



# PART 3

ANALYSIS AND MAJOR FINDINGS

# Analysis and Major Findings

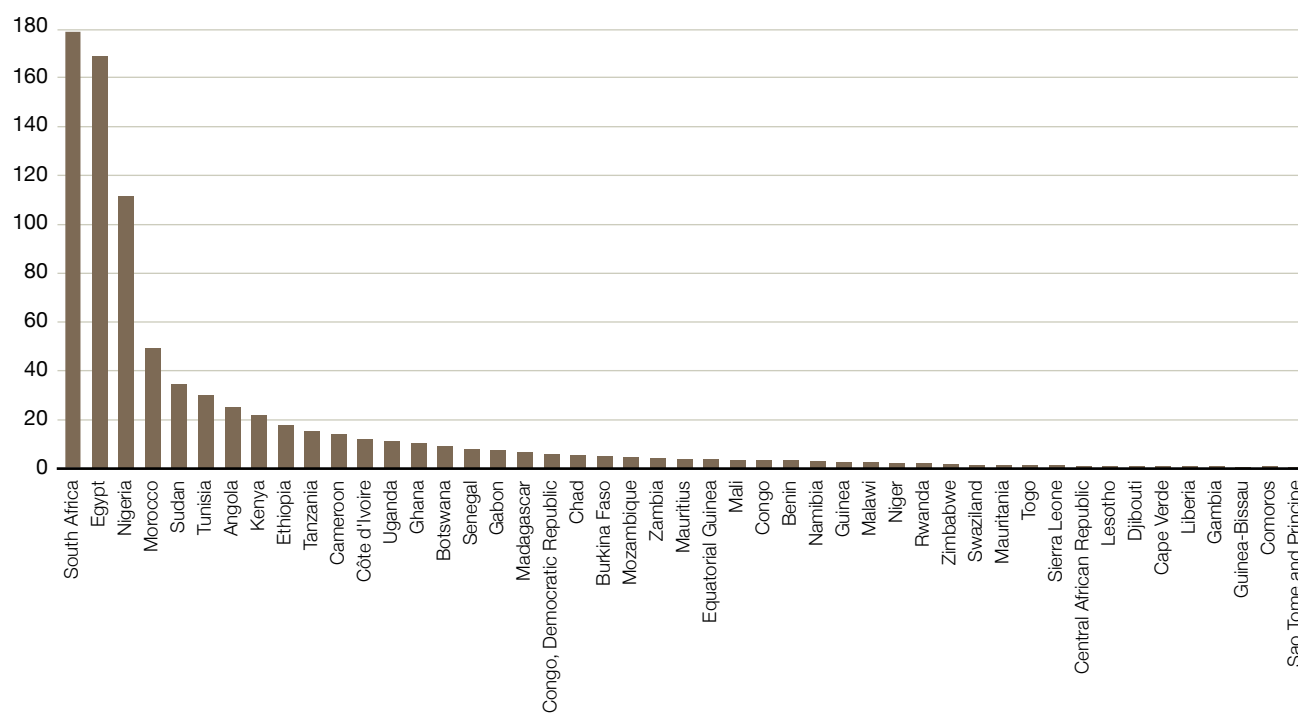
## 3.1 OVERVIEW

Purchasing power parities are used to contrast estimates of the size of a country's economy, its aggregate welfare, the well-being of its residents and how its prices compare with those in other countries.

The results of 2005 ICP-Africa are presented below. The descriptive analysis covers gross domestic product (GDP) and some of its main components: actual final consumption expenditures

(AFCEs), individual government consumption expenditures (IGCEs), collective government consumption expenditures (CGCEs) and investment. Africa regional values include only the 48 African countries that participated in 2005 ICP-Africa. The main results are presented in tables and figures. The main indicators used are price level indices (PLIs) and per capita GDP, its expenditure components and their expenditure shares in terms of the total Africa region.

Figure 1: Real GDP By Country in Billion AFRIC, 2005



Note: For more details, see Table T10 in part 6. Burundi is not shown because it did not supply official national account data.

PPPs, real expenditures and per capita real expenditures can be computed for all the 155 basic headings and at any desired level of aggregation. However, results at the disaggregated level are inclined to be less reliable. For purposes of disseminating the results to a wide variety of users, a balance has been sought between providing as much information as possible and ensuring a degree of reliability of the results. Therefore this analysis concentrates on the highlights of the results. Researchers and other institutions interested in conducting further analyses of the results are referred to part 4, which contains detailed tables.

### 3.2. LARGEST AND SMALLEST ECONOMIES

GDP is the most commonly used measure of the size of a country's economy. The ICP provides an opportunity to compare the size of heterogeneous economies on the basis of their purchasing power and to rank countries' contributions to a region's output. All real expenditure results are expressed in terms of a notional African regional currency (AFRIC).

South Africa is the largest economy in Africa, whether GDP figures are expressed in U.S. dollars using the exchange rate or in real terms using PPPs. South Africa and Egypt, the two largest economies, account for 41 percent of the Africa region in 2005.

The total size of the African economy is AFRIC 839.2 billion (US\$ 1856.3 billion)<sup>5</sup>. As Figure 1 indicates, South Africa is the largest economy with a real GDP of AFRIC 179.7 billion (US\$ 397.5 billion), closely followed by Egypt and Nigeria with a real GDP of AFRIC 169.0 billion (US\$ 373.7 billion) and AFRIC 111.81 billion (US\$ 247.3 billion), respectively. After the top three countries, Figure 1 shows a significant gap in real GDP for the remaining countries. Morocco ranks fourth with less than one-half of Nigeria's real GDP. The four countries following Morocco are Sudan, Tunisia, Angola, and Kenya with a real GDP between AFRIC 21.7 billion and AFRIC 36.0 billion. The remaining 39 countries have a real GDP of less than AFRIC 20 billion, with 33 countries having a real GDP of less than AFRIC 10 billion, ranging from AFRIC 9.3 billion for Botswana to AFRIC 0.1 billion for São Tomé and Príncipe.

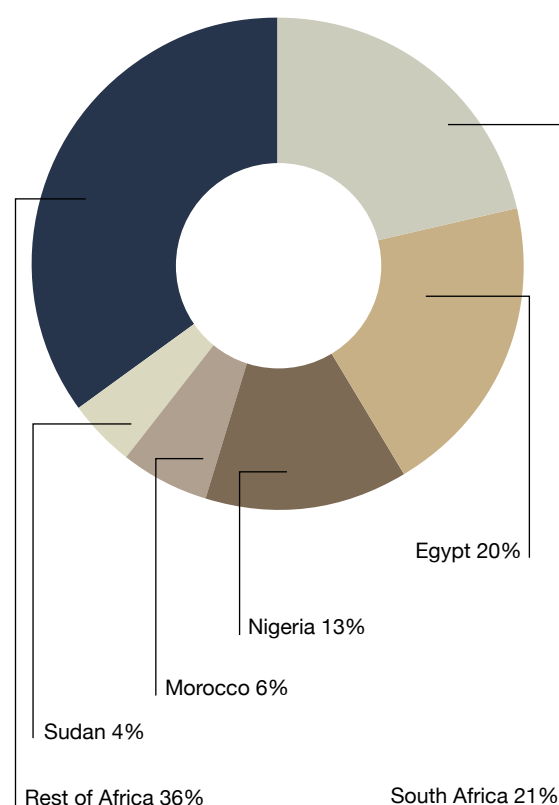
South Africa is the largest economy in Africa, whether GDP figures are expressed in U.S. dollars using the exchange rate or in real terms using PPPs. South Africa and Egypt, the two largest economies, account for 41 percent of the Africa region in 2005.

<sup>5</sup> The figures do not include Algeria, Libya, Somalia, Eritrea and Seychelles, which did not participate in the 2005 ICP-Africa program.

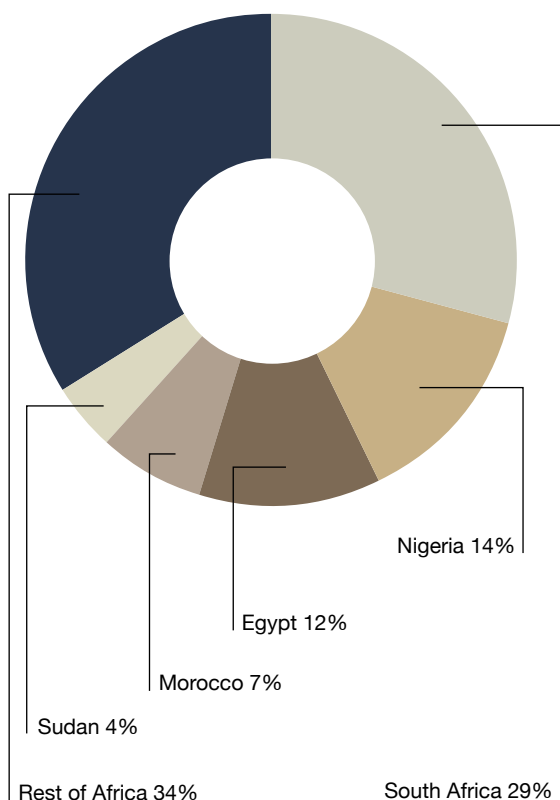
South Africa and Egypt are also the largest economies in the Africa region when using PPP-based GDP, accounting for 21 percent and 20 percent respectively (see Figure 2a). They are followed by Nigeria (13 percent), Morocco (6 percent) and Sudan (4 percent). These five economies account for nearly two-thirds of the Africa region's GDP when it is measured in PPPs. Four countries (South Africa, Egypt, Nigeria and Sudan) are mineral resources-producing countries and are among the most populated countries in Africa.

When using a market-based exchange rate, the same five countries (South Africa, Egypt, Nigeria, Morocco and Sudan) account for approximately the same share of the Africa region's GDP as when PPPs are used. Significant changes in the share occur for Egypt and South Africa, however. As Figure 2a and 2b show, Egypt's weight in the Africa region's aggregate GDP is 20 percent when using PPPs but only 12 percent when using the market exchange rate. Conversely, South Africa's share in the Africa region's GDP falls from 29 to 21 percent when its GDP is converted using PPPs rather than market exchange rates.

Figure 2a: Africa, Shares in Real GDP, 2005



**Figure 2b:** Africa, Shares in Nominal GDP, 2005



Note: For more details, see Table T9 and Table T10 in part 6.

Ten economies with relative individual shares varying from 1 to 3.5 percent account for 20 percent of the region's output: Tunisia (3.5 percent); Angola (3 percent); Kenya (2.6 percent); and Ethiopia, Tanzania, Cameroon, Cote d'Ivoire, Uganda, Ghana and Botswana (about 1 percent each). The remaining 33 countries, each with less than 1 percent of the region's output, account collectively for 14 percent of the total output.

### 3.3. RICHEST AND POOREST COUNTRIES

Real GDP per capita is the usual yardstick to distinguish between rich and poor countries. Per capita GDP removes the distortion created by population size and allows a comparison of the standard of living across countries. Real GDP per capita measures the flow of goods and services that are available to countries to contribute to their economic well being. Figure 3 illustrates the distribution of real and nominal per capita income (in AFRIC and U.S. dollars) by country.

As Figure 3 shows, when real GDP per capita is used, the five richest economies are Gabon, Botswana, Equatorial Guinea, Mauritius

and South Africa. Four of these five countries have a small population—between 1 and 1.7 million—and their share in real terms of the Africa regional output varies from 0.68 to 1.1 percent. The Africa region's average real GDP per capita is AFRIC 1,016 in PPP terms. Thirty-five, close to three quarters, of the countries have a real GDP per capita that is smaller than the regional average. One-quarter have a GDP per capita of less than AFRIC 360, half have a real GDP per capita of less than AFRIC 620, and 34 economies have a real GDP per capita of less than AFRIC 1,000. A striking feature of these data is a huge dispersion, with the richest economy having a per capita real GDP of more than 45 times that of the poorest. On average, oil-producing countries<sup>6</sup> have a real per capita GDP of AFRIC 1,917, which is higher than non-oil-producing countries by AFRIC 970. This difference can be attributed to a pure income effect arising from high windfall revenue. Much more variation exists among oil-producing countries than among non-oil-producing ones.<sup>7</sup>

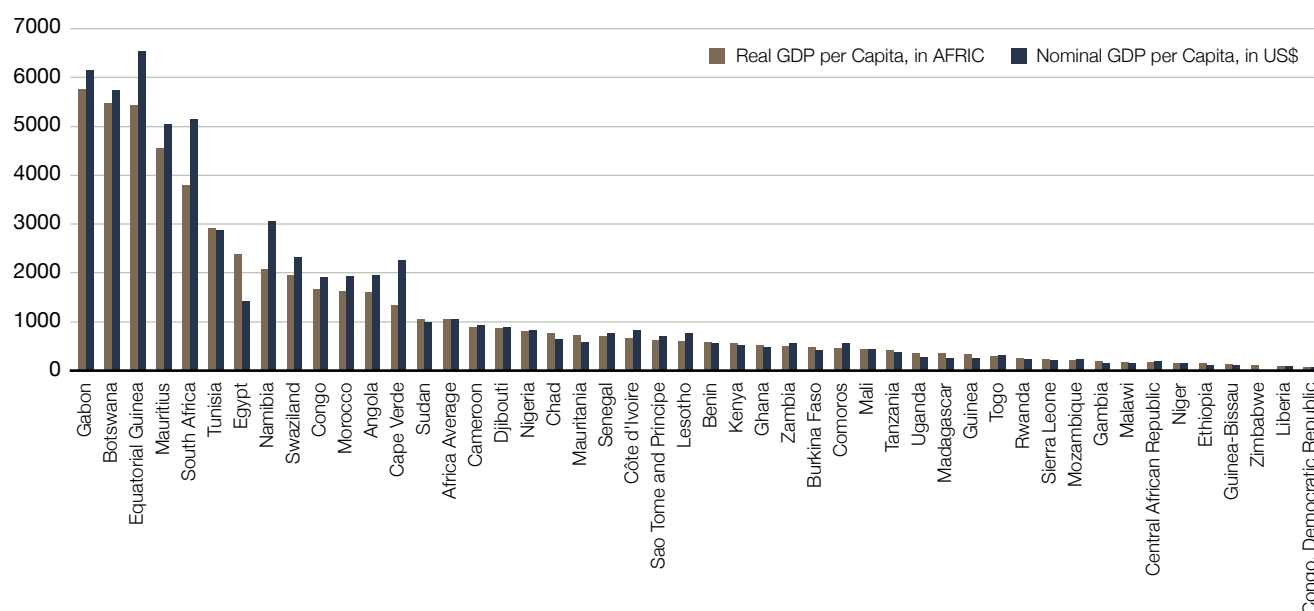
In terms of GDP per capita, Gabon, Botswana, Equatorial Guinea, Mauritius, South Africa, Tunisia, Egypt and Namibia are the wealthier African countries. The poorest countries are Democratic Republic of Congo, Liberia, Zimbabwe, Guinea-Bissau, Ethiopia and Niger.

Comparing the countries on the basis of GDP per capita in nominal terms may cause a change in the rank of a country depending on whether the exchange rate understates or overstates the purchasing power of its currency. As shown in Figure 3, seven countries (Cameroon, Djibouti, Mali, Nigeria, Sudan, Congo Democratic Republic and São Tomé and Príncipe) have the same ranking irrespective of whether GDP per capita is expressed in U.S. dollars or in real terms using PPPs. Eleven countries (Angola, Burundi, Botswana, Gabon, Morocco, Mauritius, Niger, Senegal, Swaziland, Tunisia and South Africa) have an increase or decrease of one point from the comparison of GDP per capita in U.S. dollars to that of GDP per capita measured by PPPs. The rankings of the rest of the countries vary by two to more points from one comparison to the other.

Egypt posts the biggest rank gain and is ranked 13th when the per capita GDP is expressed in U.S. dollars but falls to the 7th place

6 Oil-producing countries in the region are Angola, Cameroon, Chad, Côte d'Ivoire, Egypt, Equatorial Guinea, Gabon, Mauritania, Nigeria, Congo and Sudan. Note that Algeria and Libya, two major oil producers in Africa, are not among the countries surveyed for 2005 ICP-Africa.

7 Poor economic governance is a possible explanation for such a high variance among oil-producing countries.

**Figure 3: Real GDP Per Capita in AFRIC and Nominal GDP Per Capita in US\$, 2005**

Note: For more details, see Table T3 and Table T4 in part 6. Burundi is not shown because it did not supply official national account data.

when the per capita GDP is expressed in real terms, reflecting its relatively low prices. Indeed, although Egypt is a middle-income country, it is the cheapest country in the sample, with the lowest PLI (as will be further elaborated in section 3.3). Egypt ties with Ethiopia, which is much poorer. The difference in Egypt's ranking provides an illustration of the extent to which PPP, rather than market exchange rates, is regarded as a better measure of the relative cost of living because PPP measures are based on the goods and services households can buy with their domestic currency. Egypt's low PLI arises in part because of interventions in the market for goods and services.

### 3.4. MOST AND LEAST EXPENSIVE ECONOMIES

A country's PLI is a ratio obtained by dividing its PPP by the exchange rate of its currency. It is generally expressed as a percentage. PLIs for a given product or aggregate indicate the number of units of AFRIC needed to buy the same volume of the product or aggregate in each country. These indices provide a comparison of the countries' overall price levels with respect to the Africa regional average. Thus, a PLI greater than 100 means that the country prices are higher than the regional average, and a PLI lower than 100 means that prices are relatively lower than the regional average. Figure 4 provides a ranking of all countries from the most expensive to the least expensive. In other words, if a person bought

precisely the same basket of goods and services in each of the 48 participating countries in the African region, he or she would spend the most in Cape Verde and the least in Ethiopia.

Food and nonalcoholic beverages are most expensive in Angola, Gabon, Equatorial Guinea, Nigeria, Congo and Comoros.

Alcoholic, beverages and tobacco are most expensive in Comoros, Morocco, Sudan and Mauritius.

Angola is the most expensive country on three basic headings in individual household consumption: health, food and nonalcoholic beverages, and recreation and culture.

Ethiopia and Guinea are the cheapest for restaurants and hotels and recreation and culture respectively.

Mauritius is by far the most expensive country with respect to education.

While on average PLIs are higher in richer than in poorer countries, some notable exceptions occur. Cape Verde has the highest PLI followed by Namibia, South Africa and Comoros. On the contrary Ethiopia shows the lowest PLI among the participating countries.

Therefore, Ethiopia is the cheapest place in Africa in which to live or buy things. Other countries with relatively low price levels are Egypt, The Gambia and Burundi.

In Africa, the most expensive place to live and work in is Cape Verde followed by Namibia, South Africa and Comoros. Ethiopia, Egypt, and The Gambia, are the cheapest places.

Figures 5a and 5b show the three most and least expensive countries in seven categories: housing and utilities; health; education; food and nonalcoholic beverages; alcoholic beverages and tobacco; recreation and culture; and restaurants and hotels. Angola is the most expensive country in three categories: health, food and non-alcoholic beverages, and recreation and culture. The second and third most expensive countries for health are South Africa and Morocco, while Swaziland, Ethiopia and Tanzania are the cheapest countries. Angola, Gabon and Equatorial Guinea are the three most expensive countries for food and nonalcoholic beverages, while the cheapest countries are Uganda, Egypt and Ethiopia. In recreation and culture Angola ranks first, closely followed by Equatorial Guinea and Gabon, while Madagascar, The Gambia and Guinea are the least expensive countries.

Mauritius, South Africa, Tunisia, Egypt, Swaziland, Gabon, Botswana and Equatorial Guinea have the highest standard of living.

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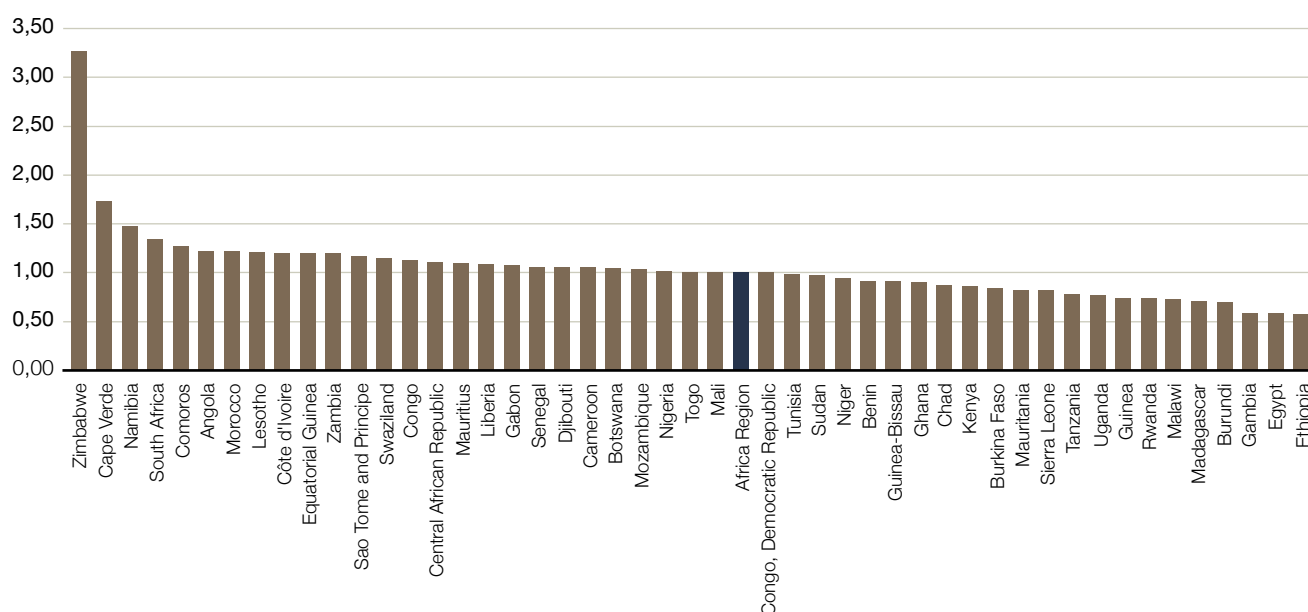
Ethiopia and Guinea are the cheapest for restaurants and hotels and recreation and culture respectively.

Mauritius is by far the most expensive country with respect to education.

Zimbabwe, Cape Verde, Angola, Gabon, Equatorial Guinea, Namibia and Comoros are the most expensive in terms of individual household final consumption expenditure.

With regard to the remaining categories housing and utilities cost the most in Cape Verde, Namibia and Swaziland and the least in Sierra Leone, Chad and The Gambia. Education is most costly in Mauritius at about nine times the African average, followed after a wide gap by South Africa and Namibia. Education is available at the lowest cost in Guinea, Burundi and Madagascar. Comoros, Morocco and Sudan are the most expensive countries for the purchase of alcohol and tobacco, showing a price level of 2 to 2.5 times higher than the African average. The cheapest

Figure 4: Country PLI at GDP Level, 2005

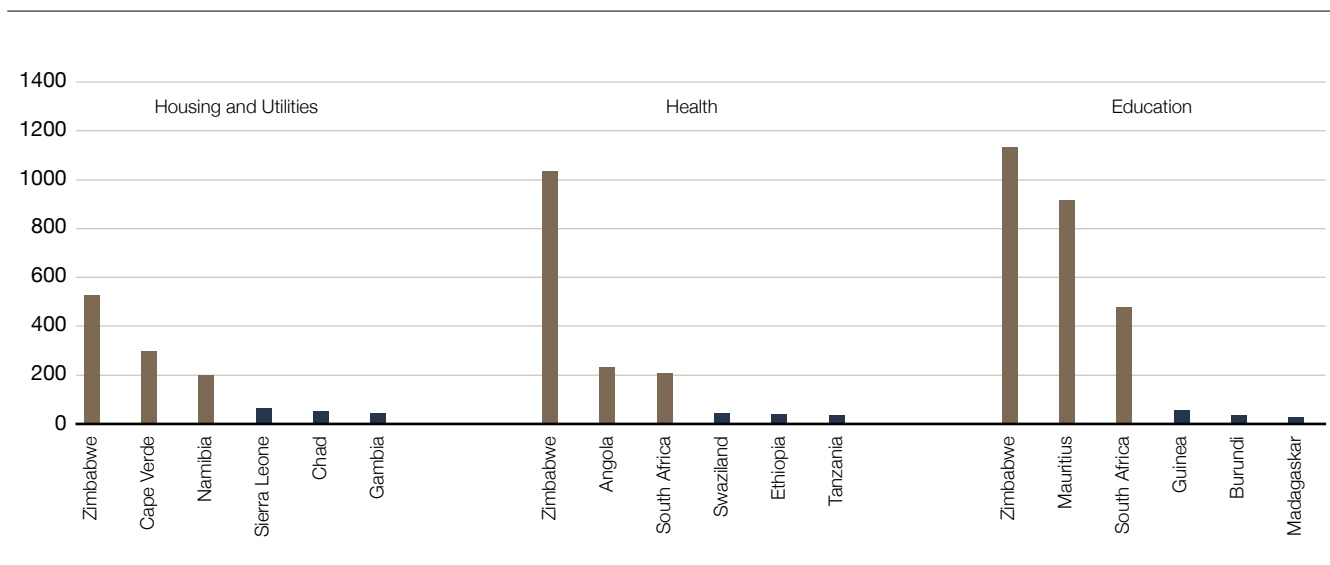


Note: For more details, see Table T2 in part 6.

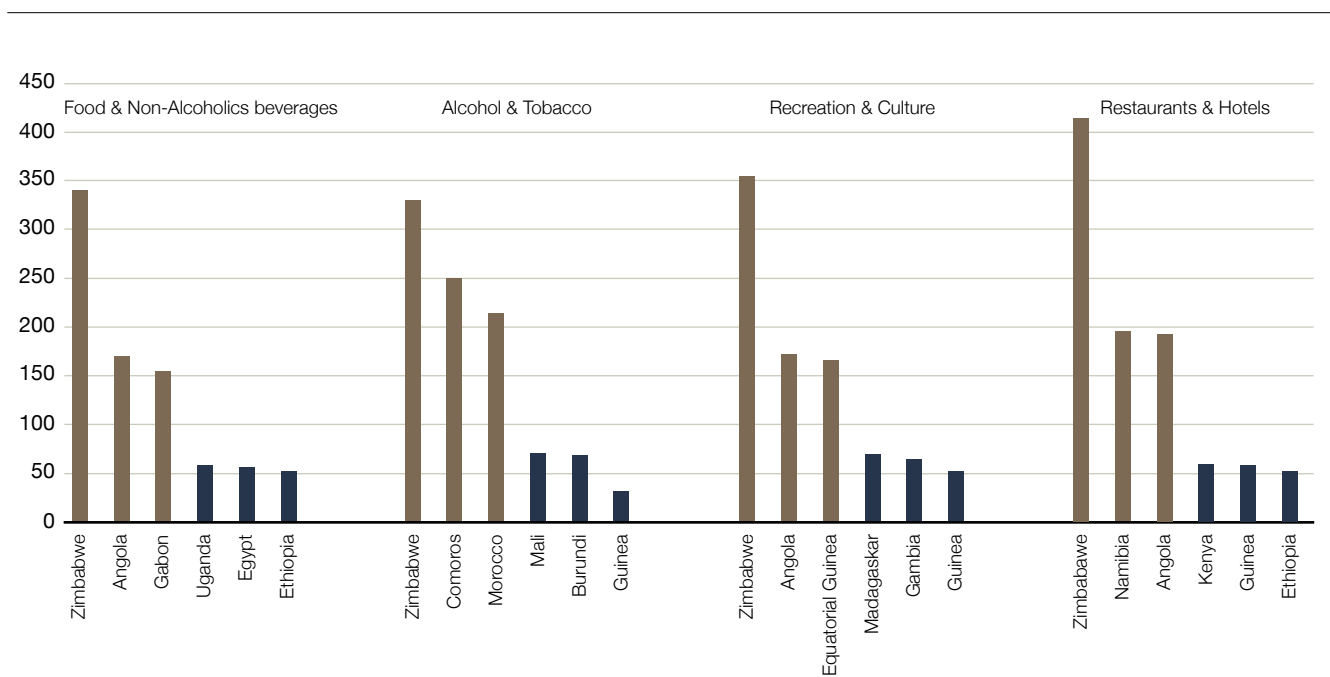
countries for alcohol and tobacco are Mali, Burundi and Guinea, where prices are about one-half of the African average. Restaurants and hotels in Namibia, Angola and Comoros cost the most, with a price level of about twice as much than the African average. Restaurants and hotels are cheapest in Kenya, Guinea and Ethiopia.

Mauritius, South Africa, Tunisia, Egypt, Swaziland, Gabon, Botswana and Equatorial Guinea have the highest standard of living. Zimbabwe, Cape Verde, Angola, Gabon, Equatorial Guinea, Namibia and Comoros are the most expensive in terms of individual household final consumption expenditure.

**Figure 5a:** Most and Least Expensive Countries by Sector (PLI by Sector), 2005, Africa = 100



**Figure 5b:** Most and Least Expensive Countries by Sector (PLI by Sector), 2005, Africa = 100

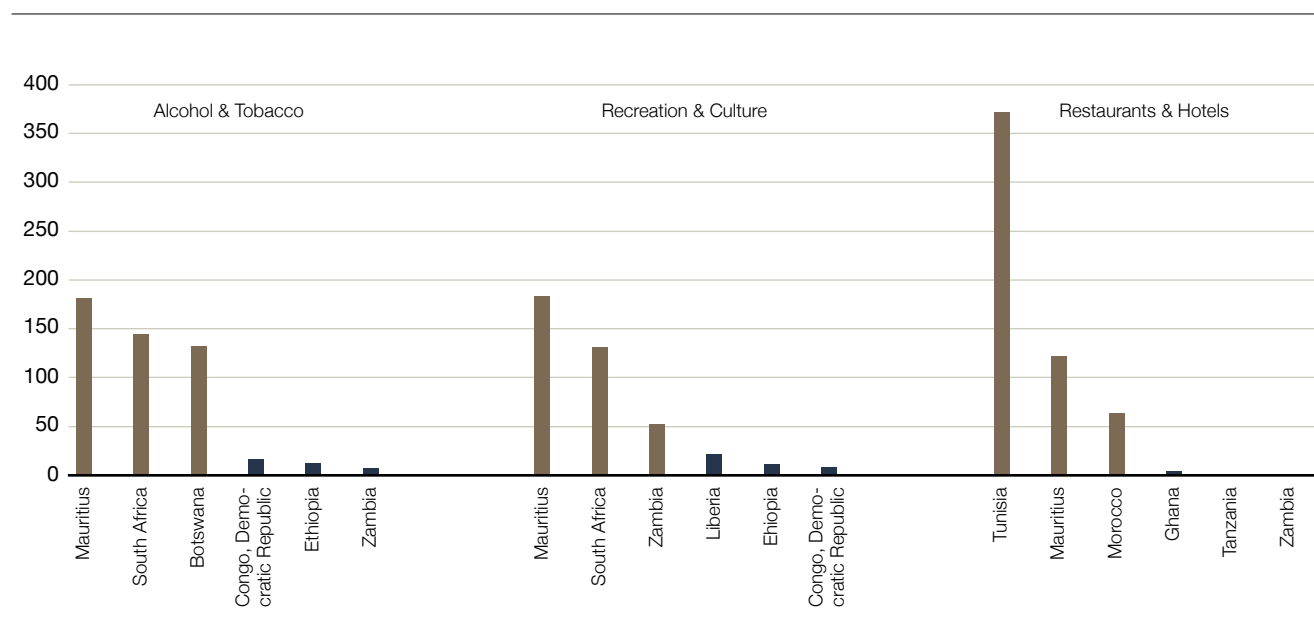


Note: For more details, see Table T2 in part 6.

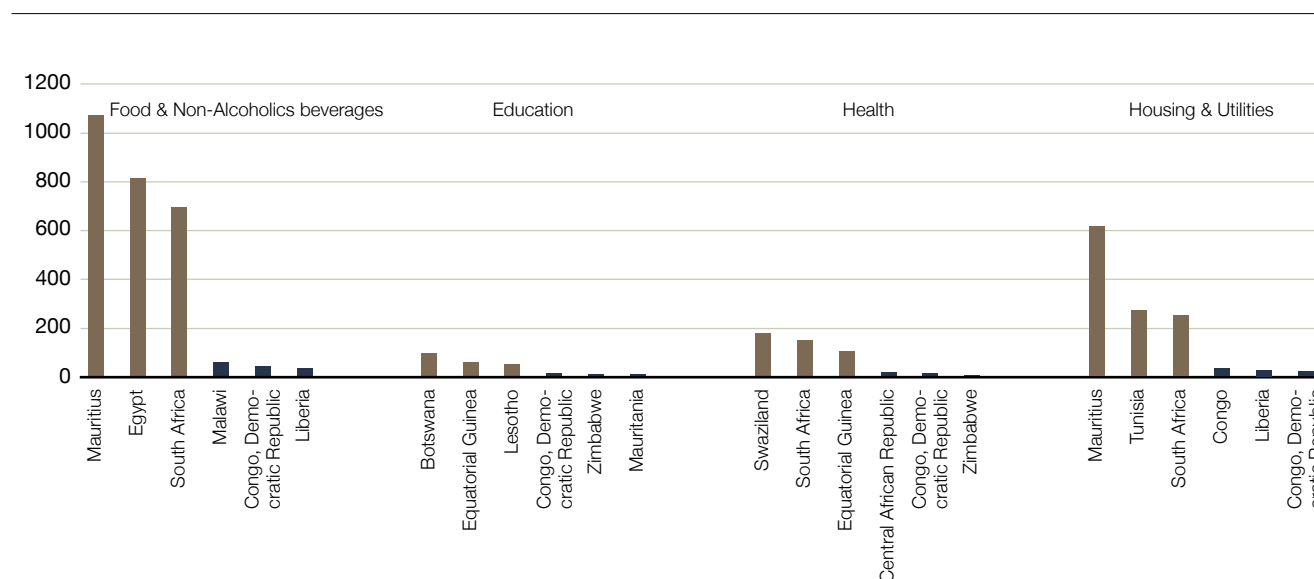
Figure 6a and 6b show the expenditure per capita (in AFRIC) on various goods and services in individual consumption expenditure. Mauritius spends more than any other country in Africa on four of the seven basic headings in individual household consumption: alcoholic beverages and tobacco (almost nine times above the Africa regional average); housing, water, electricity, gas and other fuels (almost eight times above the average); recreation and culture

(eight times above the average); and food and nonalcoholic beverages (three times above the average). The lowest expenditures are Zambia on alcoholic beverages and tobacco (one-third of the average) and restaurants and hotels (0.6 percent of the average) and Zimbabwe on private education (AFRIC 1) and private health (AFRIC 0.7).

**Figure 6a: Highest and Lowest Per Capita Expenditure by Sector, 2005**



**Figure 6b: Highest and Lowest Per Capita Expenditure by Sector, 2005**



Note: For more details, see Table T4 in part 6.



### 3.5. HIGHEST AND LOWEST LIVING STANDARDS

While the full range of goods and services that comprise GDP measure countries' general economic development, a more appropriate measure of the economic well-being of the population is obtained by comparing per capita actual final consumption expenditure (AFCE). In fact, GDP per capita includes other components of GDP such as gross fixed capital formation (GFCF) and collective government consumption expenditure (CGCE). Therefore, the standard of living of individuals is best measured by AFCE.<sup>8</sup> Figure 7 provides per capita AFCE based on PPP and market exchange rates.

The same countries that top the list on the basis of per capita real GDP dominate the top rankings when the comparison is based on per capita real AFCE. As Figure 7 indicates, Mauritius ranks first with a real per capita AFCE of AFRIC 3530, showing quite a large difference of approximately AFRIC 800 and AFRIC 1500, respectively, over consecutive countries South Africa and Tunisia. Egypt and Gabon rank fourth and fifth with a real AFCE of AFRIC 1835 and AFRIC 1543, respectively. Eight additional countries rank above

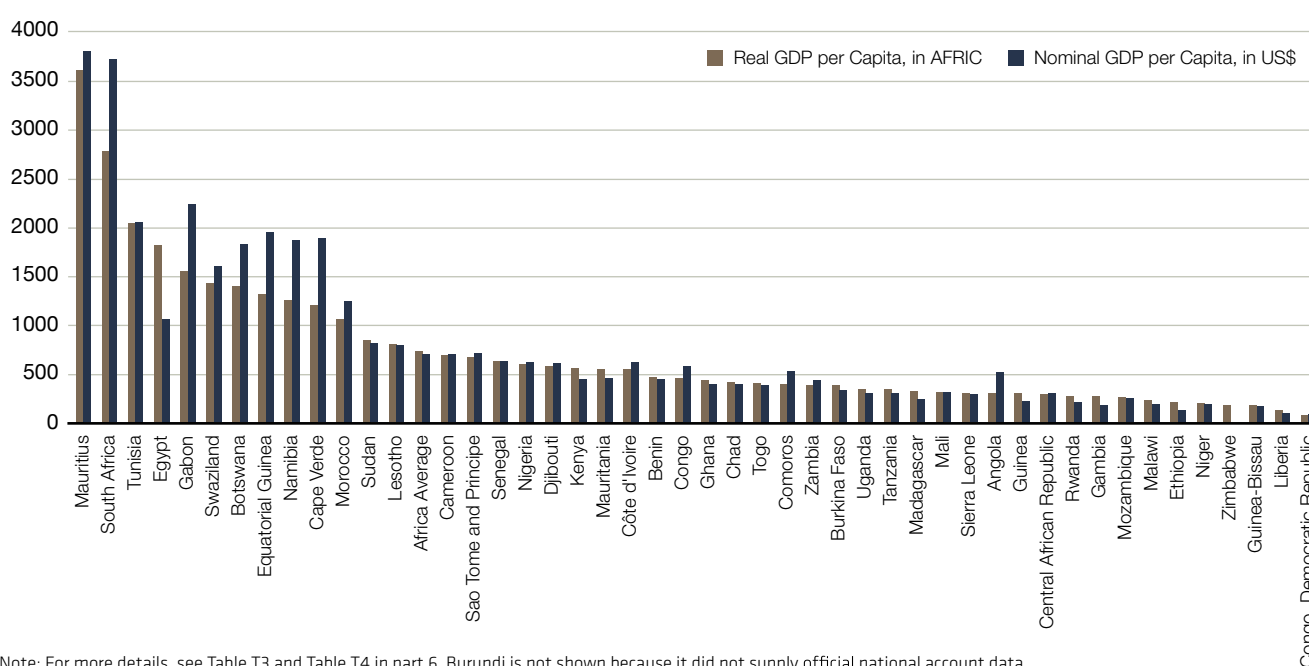
the Africa regional average of AFRIC 727, while the remaining 35 countries have a real per capita AFCE lower than the average. Approximately half of the countries in the sample range below the threshold of AFRIC 500. Democratic Republic of Congo is ranked lowest with a real per capita AFCE of AFRIC 69. The three other lowest-ranking countries are Guinea-Bissau, Zimbabwe and Liberia, which range between AFRIC 201 and AFRIC 122.

Comparing Figure 7 with Figure 3, which shows real GDP per capita, reveals that although the same countries rank at the top of the list, the ranking is different. Gabon, Botswana and Equatorial Guinea drop by five positions, moving respectively from first, second and third to fifth, seventh and eighth. Mauritius, South Africa, Tunisia and Egypt move up by three positions from fourth, fifth, sixth and seventh to first, second, third and fourth, respectively. The countries that drop the most are Angola, from the 12<sup>th</sup> to 36<sup>th</sup>;

Mauritius, Egypt, Gabon and South Africa have the highest IGCE in Africa. IGCE services are the most expensive in Morocco, South Africa, Botswana, Cape Verde and Namibia, and the least expensive in Chad, Egypt and Burundi. Botswana, Gabon, Mauritius, South Africa, Egypt, Namibia and Tunisia spend the most on CGCE.

<sup>8</sup> The results for AFCE presented here are slightly different from those published in March 2007. The differences result from the inclusion or revision of data by some countries in their 2005 GDP estimates. Angola, Burundi, Cape Verde, Comoros, The Gambia, Liberia, Malawi, Rwanda, São Tomé and Príncipe, Sudan and Zambia had several gaps in their data at the time the first results were released.

**Figure 7: Real and Nominal Per Capita Actual Final Consumption Expenditure (AFCE), 2005**



Note: For more details, see Table T3 and Table T4 in part 6. Burundi is not shown because it did not supply official national account data.

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Congo, from 10<sup>th</sup> to 26<sup>th</sup>; and Chad, from 18<sup>th</sup> to 30<sup>th</sup>. These countries have the smallest share of real consumption expenditures of households in GDP (19 percent for Angola, 25 percent for Congo and 46 percent for Chad). The countries that increase the most are Lesotho, from the 23<sup>rd</sup> to 13<sup>th</sup>; Togo, from 35<sup>th</sup> to 25<sup>th</sup> and São Tomé and Príncipe, from 22<sup>nd</sup> to 15<sup>th</sup>.<sup>9</sup>

### 3.6. GOVERNMENT CONSUMPTION EXPENDITURE

Government consumption expenditure is divided into two broad categories. Individual government consumption expenditure (IGCE) is the expenditure incurred by governments on individual services, especially public education and public health. Collective government consumption expenditure (CGCE) is the expenditure on collective consumption of goods and services, such as defense and police. Surveys on the compensation of employees were conducted in all participating countries for a selected number of occupations. Data on wages and salaries of health and education personnel were used to compute PPPs for IGCE. PPPs for CGCE were computed using data on wages and salaries for the other occupations in the defense and public administration heading.

#### 3.6.1. INDIVIDUAL GOVERNMENT CONSUMPTION EXPENDITURE

Table 2 shows the per capita IGCE and PLI as a percentage of the Africa regional average for individual government consumption. The governments of Mauritius and Egypt spend more on health and education than do the governments of other countries in the Africa region. Mauritius and Egypt spend about six and four times more than the average on individual government services of education and health. They are followed by Gabon, South Africa and Namibia. Countries that spend the least, with less than 4% of the African average per capita, are Democratic Republic of Congo, Malawi and Comoros.

When the IGCE is separated into public education and public health (columns 6 and 7), Mauritius spends the most on education (almost six times the Africa regional average), followed by Gabon and Egypt (almost five times the average) and South Africa (almost four times the average). The Democratic Republic of Congo, Malawi and Comoros spend the least on education in more or less the same proportions below the Africa regional average as for total IGCE.

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9 Angola, Burundi, Cape Verde, São Tomé and Príncipe and Zimbabwe could not be ranked in terms of per capita expenditures at all because they had not yet provided data on either household consumption or population. As a result, the ranking of some countries has changed while other countries are being ranked for the first time.

For public health the picture is similar. Mauritius spends more on public health than does any other country in Africa (almost eight times the Africa regional average), followed by South Africa and Egypt (almost five times the average). Malawi (1 percent of the average), Ghana (3 percent of the average) and the Democratic Republic of Congo (4 percent of the average) spend the least on public health.

Columns 2, 3 and 4 of Table 2 show the PLIs for total IGCE, education and public health respectively. Column 2 shows that Morocco (three times the Africa regional average) and South Africa, Botswana, Cape Verde and Namibia (two times the average) spend the most for IGCE services. Chad (one-tenth of the average), Egypt (one-fourth of the average) and Burundi (one-half of the average) spend the least.

Morocco, South Africa and Botswana spend the most on public education in the same proportions as in total IGCE. Cape Verde, Morocco and Zimbabwe (three times the Africa regional average) spend the most on public health. Chad (one-tenth of the average) and Egypt and Democratic Republic of Congo (one-third of the average) spend the least for public education. Egypt (one-tenth of the average), Chad (one-fifth of the average) and Burundi (one-half of the average) spend the least for public health.

Botswana, Namibia, Swaziland and South Africa have the highest price levels and the highest per capita real IGCE. Morocco, Cape Verde, Côte d'Ivoire and Angola present the same picture but with a lower real expenditure, for instance Morocco has the highest price level and ranks 14th on real IGCEs. On the other hand, Congo, Egypt, Gabon, Mauritius and Chad have low price levels but their IGCEs are among the highest. Low prices may result from a high level of government expenditure. With high government spending, citizens would not need to pay the full cost of spending on health and education.

#### 3.6.2. COLLECTIVE GOVERNMENT CONSUMPTION EXPENDITURE

The result of per capita collective consumption by government is slightly different from that of per capita GDP, households and IGCE discussed above. Botswana spends the most in CGCEs. Botswana's CGCE is nine times the Africa regional average.. Botswana's high government revenue may have induced the huge government expenditure. Botswana is followed by Gabon (five times the average), Mauritius and South Africa (about four times the average) and Egypt and Namibia (about three times the average).

Liberia spends the least on CGCE. This is understandable as the country was just beginning a post-conflict era during the data

**Table 2:** Price Level Index and Individual Government Consumption Relative Africa = 100

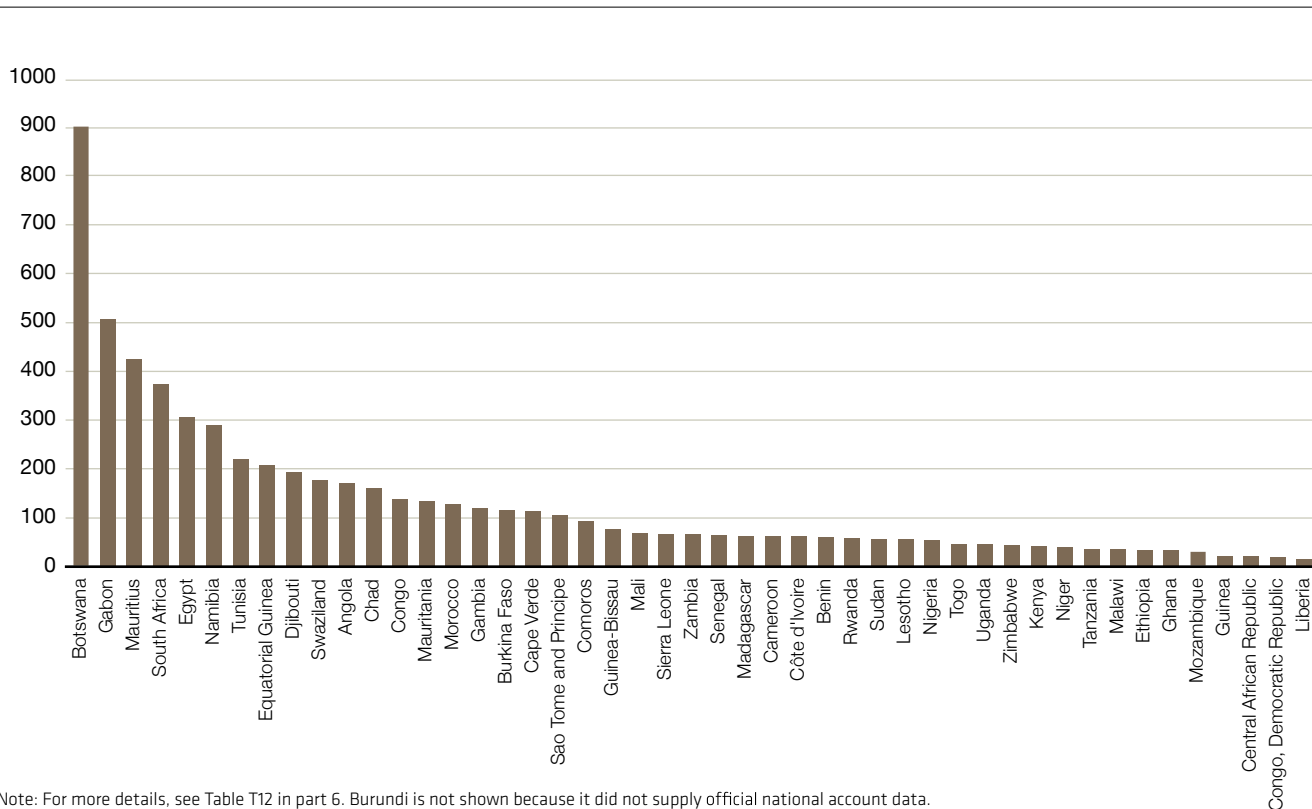
<b>COUNTRY</b>	<b>Individual Government Consumption Expenditure PLI Africa = 100</b>	<b>of which Education PLI Africa = 100</b>	<b>of which Health PLI Africa = 100</b>	<b>Individual Government Consumption Expenditure Index; Africa = 100</b>	<b>of which Education Consumption Expenditure Index; Africa = 100</b>	<b>of which Health Consumption Expenditure Index; Africa = 100</b>
Angola	185	185	185	47	39	68
Benin	104	110	87	45	46	42
Botswana	222	224	211	251	279	182
Burkina Faso	88	87	91	34	36	29
Burundi	52	55	45	...	...	...
Cameroon	110	106	125	49	55	33
Cape Verde	215	204	310	103	128	39
Central African Republic	120	119	125	13	16	8
Chad	11	10	20	155	193	59
Comoros	84	80	96	4	4	4
Congo	71	69	75	146	161	107
Congo, Democratic Republic	72	38	87	1	1	4
Côte d'Ivoire	196	221	146	28	26	33
Djibouti	109	107	114	110	116	97
Egypt	26	33	10	463	464	460
Equatorial Guinea	56	53	61	85	77	106
Ethiopia	72	69	97	10	12	4
Gabon	104	106	97	438	482	325
Gambia	68	83	52	76	55	129
Ghana	140	141	124	19	25	3
Guinea	57	58	50	25	30	13
Guinea-Bissau	69	64	84	8	9	8
Kenya	156	160	121	62	77	23
Lesotho	138	139	135	115	117	111
Liberia	118	119	114	9	9	9
Madagascar	73	70	76	39	27	71
Malawi	55	49	84	2	3	1
Mali	91	89	98	34	38	23
Mauritania	71	71	73	69	80	41
Mauritius	95	88	108	649	593	794
Morocco	340	348	301	97	112	58
Mozambique	95	90	115	30	33	23
Namibia	208	205	217	300	304	288
Niger	126	126	127	11	12	8
Nigeria	64	57	86	54	58	44
Rwanda	63	62	69	38	44	24
Sao Tome and Principe	81	85	67	48	50	44
Senegal	136	147	107	61	60	63
Sierra Leone	72	73	64	45	57	14
South Africa	230	238	213	407	373	495
Sudan	131	126	143	8	7	9
Swaziland	179	192	152	118	110	139
Tanzania	79	80	77	9	10	8
Togo	87	82	124	31	37	16
Tunisia	172	201	131	226	184	335
Uganda	71	69	75	55	56	54
Zambia	104	98	109	93	54	193
Zimbabwe	100	87	294	48	62	11
Africa Region	100	100	100	100	100	100

For more details, see Table T2 and Table T12 in part 6.

collection and had a paucity of funds for government activities. Other countries that spend less on CGCE are Democratic Republic

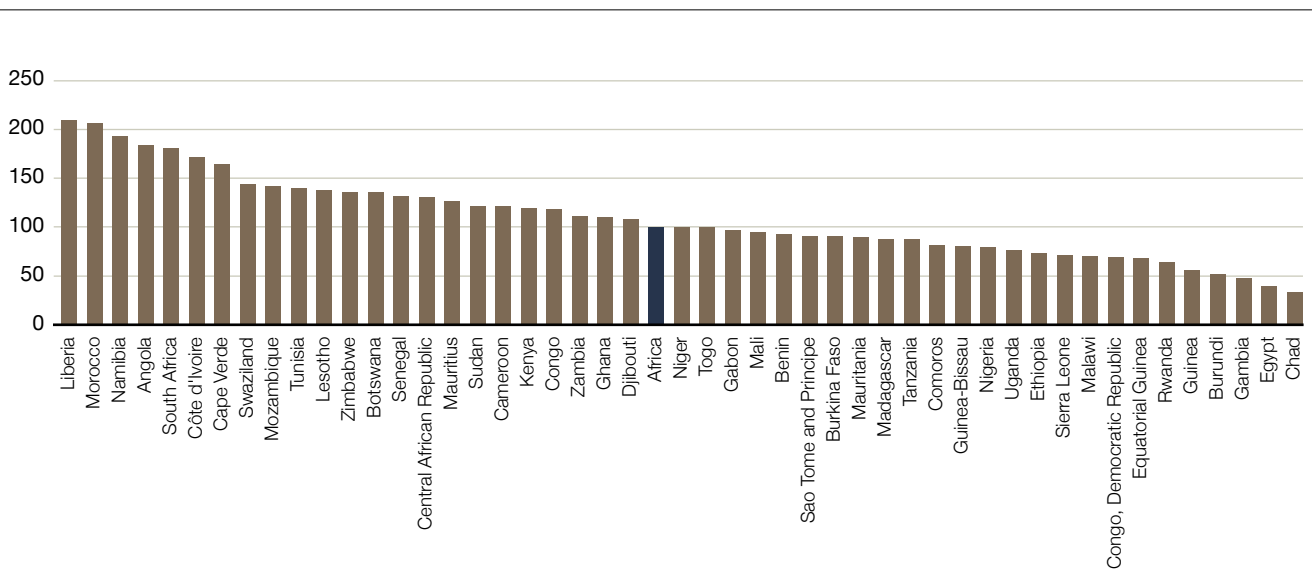
of Congo (one-sixth of the Africa regional average) and Central African Republic and Guinea (about one-fifth of the average).

**Figure 8: Real Per Capita Collective Government Consumption Expenditures Relatives 2005, Africa Region = 100**



Note: For more details, see Table T12 in part 6. Burundi is not shown because it did not supply official national account data.

**Figure 9: Country PLI at Collective Government Consumption Level, 2005, Africa = 100**



Note: For more details, see Table T12 in part 6. Burundi is not shown because it did not supply official national account data.

Figure 9 presents country PLIs with respect to CGCE. Chad and Egypt have the lowest PLI for per capita CGCE. With PLIs more than twice the African regional average, Liberia and Morocco have the most expensive cost of CGCE. They are closely followed by Namibia, which is slightly below twice the African average. The cost of CGCE in most countries including Niger and Togo is less than or equal to the regional average costs.

### 3.7. GROSS FIXED CAPITAL FORMATION

Gross fixed capital formation (GFCF) is a measure of countries' investment expenditures. The main components of GFCF are machinery and equipment and construction. The ratio of investment to GDP is important because it is an indication of economic growth. Generally local and foreign investment is low in Africa. The regional average investment is AFRIC 83 per capita. Figure 10 provides a comparison of per capita investment expenditures based on PPP and when nominal exchange rates are used for conversion.

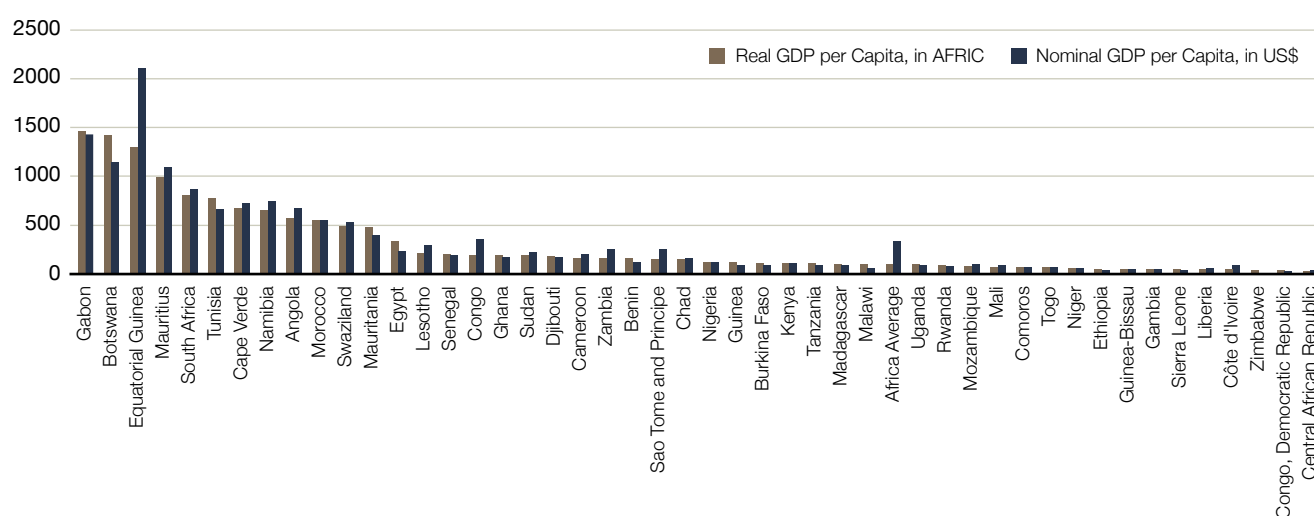
The countries that rank highest on the basis of real GDP per capita also dominate the top rankings when the comparison is based on real GFCF per capita: Gabon, Botswana, Equatorial Guinea, Mauritius, and South Africa. Gabon, Botswana and Equatorial Guinea have investment expenditures of AFRIC 1,467.8, 1,402.9 and 1,323.8 per capita respectively, about 16 times the Africa regional average. The result is not surprising due to the fact that the three countries are relatively rich countries. Gabon and Equatorial Guinea are net exporters of oil and gas, while Botswana is the largest producer of diamonds in the world.

Columns 5, 6 and 7 of Table 3 show the real per capita expenditure for GFCF, construction, and machinery and equipment respectively. Column 5 shows that Gabon, Botswana and Equatorial Guinea (seven times the Africa regional average), Mauritius (five times the average), and South Africa and Tunisia (about four times the average) spend more on GFCF than do the rest of the African countries. Central African Republic, Democratic Republic of Congo and Zimbabwe spend the least on GFCF at between one-eighth and one-sixth of the average.

As shown in column 6, Botswana, Mauritius and Gabon, Tunisia, and Angola and Cape Verde spend 6 to 4 times the Africa regional average on construction per capita respectively. Liberia and Nigeria and Zimbabwe spend the least on construction per capita. For machinery and equipment (column 7), Equatorial Guinea and Botswana (eight times the average), Gabon (six times average), South Africa (five times the average), Mauritius (four times the average) and Namibia and Morocco (three times the average) spend the most. Democratic Republic of Congo, Central African Republic and Ethiopia and Burundi spend the least on machinery and equipment.

At the level of GCFC, PLIs provide a measure of the differences in investment costs between countries. Figure 11 shows PLIs of GFCF of participating countries. The figures are expressed as percentages with the Africa regional average being 100. Côte d'Ivoire and Congo (almost two times the average) are the most expensive countries. The cheapest countries are Malawi and Ethiopia (about one-half of the average).

**Figure 10:** Real GFCF Per Capita in AFRIC and Nominal GFCF Per Capita



Note: For more details, see Table T9 and Table T10 in part 6. Burundi is not shown because it did not supply official national account data.