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How Large Is the Private Sector in Africa? Evidence from National Accounts and Labor Markets

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ABSTRACT

How Large Is the Private Sector in Africa? Evidence from National Accounts and Labor Markets[1]

In recent years, the private sector has been recognized as a key engine of Africa's economic development. Yet, the most simple and fundamental question remains unanswered: how large is the African private sector? We present novel estimates of the size of the private sector in 50 African countries derived from the analysis of national accounts and labor market data. Our results point to a relatively large size of the African private sector. National account data shows that this accounts for about 2/3 of total investments, 4/5 of total consumption and 3/4 of total credit. In relative terms, large private sector countries are concentrated in Western Africa (Cote d'Ivoire, Guinea, Niger, Senegal and Togo), Central Africa (Cameroun, Republic of Congo) and Eastern Africa (Kenya, Sudan, Uganda and Tanzania), with the addition of Mauritius. Countries with small private sectors include a sample of oil-exporters (Algeria, Angola, Equatorial Guinea, Libya and Nigeria), some of the poorest countries in the continent (Burundi, Burkina Faso, Guinea Bissau, Mali and Sao Tome e Principe), Zambia and Botswana. Over the last ten years, the size of the private sector has been contracting significantly in oil exporting countries, although the variation in its size does not appear to be significantly correlated with growth performance. Labor market data reinforces the idea of a large private sector, which provides about 90% of total employment opportunities. However, most of this labor is informal and characterized by low productivity: permanent wage jobs in the private sector account on average for only 10% of total employment (a share similar to that provided by public administration and state owned enterprises). South Africa is the notable exception, with formal wage employment in the private sector representing 46% of total employment. Finally, we find evidence of negative private sector earning premiums, suggesting that market distortions abound. These are likely to prevent the efficient allocation of human resources, and to reduce the overall productivity of the African economies.

JEL Classification: H10, J21, O10, O55, P17, Y10

Keywords: private sector size, private sector development, private consumption, private investment, national accounts, private sector employment, private sector earnings, labor markets, Africa

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[1] This is a background paper of the African Development Report, titled "Private Sector as an Engine of Africa's Economic Development" (http://www.afdb.org/en/documents/publications/african-development-report/). We are grateful to Mthuli Ncube, Desire Vencatachellum, Leonce Ndikumana, Brian Ames, Thouraya Triki, Shimeles Abebe and the participants in internal seminars at the African Development Bank in Tunis for useful comments. We are also thankful to the statistical department of the African Development Bank for availing the African Economic Outlook master data. Finally, various national statistical offices are thanked for providing household and labor force survey data. Marco Stampini worked on this paper at the African Development Bank, before joining the Inter-American Development Bank. The findings of this paper reflect the opinions of the authors and not those of the Inter-American Development Bank, the African Development Bank, their Board of Directors or the countries they represent.

1. Introduction

Fifty years of post colonial history have seen deep transformations in the role and size of the private sector in Africa[2], led mostly by ideological shifts. Immediately after independence, many countries experimented with socialist systems in which states were in charge of the production of commodities and services. This development model encountered great challenges in the 1980s as commodity prices fell, and most African economies experienced a prolonged economic collapse. In the 1990s, macroeconomic and structural reforms brought a reduction of the scope of the public sector.

In recent years, the private sector has been recognized as a key engine of economic development in Africa as well as in other parts of the developing world. This shift has been translated into development finance institutions' policies, which have made private sector development one of their strategic pillars. In parallel, a wealth of data was collected to document the constraints to doing business and to inform regulatory reforms aimed to unlock private sector led economic development (for example Doing Business and Enterprise Surveys data).

Yet, development practitioners have limited information on the size of the African private sector. The most simple and fundamental questions remain largely unanswered: how large is the private sector in Africa? How has its size evolved over the last decade? This is the focus of our paper.

Knowing the size of the private sector is relevant for policy makers, donors and development finance institutions. The type of private sector development policy needed in each country, as well as the expected impacts, will fundamentally depend on the size and characteristics of private sector activities. Where the private sector is large, entrepreneurship is likely to exist, and policies that alleviate the constraints to its development will have a strong effect on growth. On the other hand, countries with a small private sector may first need to develop entrepreneurial skills, and any effects on growth are likely to be experienced with a lag.

Our estimates of the size of the private sector are based on national accounts and labor market data. Most national account data is from the master data set of the African Economic Outlook 2009/10, which covers 50 African countries (all but Eritrea, Somalia and Zimbabwe) over the period 1996-2008. Data on credit is from the World Development Indicators. Finally, labor markets are analyzed through household and labor force survey data for a sample of 16 African countries.

We find that the African private sector is relatively large, with a few outliers concentrated amongst resource rich countries. National account data shows that the private sector accounts for about 2/3 of total investments and 4/5 of total consumption. Investment and consumption reported in the national accounts represent components of aggregate demand rather than production. Public sector demand will equal public sector production only in few special cases; for example if public sector consumption, made mostly of wages, equals the value of the services supplied by the public administration, and if public sector investment equals the maintenance cost and the value of the services provided by public infrastructure. Although we are aware that such special cases are not prevalent, we still argue that public sector consumption and investment are useful indicators of the

[2] Bold-font sentences (at the beginning of most paragraphs) contain the key messages and results, and are meant to provide an option for fast reading.

magnitude of government's involvement in the economy. Where these are large, the government controls a big share of aggregate demand and decides how available resources are spent. The private sector, which is the complement to aggregate demand, will have a small size. Therefore, the measures presented in this paper are a useful first approximation of the size of the African public and private sectors, and a starting point for discussion and future refinement of measurement.

The private sector also accounts for about 3/4 of total credit. Credit is a key determinant of private sector production; when governments absorb most available credit, the private sector is likely to be constrained by lack of finance.

Labor market data reinforces the idea of a large private sector, as this provides about 90% of total employment opportunities. However, most of this labor is informal and characterized by low productivity: permanent wage jobs in the private sector account for only 10% of total employment. Governments create a similar amount of formal wage jobs in public administrations and state owned enterprises, hence about 4/5s of total employment are made of casual or temporary wage employment, small scale farming and unregistered self-employment.

The analysis of national accounts and labor markets aimed at assessing the size of the African private sector has high content of novelty. Most of the data presented in this paper has not been previously published. It is reported in a systematic fashion to inform future research by other scholars and policy making within country governments and international organizations.

The rest of the paper is organized as follows. Section 2 describes data and methodology. Section 3 analyzes the size of the private sector as recorded in national accounts, and the relationship between private sector size and economic growth. Section 4 looks at the share of private sector employment, and assesses the existence of private sector earning premiums. Finally, section 5 concludes.

2. Data and Methodology [3]

Evidence on the private share of total consumption and investment is from the master data set of the African Economic Outlook 2009/10, covering 50 African countries (all but Zimbabwe, Somalia and Eritrea). The reference period is 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). The public sector includes both the public administration and state owned enterprises. Gross Domestic Product (GDP) and inflation series are from the same source.

Information on credit to public and private sector is from the World Development Indicators. Time series were extracted for the same period and sample of countries covered by the African Economic Outlook (AEO) data.

We measure the size of the private sector in two ways. First, we calculate the ratio between private and total consumption, investment and credit. The denominator is made of the sum of both private and public components. Second, we calculate the ratio between private consumption, investment and credit, and GDP. In both cases, numerator and denominator are the summation of yearly values

[3] Non-technical readers can skip this section with no prejudice to their ability to understand the rest of the paper.

over the period of analysis. While both measures provide useful evidence, we focus our discussion on the former, which captures the way in which the economy is organized and is independent from the stage of economic development. This cannot be said of the latter measure, which has GDP as denominator.

We also look at the correlation between the size of the private sector and GDP growth. First, we cross-tabulate the private share of investment, consumption and credit over the period 1996-2002 (t) and GDP growth over the period 2003-08 (t+1). Then, we cross-tabulate growth in the private share of investment, consumption and credit (2003-08 minus 1996-2002, i.e. (t+1)-t) and GDP growth over the period 2003-08. In all cases, significance of the correlation is measured through the t-statistic of the slope (in a simple Y=a+bX regression model where Y represents GDP growth).

Estimates of the proportion of private sector employment are based on 22 household and labor force surveys from 16 countries, with data collected between 1988 and 2009. For each country, at least one survey was conducted over the period 2002-2009. A complete list of data sources is provided in Table A1 in Annex.[4] Samples are in general nationally representative, with the exception of Senegal 2003 1-2-3 Survey, which covers only the city of Dakar.

Wage differentials are analyzed through multivariate analysis to control for individual and job characteristics. The model can be written as follows:

$$\ln(w_i) = X_i\beta + SOE_i\varphi + PRIV_i\phi + \lambda_i\delta + u_i \qquad (1)$$

where w_i represents worker *i*'s weekly earnings, the vector X_i denotes individual and job characteristics, *SOE* and *PRIV* are dummy variables indicating employment respectively in state owned enterprises and in the private sector; λ_i is the Inverse-Mills-Ratio included to correct the selection bias due to the fact that those whose earnings are reported differ from other individuals; β, φ, ϕ and δ are parameters to be estimated and u_i is a random disturbance. We run one regression for each combination of country and year. The estimate of the coefficient ϕ will measure the wage premium associated with private sector employment (relative to public sector employment, which is the omitted category).[5]

In Egypt and Rwanda, information on earnings is collected only for wage employees. In all other countries, earnings are surveyed also for the self-employed.

The vector X includes the following variables: gender (one dummy variable for female gender), age (four dummy variables for age 25-34, 35-44, 45-54, 55-64, with 15-24 omitted category), education (five dummy variables for primary, lower secondary, vocational, secondary, and tertiary education, with less than primary omitted category), residence (a set of dummy variables for rural residence and for the regions in the country), sector of activity (two dummy variables for industry and services, with agriculture omitted category), labor market state (four dummy variables for informal/temporary

[4] We also present data on Madagascar from a secondary source (UNDP 2010).

[5] Equation (1) returns valuable and standardized estimates of other policy relevant parameters such as the magnitude of the returns to education in a large sample of African countries. For example, Table 4 shows that the earning premium for secondary education (relative to no-schooling) ranges from a minimum of 24% in Ghana to a maximum of 150% in Zambia. This is the focus of a companion forthcoming paper (Abebe, Diarra and Stampini, 2012).

wage employed, employer, self-employed, and unpaid family worker, with formal/permanent wage employed omitted category), number of hours worked over the week.

Estimation is performed using the Heckman command in STATA. Household size, a dummy variable for household head and the dependency ratio (number of children and elderly in the household divided by household size) are used as selection variables in Heckman's first stage, as they are assumed to affect the likelihood to work but to be unrelated with the weekly wage once working.

3. The size of the private sector: evidence from national accounts

The private sector accounts for about 2/3 of investments and 4/5 of consumption.[6] Between 1996 and 2008, the private sector accounted for 66% of African investments and 79% of African consumption. Country variability was wide.

The private sector's share of total investment ranged from 18% in Burundi to 89% in Morocco (Figure 1 and Table 1). No significant difference was observed across country groups (low versus middle income countries, and oil exporters versus oil importers).

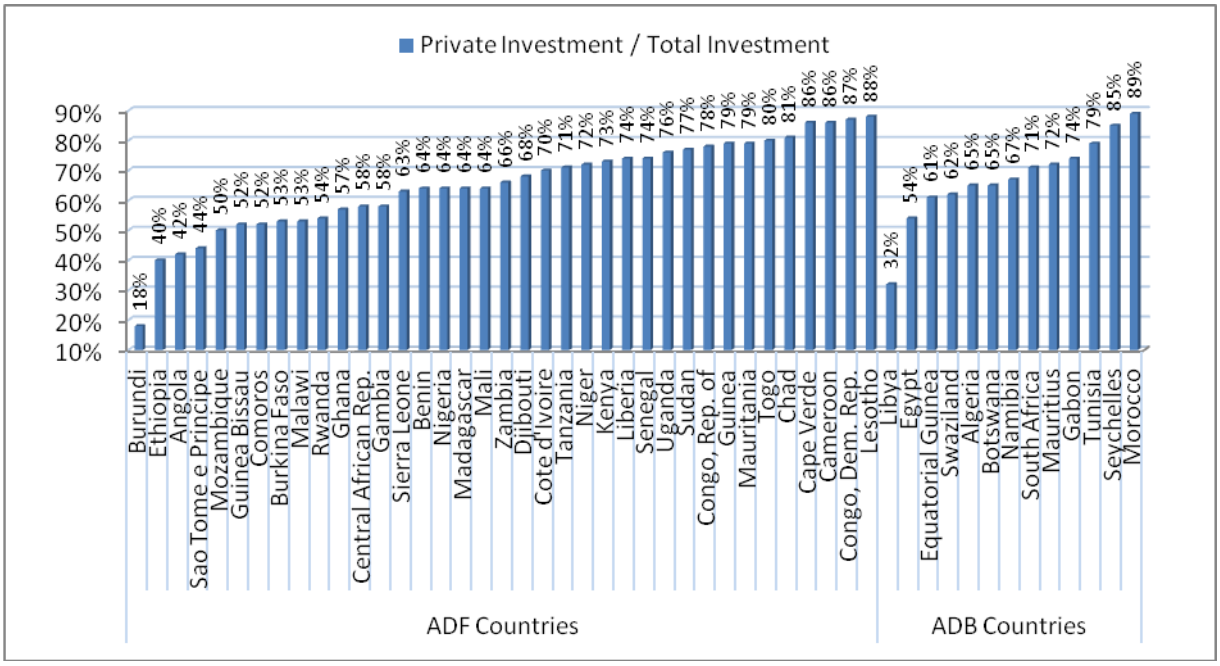
The private sector's share of total consumption ranged from a minimum of 54% in Angola to a maximum of 92% in Guinea (Figure 2 and Table 1). This share was significantly higher in low income countries (81% against 74% in middle income countries), and significantly lower in oil exporting countries (75% against 80% for net oil importers), suggesting that oil revenues are associated with an expansion of government activities.

In relative terms, large private sector countries were concentrated in Western Africa (Cote d'Ivoire, Guinea, Niger, Senegal and Togo), Central Africa (Cameroun, Republic of Congo) and Eastern Africa (Kenya, Sudan, Uganda and Tanzania), with the addition of Mauritius (Figure 3). In all these countries, the private shares of both consumption and investment exceeded the median African value, and the private sector accounted for about 80% of aggregate domestic demand. It is noteworthy that no Northern African country is part of this group.

Countries with small private sectors included a sample of oil-exporters (Algeria, Angola, Equatorial Guinea, Libya and Nigeria), some of the poorest countries in the continent (Burundi, Burkina Faso, Guinea Bissau, Mali and Sao Tome e Principe), and Zambia and Botswana. In these countries, the private share of both consumption and investment was below the continental median.

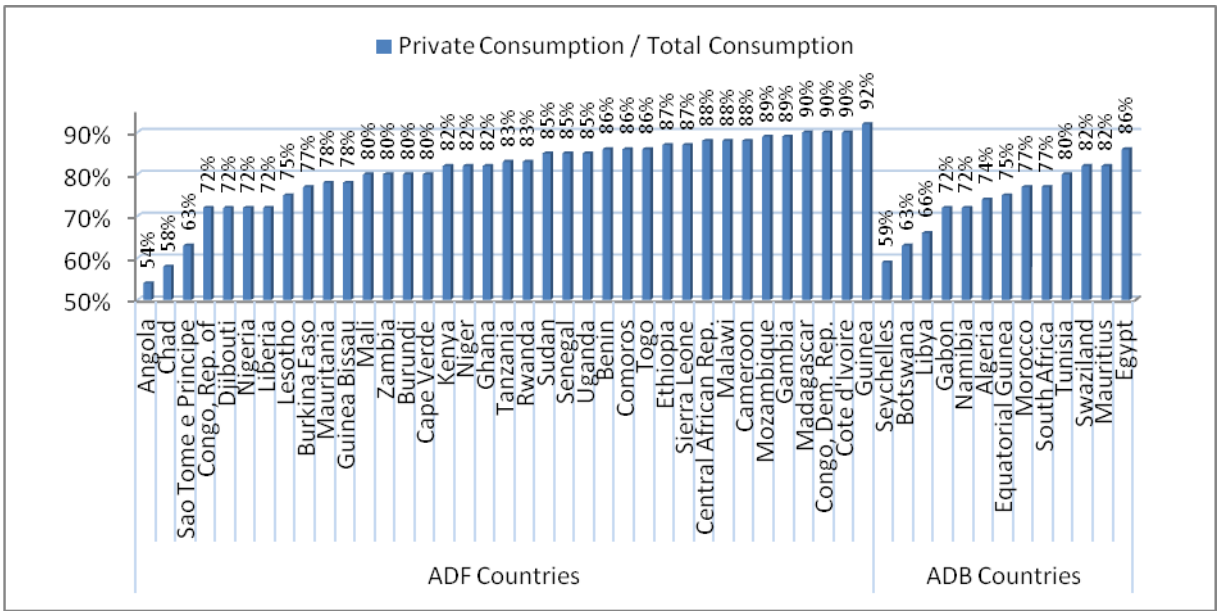
[6] Unless differently specified, descriptive statistics are unweighted averages of available country shares.

Figure 1 – Private sector's share of total investment in selected African countries (1996-2008)



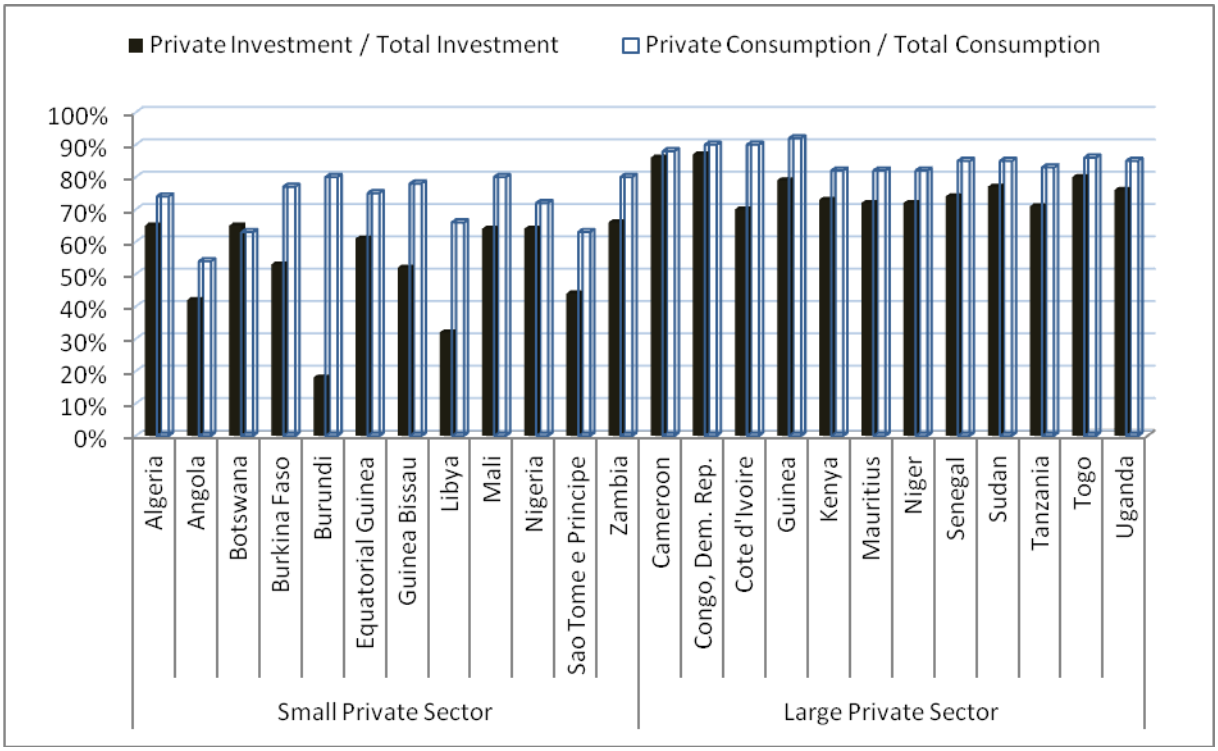
Source: Authors' elaborations based on African Economic Outlook 2009/10 master data. Note: reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). Countries are divided in low income or African Development Fund (ADF), and middle income or African Development Bank (ADB), as for the African Development Bank Group's definition.

Figure 2 – Private sector's share of total consumption in selected African countries (1996-2008)



Source: Authors' elaborations based on African Economic Outlook 2009/10 master data. Note: reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). Countries are divided in low income or African Development Fund (ADF), and middle income or African Development Bank (ADB), as for the African Development Bank Group's definition.

Figure 3 – Small and large private sector countries (1996-2008)



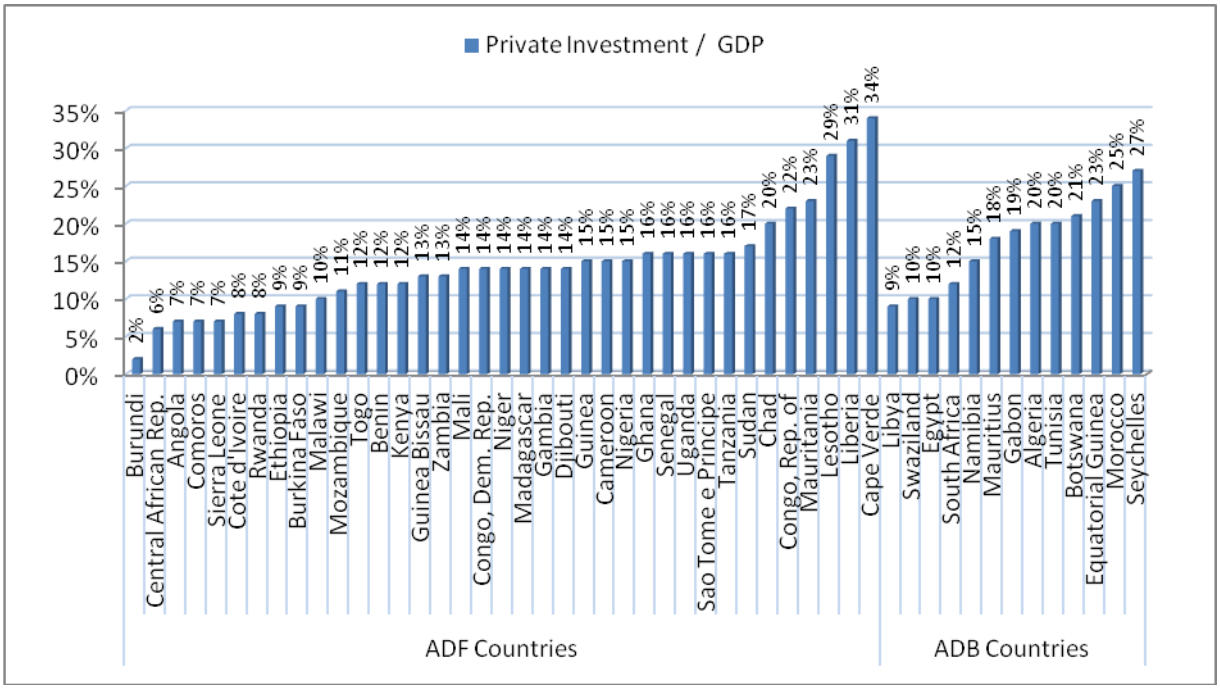
Source: Authors' elaborations based on African Economic Outlook 2009/10 master data. Note: reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08).

Results are broadly consistent when private investment and consumption are normalized by GDP. A few differences are highlighted below, the main one being that the size of the private sector in Western and Central African countries appears relatively smaller.

Private investment represented on average 15% of GDP, varying from a minimum of 2% in Burundi to a maximum of 34% in Cape Verde (Figure 4 and Table 1), with no statistically significant difference across country groups. South Africa and some Western and Central African countries like Cote d'Ivoire, Togo and Democratic Republic of Congo -which were in the right hand tail of the distribution in Figure 1, where private investment was normalized by total investment- appeared to have relatively little private sector investment. The opposite was true for Ghana, Sao Tome e Principe, Algeria, Botswana and Equatorial Guinea.

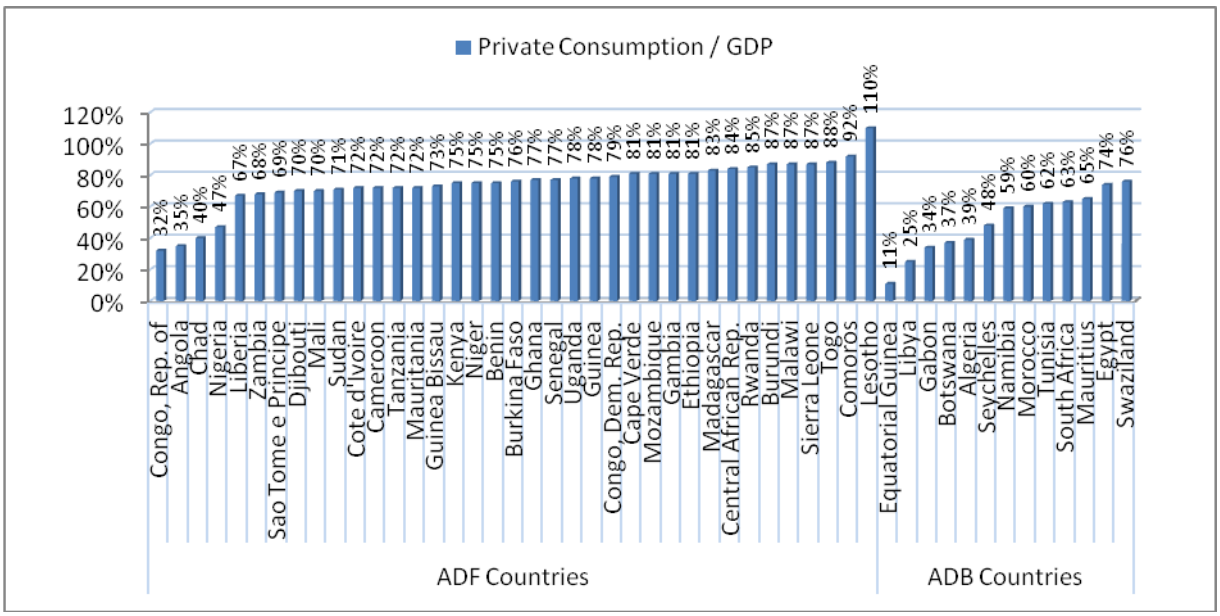
Private consumption accounted for 68% of GDP, varying from a minimum of 11% in Equatorial Guinea to a maximum of 110% in Lesotho (Figure 5 and Table 1). Notably, its relative size was significantly larger in low income countries (74% against 50% of GDP in middle income countries) and significantly smaller in oil exporting countries (49% against 75% in oil importing countries). Compared to the ranking based on the share of total consumption, private consumption appeared relatively smaller in Cote d'Ivoire and Cameroon, and relatively larger in Burundi and Lesotho.

Figure 4 – Relative size of private investment (relative to GDP) in selected African countries (1996-2008)



Source: Authors' elaborations based on African Economic Outlook 2009/10 master data. Note: reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). Countries are divided in low income or African Development Fund (ADF), and middle income or African Development Bank (ADB), as for the African Development Bank Group's definition.

Figure 5 – Relative size of private consumption (relative to GDP) in selected African countries (1996-2008)



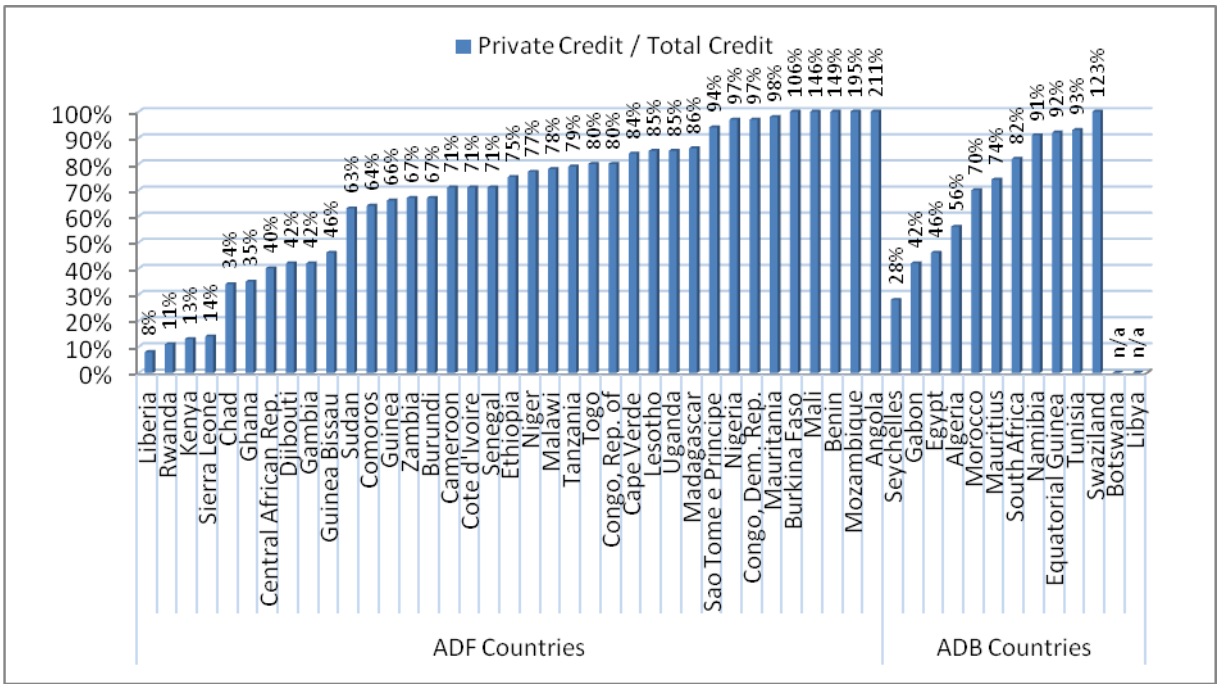
Source: Authors' elaborations based on African Economic Outlook 2009/10 master data. Note: reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). Countries are divided in low income or African Development Fund (ADF), and middle income or African Development Bank (ADB), as for the African Development Bank Group's definition.

The private sector receives 3/4 of total credit. Over the period 1996-2008, 74% of total credit went to the private sector. The statistic refers to a subset of 48 countries for which both credit to the private sector and total credit were positive. Libya and Botswana cannot be included in the sample as the governments, in the process of repaying previous public debt, determined a situation of overall negative borrowing.

The private share of credit varied between a minimum of 8% in Liberia and a maximum of 211% in Angola (Figure 6 and Table 1). No statistically significant difference was found across country groupings.

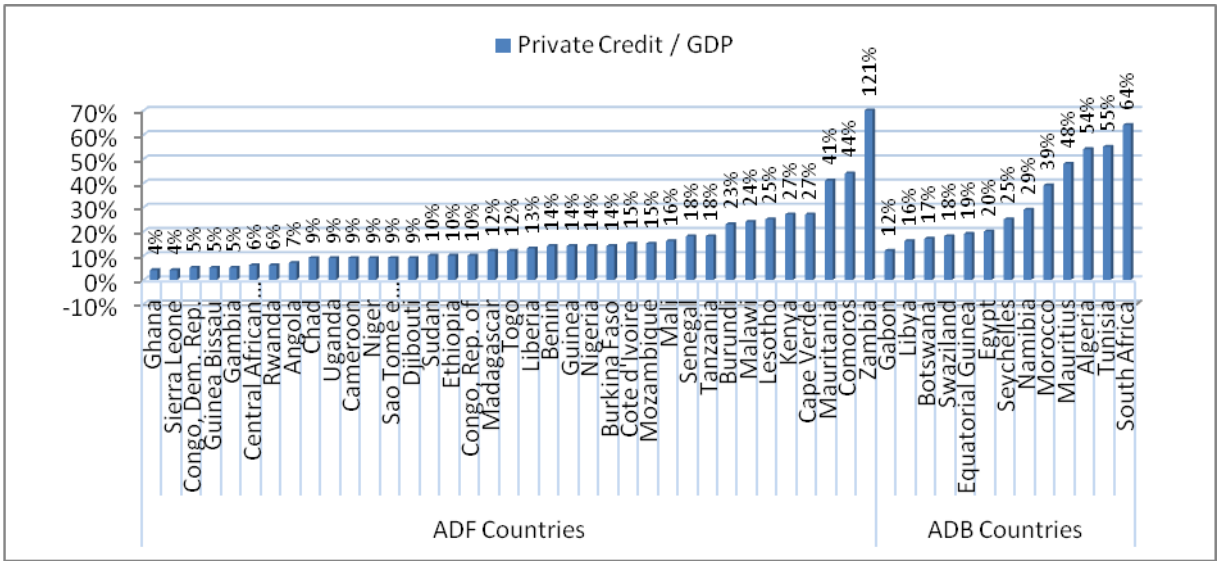
Credit to the private sector amounted on average to 21% of GDP, varying from a minimum of 4% in Ghana and Sierra Leone to a maximum of 121% in Zambia (Figure 7 and Table 1). The share was significantly lower in post-conflict countries (10% of GDP against 23% in the rest of the sample) and in low income countries (17% against 32% in middle income countries). This is not surprising, as this statistic is affected by the level of financial market development, which is in turn correlated with the stage of economic development. Consequently, countries such as Democratic Republic of Congo, Angola, Sao Tome e Principe, Madagascar, Benin and Burkina Faso -in which most of credit went to the private sector (see Figure 6)- show very low levels of private sector borrowing when this is normalized by GDP. This simply means that no matter the fact that the available credit goes to private sector entities, this credit remains extremely scarce.

Figure 6 - Private sector's share of total credit in selected African countries (1996-2008)



Source: Authors' elaborations based on World Development Indicators and African Economic Outlook 2009/10 master data. Note: bars are capped for improved visibility. Reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). Countries are divided in low income or African Development Fund (ADF), and middle income or African Development Bank (ADB), as for the African Development Bank Group's definition.

Figure 7 - Relative size of private sector credit (relative to GDP) in selected African countries (1996-2008)



Source: Authors' elaborations based on World Development Indicators and African Economic Outlook 2009/10 master data. Note: bars are capped for improved visibility. Reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). Countries are divided in low income or African Development Fund (ADF), and middle income or African Development Bank (ADB), as for the African Development Bank Group's definition.

Table 1 – Size of the private sector in selected African countries (1996-2008)

Category	Country	Private Investment / Total investment	Private Consumption / Total Consumption	Private Credit / Total Credit	Private Investment / GDP	Private Consumption / GDP	Private Credit / GDP
ADF Countries	Angola	0.42	0.54	2.11	0.07	0.35	0.07
	Benin	0.64	0.86	1.49	0.12	0.75	0.14
	Burkina Faso	0.53	0.77	1.06	0.09	0.76	0.14
	Burundi	0.18	0.80	0.67	0.02	0.87	0.23
	Cameroon	0.86	0.88	0.71	0.15	0.72	0.09
	Cape Verde	0.86	0.80	0.84	0.34	0.81	0.27
	Central African Rep.	0.58	0.88	0.40	0.06	0.84	0.06
	Chad	0.81	0.58	0.34	0.20	0.40	0.09
	Comoros	0.52	0.86	0.64	0.07	0.92	0.44
	Congo, Dem. Rep.	0.87	0.90	0.97	0.14	0.79	0.05
	Congo, Rep. of	0.78	0.72	0.80	0.22	0.32	0.10
	Cote d'Ivoire	0.70	0.90	0.71	0.08	0.72	0.15
	Djibouti	0.68	0.72	0.42	0.14	0.70	0.09
	Ethiopia	0.40	0.87	0.75	0.09	0.81	0.10
	Gambia	0.58	0.89	0.42	0.14	0.81	0.05
	Ghana	0.57	0.82	0.35	0.16	0.77	0.04
	Guinea	0.79	0.92	0.66	0.15	0.78	0.14
	Guinea Bissau	0.52	0.78	0.46	0.13	0.73	0.05
	Kenya	0.73	0.82	0.13	0.12	0.75	0.27
	Lesotho	0.88	0.75	0.85	0.29	1.10	0.25
	Liberia	0.74	0.72	0.08	0.31	0.67	0.13
	Madagascar	0.64	0.90	0.86	0.14	0.83	0.12
	Malawi	0.53	0.88	0.78	0.10	0.87	0.24
	Mali	0.64	0.80	1.46	0.14	0.70	0.16
	Mauritania	0.79	0.78	0.98	0.23	0.72	0.41
	Mozambique	0.50	0.89	1.95	0.11	0.81	0.15
	Niger	0.72	0.82	0.77	0.14	0.75	0.09
	Nigeria	0.64	0.72	0.97	0.15	0.47	0.14
	Rwanda	0.54	0.83	0.11	0.08	0.85	0.06
	Sao Tome e Principe	0.44	0.63	0.94	0.16	0.69	0.09
	Senegal	0.74	0.85	0.71	0.16	0.77	0.18
	Sierra Leone	0.63	0.87	0.14	0.07	0.87	0.04
	Sudan	0.77	0.85	0.63	0.17	0.71	0.10
	Tanzania	0.71	0.83	0.79	0.16	0.72	0.18
	Togo	0.80	0.86	0.80	0.12	0.88	0.12
	Uganda	0.76	0.85	0.85	0.16	0.78	0.09
	Zambia	0.66	0.80	0.67	0.13	0.68	1.21
ADB Countries	Algeria	0.65	0.74	0.56	0.20	0.39	0.54
	Botswana	0.65	0.63	.	0.21	0.37	0.17
	Egypt	0.54	0.86	0.46	0.10	0.74	0.20
	Equatorial Guinea	0.61	0.75	0.92	0.23	0.11	0.19
	Gabon	0.74	0.72	0.42	0.19	0.34	0.12
	Libya	0.32	0.66	.	0.09	0.25	0.16
	Mauritius	0.72	0.82	0.74	0.18	0.65	0.48
	Morocco	0.89	0.77	0.70	0.25	0.60	0.39
	Namibia	0.67	0.72	0.91	0.15	0.59	0.29
	Seychelles	0.85	0.59	0.28	0.27	0.48	0.25
	South Africa	0.71	0.77	0.82	0.12	0.63	0.64
	Swaziland	0.62	0.82	1.23	0.10	0.76	0.18
	Tunisia	0.79	0.80	0.93	0.20	0.62	0.55

Source: Authors' elaborations based on African Economic Outlook 2009/10 master data and World Development Indicators. Reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). Countries are divided in low income or African Development Fund (ADF), and middle income or African Development Bank (ADB), as for the African Development Bank Group's definition.

After measuring the size of the private sector, we now turn to analyze how this evolved over the course of the last decade, and its correlation with GDP growth performance. As variables normalized by GDP are likely to be correlated with the stage of economic development (as in the case of credit to the private sector), we focus hereafter on measures that abstract from the total size of consumption, investment and credit.

The size of the private sector remained stable over the period 1996-2008. On average, the private sector's shares of total consumption and investment did not change significantly between 1996-2002 and 2003-08 (Table 2).

Yet, stability on average masks very different trends. At one end of the distribution, the private sector grew most remarkably in Liberia, where the private shares of consumption, investment and credit increased respectively by 26, 3 and 18 percentage points. At the opposite end of the distribution, the private sector recorded the strongest contraction in Equatorial Guinea, where the private shares of investment and consumption fell by 45 and 5 percentage points respectively (data on credit not available).

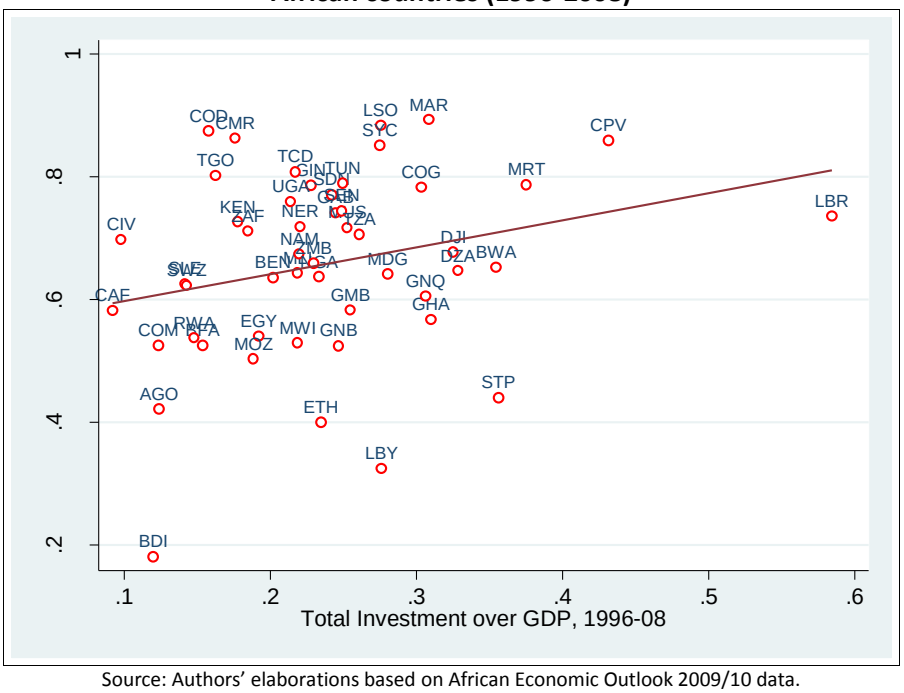
The private share of investment fell by 9% in oil exporting countries, while it increased by 5% for oil importers. This 14% difference is statistically highly significant. A possible explanation is that oil production was associated with increased state engagement in the economy. This may be a consequence of governments using oil revenues for investments in infrastructure.

The private share of investment was positively correlated with countries' investment rate (defined as investment over GDP). This suggests that the private sector played a more important role where capital accumulation was faster (Figure 8). Variability was wide. While both Angola and the Democratic Republic of Congo invested between 10% and 20% of GDP (on average over the period 1996-2008), the private share of investment was slightly above 40% for the former and almost 90% for the latter. Similarly, while both Ghana and Morocco had investment rates in excess of 30%, the private sector accounted for less than 60% in the former and for more than 90% in the latter.

Nonetheless, a large size of the private sector does not seem to be associated with better economic performance. Contrary to our expectation, GDP growth over the period 2003-08 is not positively correlated with the private share of total investment, consumption and credit over the period 1996-2002 (Figures 9-10-11, panels A). This means that countries in which the private sector accounted for a large share of demand and credit (at time t) did not outperform others in which the public sector played a more important role. The evidence for consumption is even more surprising as it shows a statistically significant negative relationship between private sector share and GDP growth.[7]

[7] The results hold when the group of oil exporting countries is omitted from the analysis.

Figure 8 – Relationship between investment rate and private share of investment in selected African countries (1996-2008)



Source: Authors' elaborations based on African Economic Outlook 2009/10 data.

The findings are broadly confirmed when the analysis focuses on the trends: with the exception of private credit, a growing private sector is not associated with better growth performance. Once more contrary to our expectation, we find a negative correlation between GDP growth in 2003-08 and the growth of the private share of investment (Figure 9, panel B). The relationship between GDP growth and growth in the private share of consumption is not statistically significant (Figure 10, panel B). Notably, we find a positive and statistically significant correlation between growth in the private share of credit and GDP growth (Figure 11, panel B).

This evidence is generally robust to a change of specification in which private investment, consumption and credit are normalized by GDP rather than by their own total. The only differences are that: (i) we find a positive and statistically significant correlation between private investment rate over the period 1996-2002 and GDP growth over the period 2003-08, and; (ii) the relationship between change in credit to the private sector and GDP growth ceases to be significant.

Overall, the results presented in this section indicate that, at least in our sample, growth is not explained simply by the form of organization of economic activity. A structure of the economy in which investment and consumption are predominantly mandated by the private sector does not necessarily lead to faster growth. The same holds for a structure in which most of the credit goes to the private sector.

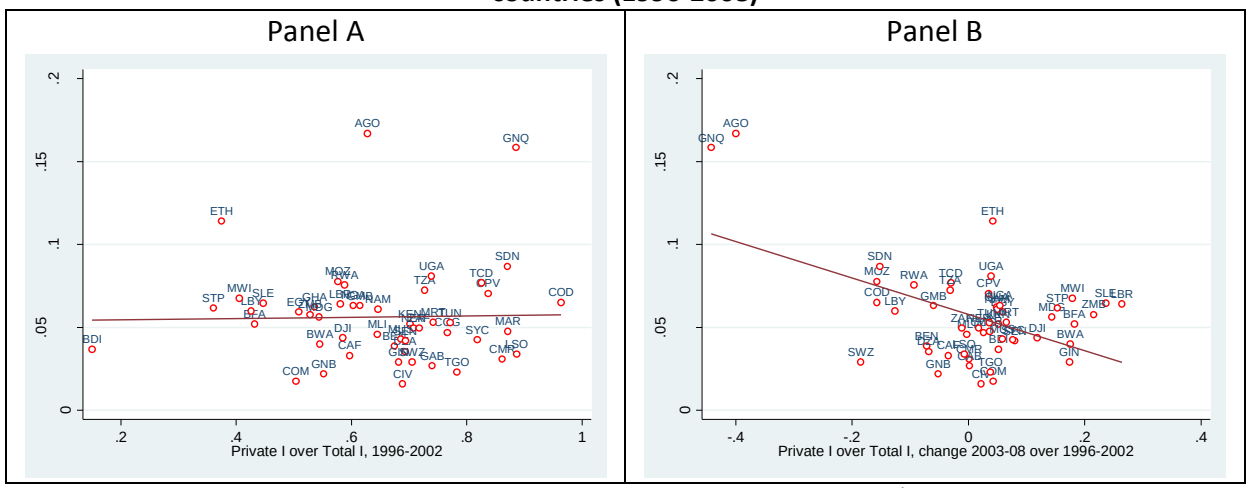
This may be due to the fact that, although its size is relatively large, the African private sector is characterized by low productivity, due to a predominance of small and informal activities. This hypothesis can be explored by looking at the structure of African labor markets, which is the focus of the next section.

Table 2 – Evolution of the size of the private sector in selected African countries (1996-2008)

Category	Country	1996-02 Private Investment / Total Investment	1996-02 Private Consumption/ Total Consumption	1996-02 Private Credit / Total Credit	1996-02 Yearly GDP growth	2003-08 Private Investment / Total Investment	2003-08 Private Consumption/ Total Consumption	2003-08 Private Credit / Total Credit	2003-08 Yearly GDP growth
ADF Countries	Angola	0.63	0.46	1.09	0.06	0.23	0.58	2.65	0.17
	Benin	0.67	0.85	1.38	0.05	0.60	0.86	1.55	0.04
	Burkina Faso	0.43	0.77	0.92	0.06	0.61	0.78	1.15	0.05
	Burundi	0.15	0.85	0.71	0.02	0.20	0.77	0.63	0.04
	Cameroon	0.86	0.88	0.53	0.04	0.86	0.88	0.95	0.03
	Cape Verde	0.84	0.82	0.85	0.08	0.87	0.79	0.84	0.07
	Central African Rep.	0.60	0.85	0.40	0.03	0.56	0.90	0.39	0.03
	Chad	0.83	0.59	0.34	0.05	0.80	0.56	0.35	0.08
	Comoros	0.50	0.84	0.60	0.02	0.55	0.87	0.68	0.02
	Congo, Dem. Rep.	0.96	0.92	0.46	-0.03	0.81	0.89	.	0.07
	Congo, Rep. of	0.77	0.70	0.82	0.02	0.79	0.73	0.80	0.05
	Cote d'Ivoire	0.69	0.91	0.67	0.01	0.71	0.90	0.77	0.02
	Djibouti	0.59	0.72	0.17	0.01	0.70	0.73	1.66	0.04
	Ethiopia	0.37	0.85	0.54	0.03	0.42	0.88	1.11	0.11
	Gambia	0.61	0.89	0.69	0.04	0.56	0.89	0.19	0.06
	Ghana	0.54	0.83	0.45	0.04	0.58	0.82	0.27	0.06
	Guinea	0.68	0.92	0.83	0.04	0.86	0.92	0.56	0.03
	Guinea Bissau	0.55	0.80	0.47	-0.01	0.50	0.75	0.45	0.02
	Kenya	0.70	0.82	0.68	0.02	0.75	0.81	0.07	0.05
	Lesotho	0.89	0.76	.	0.02	0.88	0.74	0.74	0.03
	Liberia	0.58	0.71	0.03	0.09	0.84	0.74	0.21	0.06
	Madagascar	0.54	0.91	0.61	0.01	0.69	0.89	1.12	0.06
	Malawi	0.41	0.86	0.48	0.02	0.58	0.89	0.85	0.07
	Mali	0.64	0.81	1.12	0.05	0.64	0.80	2.08	0.05
	Mauritania	0.74	0.82	.	0.02	0.81	0.74	0.73	0.05
	Mozambique	0.58	0.90	1.32	0.09	0.42	0.88	2.62	0.08
	Niger	0.71	0.81	0.64	0.05	0.73	0.82	0.85	0.05
	Nigeria	0.60	0.77	1.06	0.06	0.66	0.69	0.92	0.06
	Rwanda	0.59	0.85	0.97	0.09	0.49	0.82	0.02	0.08
	S. Tome e Principe	0.36	0.62	.	0.08	0.51	0.63	0.94	0.06
	Senegal	0.69	0.85	0.80	0.04	0.77	0.85	0.66	0.04
	Sierra Leone	0.45	0.87	0.06	0.03	0.68	0.87	0.33	0.06
	Sudan	0.87	0.91	0.46	0.07	0.72	0.80	0.69	0.09
	Tanzania	0.73	0.87	0.81	0.05	0.70	0.79	0.74	0.07
	Togo	0.78	0.85	0.81	0.00	0.82	0.87	0.80	0.02
	Uganda	0.74	0.84	1.01	0.07	0.78	0.87	0.66	0.08
	Zambia	0.53	0.85	0.66	0.03	0.74	0.75	0.67	0.06
ADB Countries	Algeria	0.69	0.75	0.58	0.03	0.62	0.73	0.55	0.04
	Botswana	0.55	0.62	.	0.08	0.72	0.64	.	0.04
	Egypt	0.51	0.87	0.47	0.05	0.57	0.86	0.45	0.06
	Equatorial Guinea	0.89	0.78	.	0.37	0.44	0.73	0.78	0.16
	Gabon	0.74	0.70	0.36	0.00	0.74	0.73	0.50	0.03
	Libya	0.43	0.67	.	0.00	0.30	0.65	.	0.06
	Mauritius	0.69	0.81	0.74	0.05	0.74	0.83	0.74	0.04
	Morocco	0.87	0.77	0.68	0.03	0.91	0.76	0.75	0.05
	Namibia	0.65	0.69	0.95	0.03	0.70	0.74	0.82	0.06
	Seychelles	0.82	0.52	0.47	0.03	0.89	0.65	0.22	0.04
	South Africa	0.72	0.77	1.05	0.03	0.71	0.77	0.81	0.05
	Swaziland	0.71	0.80	1.60	0.02	0.52	0.84	0.92	0.03
	Tunisia	0.77	0.80	0.95	0.05	0.81	0.81	0.92	0.05

Source: Authors' elaborations based on African Economic Outlook 2009/10 master data and World Development Indicators. Reference period 1996-08 for all countries but Sao Tome e Principe (2001-08), Guinea Bissau (2001-08), Uganda (2000-08), Gambia (2000-08) and Sudan (1999-08). Countries are divided in low income or African Development Fund (ADF), and middle income or African Development Bank (ADB), as for the African Development Bank Group's definition.

Figure 9 – Relationship between GDP growth and private share of investment in selected African countries (1996-2008)

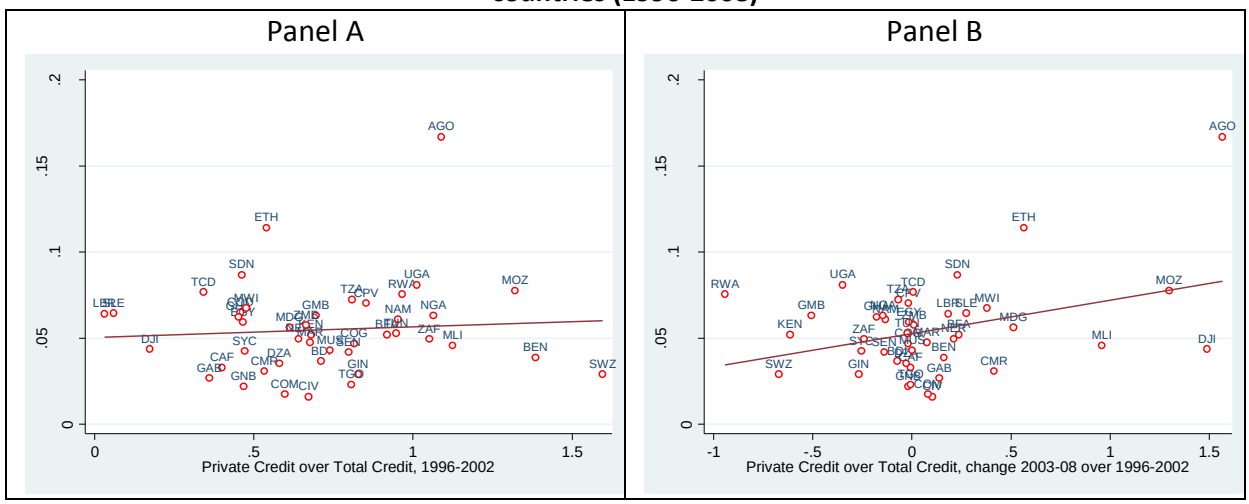


Source: Authors' elaborations based on African Economic Outlook 2009/10 data.

Figure 10 – Relationship between GDP growth and private share of consumption in selected African countries (1996-2008)

Source: Authors' elaborations based on African Economic Outlook 2009/10 data.

Figure 11 – Relationship between GDP growth and private share of credit in selected African countries (1996-2008)



Source: Authors' elaborations based on African Economic Outlook 2009/10 data and World Development Indicators.

4. The size and structure of the private sector: evidence from the labor markets

The African private sector employs 55% of working age individuals.[8] The share ranges from a minimum of 30% in Senegal in 2001, to a maximum of 84% in Tanzania in 2006. The result is a function of (i) the rates of participation in the labor market, (ii) unemployment rates and (iii) the relative weight of the private sector in supplying employment opportunities.

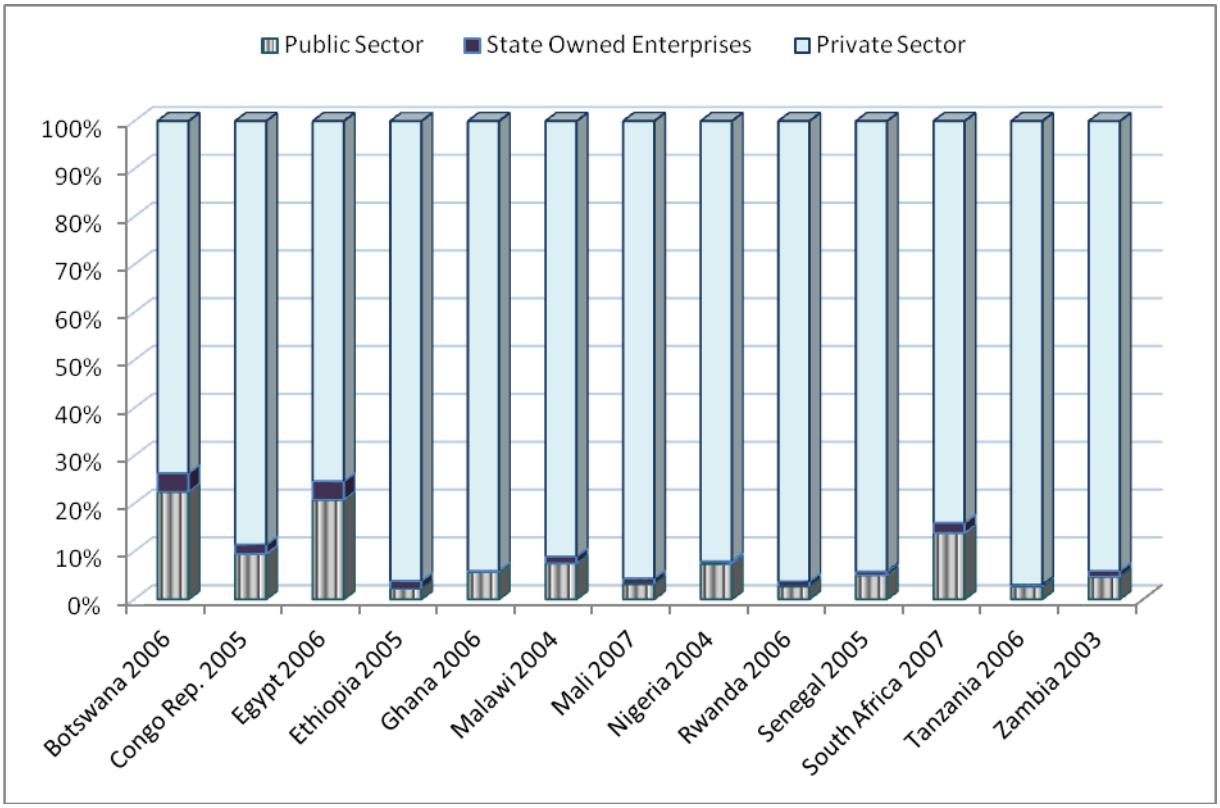
The rate of labor force participation is extremely heterogeneous, ranging from 32% in Southern Sudan in 2010 to 90% in Tanzania in 2006 (Table 3), and not clearly correlated with the stage of economic development. Inactivity rates are high in a mix of both low and middle income countries (Southern Sudan, Senegal, Egypt, South Africa, Botswana), suggesting that the social fabric plays an important role in influencing individuals' choice to work. Where we dispose of more than one time observation, we find that participation rates increased in Egypt (from 60% in 1988 to 63% in 2006) and Senegal (from 41% in 2001 to 50% in 2005), while they contracted slightly in South Africa (from 59% in 2000 to 57% in 2007).

Unemployment is virtually non-existent in Rwanda, Malawi and Nigeria, while it exceeds 20% in Republic of Congo and South Africa (Table 3). Low unemployment rates often mask underemployment in contexts in which people cannot afford the no-work option. Interestingly, the strong increase in labor market participation in Senegal between 2001 and 2005 was accompanied by a sharp drop in the unemployment rate, from 20% to 10%. This suggests a fast rhythm of job creation.

Out of 10 workers, 9 work in the private sector (Table 3). The private sector share of employment ranges between 71% in Egypt in 1998 and 97% in Tanzania in 2006. The public sector (including state owned enterprises) is largest in middle income countries, namely Botswana (26% of total employment), Egypt (25% in 2006) and South Africa (16% in 2007). Figure 12 represents graphically the latest observation for each country with available data in our sample.

[8] Unless differently specified, descriptive statistics are unweighted averages of available country shares.

Figure 12 – Public and private sector employment in selected African countries

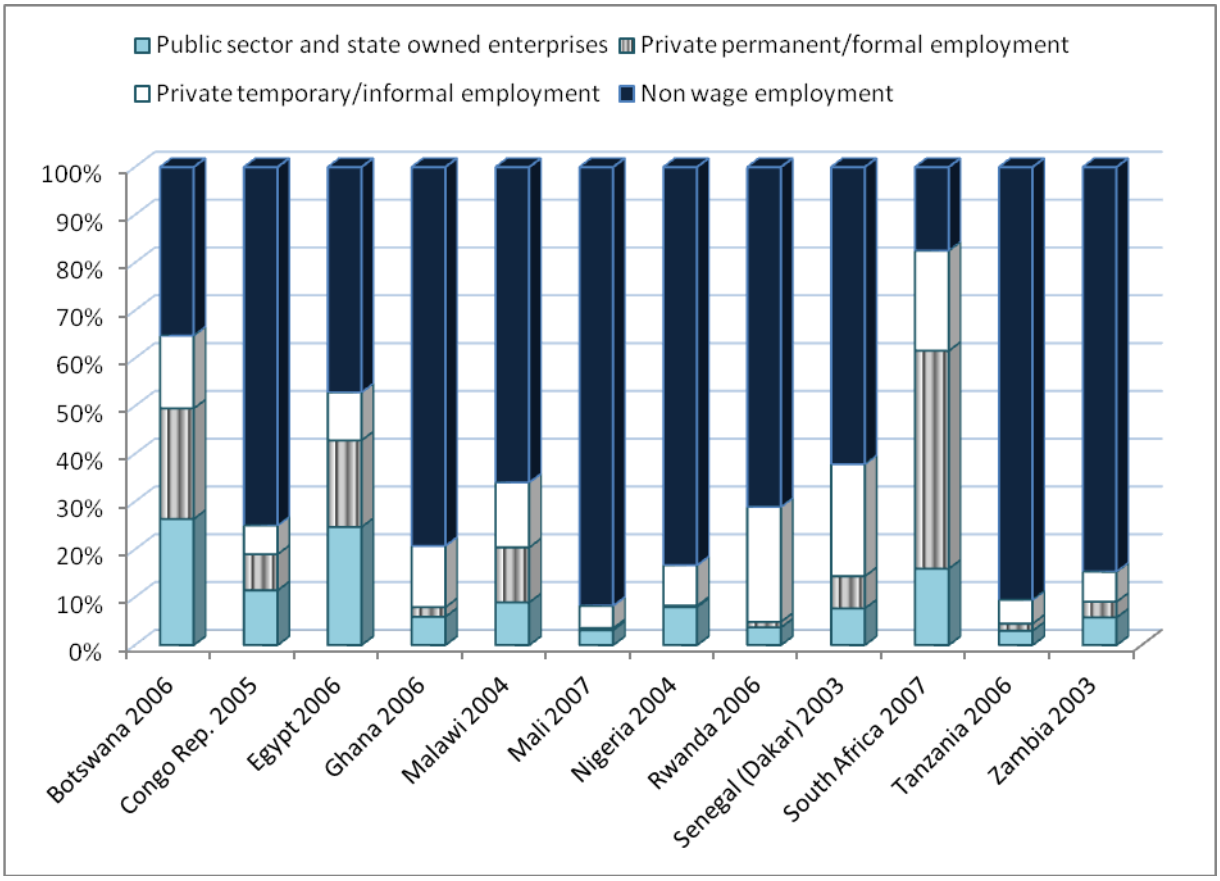


Source: Authors' calculations based on household and labor force survey data. Sample: employed working age population.

The above findings may lead to the impression of a large and dynamic private sector employer. Yet, most private sector jobs are informal, with only 1 out of 10 workers holding permanent/formal wage employment (Table 3). Non-wage activities provide the majority of private sector employment opportunities. Considering only the latest observation available for each country, they account for about 2/3 of total jobs (Figure 13), with the share varying from a minimum of 17% in South Africa to a maximum of 92% in Mali. The bulk of non-wage employment is made of either self-employment without employees or unpaid family work. Employers (i.e. self-employed with paid employees) are a relatively large group only in Egypt, where they represent about 11% of total employment. This may be partially explained by greater availability of credit for small and medium enterprises.

Overall, middle income countries combine a large public sector and a relatively large formal private sector. In low income countries such as Nigeria, Mali, Tanzania, Ghana and Rwanda, permanent/formal wage employment in the private sector represents less than 2% of total employment. Permanent/formal wage employment in the private sector is on the other hand largest in the three middle income countries in the sample, peaking at 46% of total employment in South Africa, 23% in Botswana and 18% in Egypt (Table 3). These are the countries with the largest combined formal sector, given also the relatively large share of public sector employment. A graphical representation of the latest observation for each country with available data is provided in Figure 13.

Figure 13 – Formal and informal employment in selected African countries



Source: Authors' calculations based on household and labor force survey data. Sample: employed working age population.

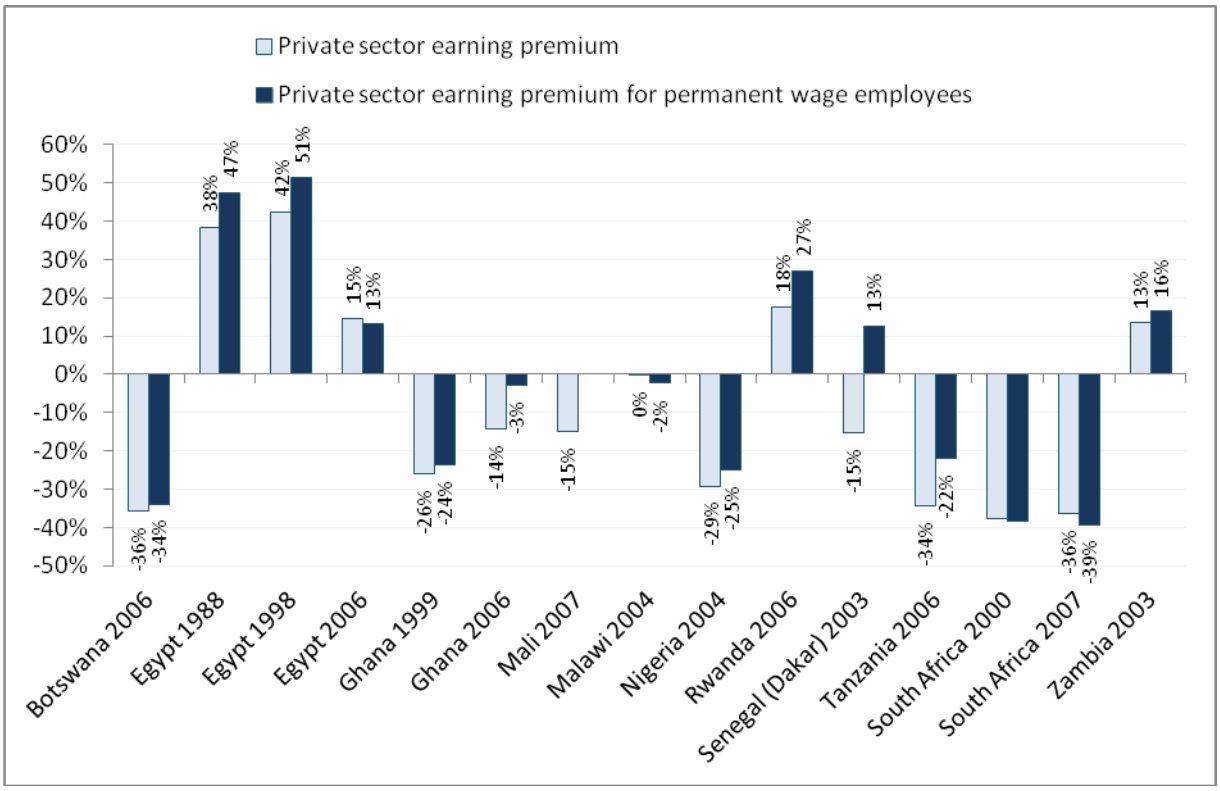
In addition to being characterized by a high degree of informality, jobs in the private sector pay on average 13% lower earnings than comparable jobs in the public sector. These negative earning premiums suggest that the labor markets are rid with distortions. The gap, measured through the estimation of equations (1), is largest in South Africa where private sector workers earn 38% less than their peers in the public sector. At the other end of the distribution, private sector workers are paid relatively more than public sector workers in Egypt, Zambia and Rwanda, with the differential peaking at 18% in Rwanda (Figure 14 and Table 4). Sensitivity analysis performed by limiting the sample to permanent wage employees only confirm the result (dark column in Figure 14) with the exception of Senegal-Dakar, where private sector workers in general are paid 15% less than their public sector peers, whereas private sector permanent wage employees are paid 12.5% more than their public sector peers. Earning premiums in state owned enterprises are even larger, exceeding those in the rest of public sector employment.

Earning differentials are resilient. For three countries, we dispose of data from more than one household or labor force survey, and can therefore analyze the trend in earning differentials between public and private employment. In the case of Egypt, the positive private sector earning premium has been decreasing from 42% in 1998 to 15% in 2006 (Figure 14 and Table 4), while over the same period the share of private sector (over total) employment has grown from 70 to 75%. This may suggest that increasing labor supply in the private sector has driven earnings down, and/or that the new entrants have started activities with lower productivity. On the other hand, the phenomenon could also be explained with government decisions aimed to fill the gap in public employees' wages relative to the private sector. In Ghana, where the public sector pays more than

the private sector, earning differentials have been decreasing from 26% in 1999 to 14% in 2005. This may hint to encouraging progress towards the elimination of distortions. On the other hand, in South Africa negative private sector earning premiums were practically stable, measuring 38% in 2000 and 36% in 2007.

The above results have serious implications, as negative private sector earning premiums may reduce private sector development by leading high skill individuals to less productive (but better paid) jobs in the public sector. Earning distortions may create perverse incentives to queue for public sector jobs in search of greater stability and higher wages,[9] instead of pursuing highly productive private sector business activities.

Figure 14 – Private sector earning premiums over the public sector in selected African countries



Source: Authors' calculations based on household and labor force survey data. Sample: employed working age population with positive weekly earnings.

[9] On this hypothesis, see for example Stampini and Verdier-Chouchane (2011) for Tunisia.

Table 3 – Labor market profile of selected African countries

			(a) % of Working Age Population					(b) % of Employed Working Age Population						
Country	**Year**	**Note**	**N.Obs**	**Inactive**	**Unempl-oyed**	**Employed**	**Total**	**N.Obs**	**Public sector**	**SOEs**	**Private wage formal/perm.**	**Private wage informal/temp.**	**Non-wage**	**Total**
Botswana	2006	*	15,844	35.69	11.91	52.40	100	8,256	22.45	3.95	23.12	15.24	35.24	100
Congo Rep.	2005	*	13,919	29.52	13.87	56.61	100	7,866	9.48	1.95	7.56	6.00	74.97	100
Egypt	1988	*	15,398	39.64	4.22	56.15	100	8,435	18.79	8.77	11.22	11.79	49.44	100
Egypt	1998	*	14,633	39.23	5.72	55.05	100	7,766	23.98	5.22	13.27	11.42	46.12	100
Egypt	2006	*	23,696	37.19	4.50	58.31	100	13,483	20.75	3.95	18.14	10.02	47.14	100
Ethiopia	2005	*	54,067	28.44	2.02	69.55	100	31,680	2.20	1.65	6.22		89.92	100
Ghana	1999	**	10,360	15.20	2.41	82.38	100	9,627	6.12	0.57	0.84	5.85	86.64	100
Ghana	2006	*	19,869	26.07	3.59	70.35	100	13,881	5.69	0.28	1.99	12.83	79.25	100
Nigeria	2004	**	38,321	43.23	0.82	55.95	100	31,338	7.40	0.57	0.27	8.47	83.29	100
Madagascar	2005	***	n.a.	11.90	2.29	85.81	100	n.a.	13.50				86.50	100
Malawi	2004	**	24,972	14.19	0.74	85.06	100	10,539	7.49	1.48	11.49	13.57	65.97	100
Mali	2007	*	7,156	25.27	2.68	72.05	100	5,113	2.56	0.58	0.41	4.69	91.76	100
Rwanda	2006	*	16,439	21.00	0.21	78.79	100	9,999	2.66	1.05	1.17	24.04	71.08	100
Senegal	2001	*	13,508	59.25	8.17	32.59	100	2,694	6.90	0.81	12.01	11.26	69.02	100
Senegal (Dakar)	2003	*	11,332	38.64	7.09	54.27	100	5,917	5.93	1.87	6.73	23.44	62.15	100
Senegal	2005	*	71,155	50.00	5.01	44.99	100	31,020	5.00	0.82	18.83		75.35	100
South Africa	2000	*	64,995	40.78	15.07	44.15	100	27,312	14.60	2.99	41.24	17.51	23.59	100
South Africa	2007	*	65,209	43.05	12.95	44.00	100	25,474	13.83	2.17	45.58	20.94	17.48	100
Southern Sudan	2009	*	15,627	67.64	3.45	28.91	100	4,821	25.92				74.08	100
Uganda	2006	*	18,292	17.03	1.75	81.22	100	14,663	2.84	14.19			82.98	100
Tanzania	2006	*	35,323	9.99	2.90	87.11	100	30,468	2.62	0.40	1.48	4.98	90.53	100
Zambia	2003	*	28,279	21.03	4.43	74.55	100	19,661	4.72	1.22	3.29	6.29	84.64	100

Source: Authors' elaboration based on data sources listed in Table A1. Notes: Statistics for Congo and Ghana 1999 are unweigthed due to unavailability of the weight variable; (*) reference period last 7 days; (**) reference period 7 days for panel (a), last 12 months for panel (b); (***) Source: UNDP (2010); reference period and number of observations not specified in the source. N.a. = not available.

Table 4 – Determinant of (log) weekly earnings (marginal effects) in selected African countries

Country	Botswana		Egypt						Ghana			
Year	2006		1988		1998		2006		1999		2006	
Reference period	7 days		7 days		7 days		7 days		12 months		7 days	
N. of observations	15,808		14,983		13,601		23,486		13,131		19,747	
N. of uncensored obs.	6,145		3,873		4,554		7,348		7,410		9,012	
Independent variables:	dy/dx		dy/dx		dy/dx		dy/dx		dy/dx		dy/dx	
Female (dummy)	-0.252	***	-0.265	***	-0.138	***	-0.207	***	-0.312	***	-0.280	***
Age 25-34 (dummy, omitted 15-24)	0.290	***	0.392	***	0.219	***	0.197	***	0.122	*	0.150	**
Age 35-44	0.556	***	0.848	***	0.483	***	0.377	***	0.326	***	0.249	***
Age 45-54	0.640	***	1.173	***	0.931	***	0.655	***	0.306	***	0.315	***
Age 55-64	0.701	***	1.119	***	1.059	***	0.972	***	0.242	***	0.324	***
Education: primary (dummy, omitted less than primary)	0.206	***	0.116	***	0.183	***	0.030		0.101	**	0.018	
Education: lower secondary	0.489	***	0.141	***	0.195	***	0.120	***	0.149	***	0.090	**
Education: secondary	1.138	***	0.567	***	0.669	***	0.344	***	0.281	**	0.241	***
Education: vocational	1.889	***	0.303	***	0.283	***	0.157	***	0.519	***	0.465	***
Education: university or higher	4.888	***	0.813	***	0.797	***	0.542	***	1.418	***	1.555	***
Sector of activity: industry (dummy, omitted primary)	0.765	***	-	-	-	-	0.278	***	1.509	***	1.212	***
Sector of activity: services	0.602	***	-	-	-	-	0.162	***	1.586	***	1.125	***
Type of employer: state owned enterprise (omitted public)	0.200	***	0.338	***	0.413	***	0.239	***	-0.015		-0.052	
Type of employer: private	-0.357	***	0.384	***	0.425	***	0.147	***	-0.259	***	-0.142	***
Labor market state: informal/ temporary wage employee (dummy, omitted formal/permanent wage empl.)	-0.295	***	-0.137	***	-0.175	***	-0.274	***	-0.224	***	-0.311	***
Ganyu	-	-	-	-	-	-	-	-	-	-	-	-
Employer	0.788	***	-	-	-	-	-	-	0.162		0.116	
Self employed	-0.551	***	-	-	-	-	-	-	-0.101		-0.282	***
Unpaid family worker	-	-	-	-	-	-	-	-	-0.385	***	-0.392	***
N. hours worked per week	0.003	***	0.005	***	0.005	***	0.002	***	0.014	***	0.006	***
Rural	-0.190	*	0.083	***	0.049	**	0.046	**	-0.088	***	-0.061	*

Source: Authors' elaboration based on data sources listed in Table A1. Note: figures represent marginal effects for continuous variables. For discrete (dummy) variables, the percentage change in weekly earnings associated with a move from 0 to 1 is reported.

Table 4 (continued) – Determinant of (log) weekly earnings (marginal effects) in selected African countries

Country	Malawi		Mali		Nigeria		Rwanda		Senegal (Dakar)	
Year	2004		2007		2004		2006		2003	
Reference period	12 months		7 days		12 months		7 days		7 days	
N. of observations	25,279		6,922		48,662		16,410		10,871	
N. of uncensored obs.	10,400		3,850		12,511		2,916		4,461	
Independent variables:	dy/dx		dy/dx		dy/dx		dy/dx		dy/dx	
Female (dummy)	-0.275	***	-0.482	***	-0.214	***	0.149	***	-0.326	***
Age 25-34 (dummy, omitted 15-24)	0.377	***	0.188	***	-0.197	**	0.110	**	0.124	**
Age 35-44	0.581	***	0.271	***	-0.230	**	0.229	***	0.207	***
Age 45-54	0.562	***	0.251	***	-0.191	*	0.388	***	0.313	***
Age 55-64	0.511	***	0.439	***	-0.157		0.600	***	0.293	***
Education: primary (dummy, omitted less than primary)	0.275	***	0.247	***	0.099	**	0.481	***	0.310	***
Education: lower secondary	0.719	***	0.584	***	0.236	***	1.743	***	0.584	***
Education: secondary	1.428	***	0.833	***	0.376	***	1.075	***	1.046	***
Education: vocational	2.751	***	1.340	***	0.255	***	0.560	***	0.874	***
Education: university or higher	9.034	***	2.108	***	0.839	***	4.155	***	1.382	***
Sector of activity: industry (dummy, omitted primary)	0.224	***	-0.140	***	-		0.772	***	-0.193	**
Sector of activity: services	0.145	***	0.127	***	-		0.317	***	-0.249	***
Type of employer: state owned enterprise (omitted public)	0.189	***	0.071		-0.115		0.198	*	0.186	**
Type of employer: private	-0.003		-0.149	*	-0.292	***	0.177	**	-0.154	***
Labor market state: informal/ temporary wage employee (dummy, omitted formal/permanent wage empl.)	-0.171	***	0.122		-0.154	***	0.833	***	-0.511	***
Ganyu	-0.908	***	-	-	-	-	-	-	-	-
Employer	-	-	0.214		-0.272	***	-	-	-0.061	
Self employed	-	-	0.119	**	0.031		-	-	-0.701	***
Unpaid family worker	-		-	-	-0.464	***	-	-	-0.477	***
N. hours worked per week	0.001		0.004	***	0.010	***	0.000		0.007	***
Rural	-0.513	***			-0.224	***	0.156	***	-	-

Source: Authors' elaboration based on data sources listed in Table A1. Note: figures represent marginal effects for continuous variables. For discrete (dummy) variables, the percentage change in weekly earnings associated with a move from 0 to 1 is reported.

Table 4 (continued) – Determinant of (log) weekly earnings (marginal effects) in selected African countries

Country	South Africa				Tanzania		Uganda		Zambia	
Year	2000		2007		2006		2006		2003	
Reference period	7 days		7 days		7 days		12 months		7 days	
N. of observations	63,565		64,637		35,023		17,999		27,504	
N. of uncensored obs.	20,952		18,304		10,193		4,245		5,989	
Independent variables:	dy/dx		dy/dx		dy/dx		dy/dx		dy/dx	
Female (dummy)	-0.300	***	-0.285	***	-0.322	***	-0.212	***	0.206	***
Age 25-34 (dummy, omitted 15-24)	0.081	***	0.014		0.164	***	0.181	***	0.203	***
Age 35-44	0.355	***	0.154	***	0.184	***	0.278	***	0.420	***
Age 45-54	0.476	***	0.301	***	0.160	***	0.229	***	0.459	***
Age 55-64	0.514	***	0.324	***	0.126	**	0.198	***	0.339	***
Education: primary (dummy, omitted less than primary)	0.315	***	0.331	***	0.153	***	0.130	***	0.259	***
Education: lower secondary	0.738	***	0.682	***	0.177	***	0.404	***	0.562	***
Education: secondary	1.540	***	1.319	***	0.626	***	0.759	***	1.497	***
Education: vocational	3.175	***	3.154	***	0.624	***	0.820	***	2.586	***
Education: university or higher	5.767	***	6.029	***	1.807	***	3.023	***	5.265	***
Sector of activity: industry (dummy, omitted primary)	0.788	***	0.523	***	0.307		0.498	***	0.568	***
Sector of activity: services	0.278	***	0.163	***	0.380		0.256	***	0.575	***
Type of employer: state owned enterprise (omitted public)	-0.020		0.035		0.292	***	-0.195	***	0.631	***
Type of employer: private	-0.377	***	-0.364	***	-0.343	***			0.134	***
Labor market state: informal/ temporary wage employee (dummy, omitted formal/permanent wage empl.)	-0.410	***	-0.377	***	-0.461	***	-0.206	***	-0.436	***
Ganyu	-	-	-	-	-	-	-	-	-	-
Employer	-0.267	***	-0.338	***	1.469	***	-	-	3.581	***
Self employed					0.568	***	-	-	-0.372	***
Unpaid family worker	-0.172		-0.376	***	-	-	-	-	-	
N. hours worked per week	0.006	***	0.007	***	0.004	***	0.002	**	-	
Rural	-0.209	***	-	-	-0.085	***	-0.204	***	-0.160	***

Source: Authors' elaboration based on data sources listed in Table A1. Note: figures represent marginal effects for continuous variables. For discrete (dummy) variables, the percentage change in weekly earnings associated with a move from 0 to 1 is reported.

6. Conclusions

Although over 50 years of post-colonial history several African countries have experimented with State planning of economic activities, it is now widely acknowledged that private sector development is a key pillar of growth and development. Consequently, development finance institutions have invested growing amounts of money to support both the reform of regulations aimed to improve the business climate, and strategic private sector operations expected to catalyze further private sector development through linkages and demonstration effects. Yet, surprisingly little research has been conducted to measure the size of the private sector in each African country.

In this paper, we fill a knowledge gap by presenting novel estimates of the size of the private sector in 50 African countries over the period 1996-2008, derived from the analysis of national accounts from the African Economic Outlook master data set. We show that the private sector accounts for about 2/3 of total investments, 4/5 of total consumption and 3/4 of total credit. Cross-country variability is large. For example, the private sector's share ranges from 18% in Burundi to 89% in Morocco for total investment; from 54% in Angola to 92% in Guinea for consumption; and from 8% in Liberia to 211% in Angola for credit. We find statistically significant differences across country groupings only for consumption, which is higher in low income countries (81% against 74% in middle income countries), and lower in oil exporting countries (75% against 80% for net oil importers). In relative terms, large private sector countries are concentrated in Western Africa (Cote d'Ivoire, Guinea, Niger, Senegal and Togo), Central Africa (Cameroun, Republic of Congo) and Eastern Africa (Kenya, Sudan, Uganda and Tanzania), with the addition of Mauritius. Countries with small private sectors include a sample of oil-exporters (Algeria, Angola, Equatorial Guinea, Libya and Nigeria), some of the poorest countries in the continent (Burundi, Burkina Faso, Guinea Bissau, Mali and Sao Tome e Principe), Zambia and Botswana.

Over the last ten years, the size of the private sector has remained stable. Also in this case, however, country variability was large. For example, the private sector grew most remarkably in Liberia, where the private share of consumption, investment and credit increased respectively by 26, 3 and 18 percentage points. At the opposite end of the distribution, the private sector recorded the strongest contraction in Equatorial Guinea, where the private share of investment and consumption fell by 45 and 5 percentage points respectively. In general, the size of the private sector has been contracting significantly in oil exporting countries. However, neither its size nor the variation in its size appear to be significantly correlated with growth performance.

We complement the estimates based on national accounts with measures derived from household and labor force survey data from 16 countries, including some of the largest economies (e.g. Egypt, Nigeria, South Africa), and a good mix of middle and low income countries in all African regions. We show that the private sector employs on average 55% of working age individuals, and provides 90% of available jobs. The private sector share of employment ranges from a minimum of 71% in Egypt in 1998 and a maximum of 97% in Tanzania in 2006. Evidence of large size is however tempered by the low quality of most private sector jobs, as only 1 out of 10 workers hold permanent/formal wage employment. Permanent/formal wage employment opportunities in the private sector are relatively abundant only in the three middle income countries in the sample, peaking at 46% of total employment in South Africa, 23% in Botswana and 18% in Egypt. These are also the countries with the largest public sector employment (including state owned enterprises), hence with the largest formal sector in general.

In addition to being mostly informal, private sector employment is also associated with a negative earning premium (which holds after controlling for job characteristics such as formality). The gap averages 13%, and is largest in South Africa where private sector workers earn 38% less than their peers in the public sector. At the other end of the distribution, private sector workers are paid relatively more than public sector workers in Egypt, Zambia and Rwanda, with the differential peaking at 18% in Rwanda. Negative private sector earning premiums have serious policy implications, as they may reduce private sector development by leading high skill individuals to less productive (but more stable and better paid) jobs in the public sector.

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Annex

Table A1. List of household and labor force surveys

Country	Year	Name of survey
Botswana	2005-2006	Botswana Labor Force Survey 2005-2006
Congo	2005	Enquête Congolaise Auprès des Ménages (ECOM)
Egypt	1988; 1998; 2006	Egypt Labor Market Survey 1988-1998-2006
Ethiopia	2005	Ethiopia Welfare Monitoring Survey (WMS)
Ghana	1999; 2006	Ghana Living Standards Survey (GLSS 4 and 5)
Madagascar	2005	United Nations Development Program (UNDP). 2010. *Micro Entreprises, Emploi et Developpement Humain*
Malawi	2004	Second Integrated Household Survey (IHS-2)
Mali	2007	Enquête Permanente Emploi Auprès de Ménages 2007
Nigeria	2003-2004	Nigeria Living Standards Survey (NLSS)
Rwanda	2006	Enquête Intégrale sur les Conditions de Vies des Ménages (EICV)
Senegal	2001	Enquête Sénégalaise Auprès des Ménages (ESAM)
Senegal	2003	Enquête Sur l'Emploi, le Secteur Informel et la Demande des Ménages Sur l'agglomération Urbaine de Dakar Enquête 1-2-3
Senegal	2005	Enquête de Suivi de la Pauvreté au Sénégal (ESPS)
South Africa	2000; 2007	Labor Force Survey (LFS)
Southern Sudan	2009	National Poverty Survey 2009
Tanzania	2006	Integrated Labor Force Survey (ILFS)
Uganda	2006	Uganda National Household Survey (UNHS)
Zambia	2002-2003	Zambia Living Conditions Monitoring Survey III (LCMS III)