires the involvement of the private sector with guarantees from the public sector. This approach needs appreciable expertise such that at the end, projects are not almost fully public sector financed.

(v) Recovery of looted funds.

Another innovative way of utilizing existing resources include recovery of flight capital and stolen assets. According to the World Bank and the UN office of Drug and Crime (UNODC), the cross-border flow of the global proceeds from criminal activities, corruption and tax evasion are estimated to be more than \$1 trillion yearly. About \$20 billion to \$40 billion in assets acquired by corrupt leaders of poor countries, mostly in Africa, are kept abroad. It is on record that Nigeria successfully recovered half a billion dollars in stolen assets from Swiss sources with the assistance of the World Bank, civil society and the Swiss authority.

3.3 *Mobilizing Domestic Resources*

Domestic resources seem to be preferred to volatile sources of financing development. It must be stated up front that mobilizing domestic resources in SSA can be extremely difficult given the rigidities in the African economies. There are also significant tradeoffs between domestic resource mobilization and sources of financing development as earlier—examined. For example, high levels of aid may impact

adversely on domestic resource mobilization by reducing recipient countries' tax effort. It is a challenge to mobilize domestic resources in the WAIFEM countries giving the low savings rates. Both gross national and domestic savings as ratios of GDP are quite low in all the countries. In 2007, the average GNS/GDP was 18.3% and declined steadily to 13.2% in 2009; for the ECOWAS, GDS/GDP stood at –3.0% in 2007 and increased to 8.7% in 2008 (see appendix Tables). These rates are quite low if domestic resources are to be mobilized via the banking sector to finance development.

The data for the selected countries shows that in 2008 the GNS/GDP for Nigeria was almost 40% while that of Liberia was about 33% despite her being a post-conflict economy. All the other countries recorded very low savings rate (WAIFEM 2010, p. 167). Apart from the low savings rates, commercial lending rates remain very high in the selected countries. For the period 2001–2009, lending rates averaged almost 25% for the Gambia; about 20% in Nigeria and 23% in Sierra Leone.

These high lending rates cannot encourage growth in the real sectors of these countries. It is, therefore, not surprising that the real sectors in these countries are in comatose with essentially thriving informal sectors largely dependent on informal finance. The lending rates for both ECOWAS and the CFA zone are also high particularly between 2008 and 2009.

Nonetheless, we still argue that domestic resources are a more permanent and sure sources of financing development. Additional domestic resources could be harnessed by

- **Increased mobilization of savings and lending**—incentives have to be put in place to enable households and their families to save by holding more financial assets. In most African countries, the return on saving deposits is very low. Millions of Africans do not have information on available financial assets. It may be necessary to take the financial institutions to the people in the rural areas. In addition, reducing the transaction costs of holding financial assets may induce household and their families to hold financial assets.
- **Banking reforms.** It is crucial to strengthen the banking system. Aryeetey (2009) suggests that
 - (1) There is a need for measures to deepen financial markets within the context of alternative institutional arrangements;
 - (2) Measures to strengthen market—support financial infrastructure;
 - (3) A new regulatory and incentive framework to advance market integration;
 - (4) Measures to enhance the financial technology of both informal and formal finance so as to broaden the scope of their operations and
 - (5) Measures to develop linkages among segments of the market.
- **Building capital markets**—this is crucial for long-term finance. There is an absence of active capital markets in SSA. Of the 16 countries with stock markets in 2009, only Nigeria and South Africa had more than 100 firms listed; the remaining countries had about 24 firms listed. It would be useful to pool resources together

and establish regional capital markets. “Regionalization of African Stock Markets should enhance mobilization of both domestic and global financial resources both domestic and global financial resources to fund regional companies while injecting more, liquidity unto the markets” (Aryeetey 2009).

- **Developing microfinance**—some SSA Countries have established microfinance banks but the challenge is to make them generate savings and support small-scale development projects. The operations of microfinance institutions would have to be re-examined for effectiveness. Recently, the Nigerian Apex Bank closed down hundreds of microfinance banks for inactivity and not sticking to agreed prudential guidelines.
- **Expanding the tax base.** While this represents one of the surest ways of generating revenue for development, there is also a limit to taxation. It may be useful to consider a kind of regional **Tobin Tax** to finance regional development projects. This would involve political commitment from the African leadership. Another issue would centre on how best to tax the large informal sector.²
- **Creating an effective fiscal space.** This involves a re-prioritization of spending—expenditure switching. For example, an examination of budgets of most SSA countries indicate heavy expenditure on military armaments, equipment, fighter planes rather than spending on capital projects that would stimulate growth and development. Such an exercise will free resources from spending on wasteful consumption to spending on infrastructural financing.
- **Pension funds.** In some SSA countries, there exist large pension funds which could be used to finance development projects such as roads, water schemes and sanitation, among others.
- **Sovereign wealth fund.** Revenues from non-renewable resources need to be managed for investment, intergenerational equity and broad economic stability.
- **Social capital.** This aspect of financing development has not been effectively utilized by most SSA countries. Rural communities in Africa have abundant social capital that would finance micro- and even small-scale projects.
- **Role of regional financial institutions.** It is certain that the African Development Bank, the African Export and Import Bank and other similar institutions established by African Leaders must be active in generating ideas for domestic resource mobilization. African countries ought not to face similar or strict conditionalities in order to borrow from the ADB, for example. ADB was set up to provide needed funds to finance development projects so as to accelerate economic growth and development in Africa. Is the ADB still playing that role? If not, they should be reminded of their mandate.
- **Labour as a resource.** Countries in the zone must perceive labour as a resource particularly in rural communities. For example, using labour to build projects in the rural areas would yield positive multiplier effects on the said community and the wider economy.

²How Lagos State in Nigeria taxes the informal sector is worth studying.

4 Analysis of Panel Regression Results

The estimated panel results (random effect) for the period 1980–2018 for 36 SSA countries are presented in Table 2. Based on the results, remittances, revenues and savings have positive relationship with growth in GDP and are statistically significant. An increase in external debt is negatively related to growth implying that external debt has a turning point. Governance and lagged GDP have no positive relationship to growth. In addition, an increase in inflation rate reduces growth for the period under review. The R2 is robust confirming that the control variables explain the variation in the model.

Table 2 Panel regression results

ΔY	Coef.	Std. err.	Z	$P > z $	[95% Conf.]
Remit	2.786014	0.3029674	9.20	0.000	2.192209
Rev	1.119911	0.0849158	13.19	0.000	0.9534787
Infl	-2.15073	0.830396	-2.59	0.003	-0.0.07053
Savs	0.474418	0.1057248	4.49	0.000	0.2672012
Exdt	-0.3650004	0.0688446	-5.30	0.000	-0.4999334
Govern	-4.820231	1.559945	-3.09	0.000	-1.359201
$y-1$	-0.3283598	0.0130217	-25.22	0.000	-0.3538819
_cons	15.50873	13.72454	1.13	0.027	-4.080821

Random-effects GLS regression
 Number of obs = 562
 Number of groups = 36
 R-sq: within = 0.6598
 Between = 0.5883
 Overall = 0.6503

y/p	Coef.	Std. err.	z	$P > z $	[95% conf.]
$y-1$	-1.500290	0.857309	-1.75	0.001	3.291009
Govern	-67.07002	155.9768	-0.43	0.666	-0.3730102
Exdt	-0.563393	1.198708	-0.47	0.636	-0.2789308
Savs	4.470343	1.832108	2.44	0.015	4.875931
Infl	-2.837341	5.911127	-0.48	0.613	-0.2626642
Rev	3.507043	1.397228	2.51	0.011	-6.240974
Remit	-21.55517	6.284308	-3.43	0.001	-5.380747
_cons	1923.612	464.6528	4.14	0.000	1012.91

Random-effects GLS regression
 Number of obs = 562
 Number of groups = 36
 R-sq: within = 0.5105
 Between = 0.4775
 Overall = 0.4952

The results on income per capita as the dependent variable appear interesting; only savings and revenues have a positive relationship with income per capita, a proxy for development. Remittances, governance and external debt have negative relationship with development. An increase in the rate of inflation reduces income per capita which is expected—a rise in inflation rate affects more the poor since the rich can draw on savings.

5 Conclusion

We examined the sources of financing development in SSA. We x-rayed traditional as well as innovative sources of financing development in the continent. The dependent on commodity exports for revenue remains a challenge for SSA based on the volatility of such exogenous source of funds. It would be prudent to mobilize domestic resources such as private and public savings, revenue from taxation, diaspora bonds, among others to finance development.

The panel regression results showed that external debt, inflation and governance reduces growth and development. But savings and revenues enhance growth and per capita income.

These results have to be interpreted with caution because paucity of data on other sources of finance such as diaspora bonds, private equity flows and domestic debts for most of the countries prevented a more robust analysis of the subject matter. Nonetheless, SSA countries must improve on governance as well as finding innovative ways of financing development without tears.

Appendix

See Tables 3 and 4.

See Figs. 4 and 5.

Table 3 Financial flows to sub-Saharan Africa and other developing countries 1990–2006

Types of flow	1990 (\$ billion)	1995 (\$ billion)	2000 (\$ billion)	2005 (\$ billion)	2006 (\$ billion)	Growth rate, 2000–06%
Sub-Saharan Africa excluding south Africa official flows						
ODA	17.0	17.4	11.7	30.1	29.3	150
Official debt	4.3	3.5	0.7	-0.7	-	-
Private medium- and long-term flows	0.8	3.7	5.1	11.9	14.4	180
FDI	1.3	3.3	5.8	10.3	13.3	128
Portfolio equity	0.0	0.0	0.0	0.1	.01	-
Bond	0.0	0.1	-0.2	0.0	0.0	-
Bank lending	-0.5	0.3	-0.5	1.5	4.3	-
Private short-term debt	2.3	1.0	-1.4	1.4	1.4	-
Migrants' remittances	1.7	3.1	4.3	8.7	9.6	124
Institutional remittances	1.4	2.3	2.9	5.2	-	-
Capital outflows	3.2	5.3	6.6	6.3	-	-

Source Africa at a turning point? Growth, Aid, and External Shocks, p. 304

Table 4 Potential market for diaspora bonds

Country	Diaspora stock (thousands)	Potential diaspora savings (\$ billions)
South Africa	713	2.9
Nigeria	837	2.8
Kenya	427	1.7
Ghana	907	1.7
Ethiopia	446	1.6
Somalia	441	1.6
Senegal	463	1.3
Zimbabwe	761	1.0
Sudan	587	1.0
Angola	523	1.0
Congo, Dem Rep	572	0.8
Cape Verde	181	0.7
Uganda	155	0.7
Mauritius	119	0.7
Cameroon	231	0.6
Mozambique	803	0.6
Madagascar	151	0.6
Tanzania	189	0.6
Eritrea	849	0.6
Mali	1,213	0.6
Other SSA Countries	5,285	5.5
Total	15,854	28.5

Source Ratha et al. (2008), p. 316

Note Diaspora Savings are calculated assuming migrants earned the average per capita income of the host country and saved one-fifth of their income

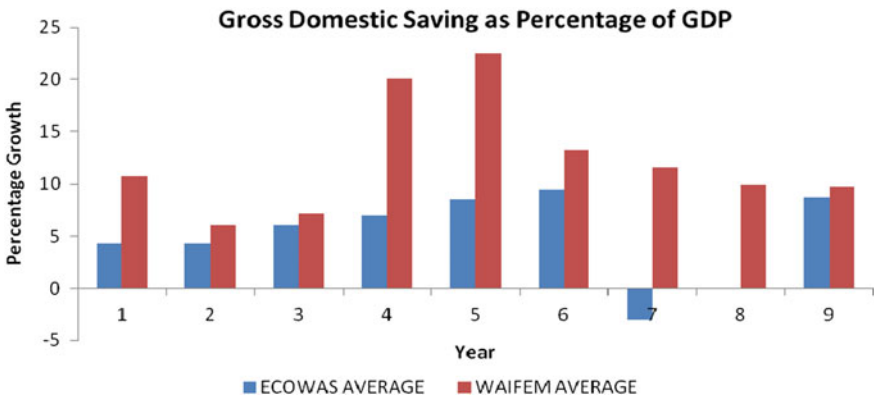


Fig. 4 Gross Domestic savings as percentage of gross domestic product in selected West African countries

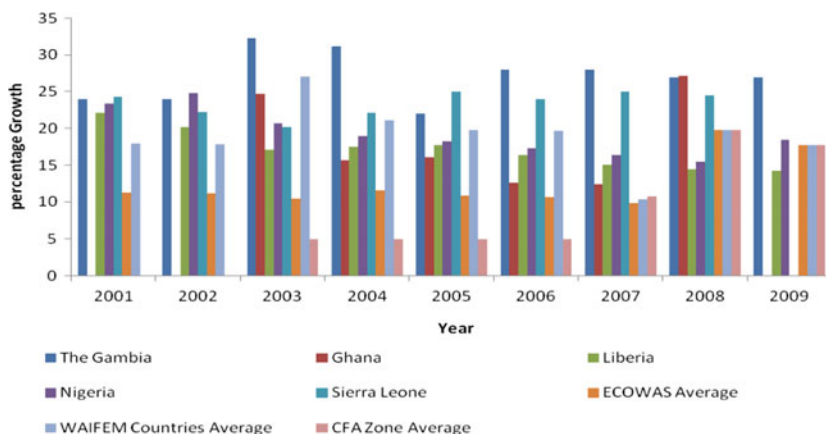


Fig. 5 Commercial bank lending rate in selected West African countries

Fixed Effect Model

```
. xtreg gdpchange remit rev infl savs exdt policy govqt gdp1, fe
note: policy omitted because of collinearity
```

```
Fixed-effects (within) regression      Number of obs   =   562
Group variable: cid                   Number of groups =   36

R-sq:  within = 0.6666                 Obs per group:  min =    8
      between = 0.3441                    avg =   15.6
      overall  = 0.6336                    max =   18

                                         F(7, 519)      =   148.23
                                         Prob > F        =    0.0000
```

gdpchange	Coef.	Std. Err.	z	P> t	[95% Conf. Interval]	
remit	1.787519	.4825456	3.70	0.000	.8395366	2.735502
rev	.9721852	.1056778	9.20	0.000	.7645763	1.179794
infl	-332065.3	4.47e+07	-0.01	0.994	-8.75e+07	8.82e+07
savs	.8191991	.1386046	5.91	0.000	.546904	1.091494
exdt	-.4689317	.0903715	-5.19	0.000	-.6464705	-.2913929
policy	0 (omitted)					
govqt	-2.32e+08	1.22e+09	-0.19	0.849	-2.62e+09	2.16e+09
gdp1	-.3392735	.0139807	-24.27	0.000	-.3667392	-.3118078
_cons	1.36e+09	7.99e+08	1.70	0.089	-2.08e+08	2.93e+09
sigma_u	3.855e+09					
sigma_e	7.162e+09					
rho	.22465232 (fraction of variance due to u_i)					

```
F test that all u_i=0:      F(35, 519) =    2.43      Prob > F = 0.0000
```

Per Capita Income Model
(Fixed Effect Model is Idea Based on the Hausman Test)
Fixed Effect Model

```
. xtreg pcy gdp1 govqt policy exdt savs infl rev remit, fe
note: policy omitted because of collinearity
```

```
Fixed-effects (within) regression          Number of obs   =    562
Group variable: cid                       Number of groups =    36

R-sq:  within = 0.6114                    Obs per group:  min =     8
        between = 0.5385                    avg =           15.6
        overall = 0.6062                    max =           18

                                           F(7, 519)       =    49.87
corr(u_i, Xb) = -0.1117                    Prob > F        =    0.0000
```

pcy	Coef.	Std. Err.	z	P> t	[95% Conf. Interval]	
gdp1	-0.006578	0.00157	-4.19	0.000	2.272309	9.515319
govqt	-0.332389	0.29415	-1.13	0.260	-4.955581	-13.43252
policy	0	(omitted)				
exdt	-4.095050	1.10082	-3.72	0.000	-2.745508	-1.953084
savs	0.677140	1.83011	0.37	0.918	.7440933	7.936708
infl	-14.56155	5.89536	-2.47	0.004	-6.182394	-2.960516
rev	0.594077	0.39084	1.52	0.030	-6.248109	-4.850808
remit	-1.130180	0.36108	-3.13	0.002	-3.241307	-7.413908
_cons	1865.165	105.3781	17.70	0.000	1658.145	2072.184
sigma_u	0					
sigma_e	10.51034					
rho	0	(fraction of variance due to u_i)				

```
F test that all u_i=0:      F(35, 519) = 109.59          Prob > F = 0.0000
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