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# The African Economies and Agricultural Value-Added – Contribution to GDP

# **Top Economies of 20 Countries in Africa 2012**

For national income accounting, policy decision-makers need information about state "country economy" of national economy. In this paper the economic fundamentals of African selected countries are explained in order to place these countries' economies in perspective before continuing to examine the GDP settings of the countries in order to similarly place their agricultural sectors in perspective. Secondary economic data is sourced from different informal bodies as United Nations World Development Indicators, the Food and Agricultural Organization (FAO) and the Central Intelligence Agency (CIA) websites, with the most consistent recently available data used. Some examples on GDP are given, GDP is a crucial measure of the size and health of an economy and the economic measurements are defined. The difference between GDP and GNP as well as GDP components are explained. Differences between microeconomics and macroeconomics are also illustrated.

#### Introduction

From the historical point view statistical records "files" on the performance of national economy help economists in testing their theories on how the economy really works. Consequently, national income accounting is, then, significant. Obviously true the GDP is the most commonly presented statistic about the state "national" economy, such as the country we have already mentioned.

#### The aim

The objective of our paper is to set the scene for the performance of some African countries national economy. Our starting point in this article is to define the economy that is measured by gross domestic product (GDP). Gross domestic product (GDP) is the best way to understand a country economy and represents the statistical mean used to measure the economy. In other words, for example Slovak economy, as measured by GDP, is everything produced by all the people and all the companies in the Slovakia. In 2010, it was US\$ 95.177 billion (Global Finance 1987-2011 V2.1), for the USA see the Table 1.

Table 1 GDP components – United States (\$ Billions)								
Line		2009 I	2009 II	2009 III	2009 IV	2010 I		
1	Gross domestic product	14,178.0	14,151.2	14,242.1	14,453.8	14,601.4		
2	Personal consumption expenditures	9,987,7	9,999.3	10,132.9	10,236.4	10,362.3		
3	Goods	3,197.7	1,193.8	3,292.3	3,337.1	3,406.6		
4	Durable goods	1,025.2	1,011.5	1,051.3	1,052.0	1,072.8		
5	Nondurable goods	2,172.4	2,182.2	2,241.0	2,285.1	2,333.8		
6	Services	6,790.0	6,805.6	6,840.6	6,899.3	6,955.8		
7	Gross private domestic investment	1,689.9	1,561.5	1,556.1	1,707.8	1,763.8		
8	Fixed invetment	1,817.2	1,737.7	1,712.6	1,731.4	1,726.9		
9	Nonresidential	1,442.6	1,391.8	1,353.9	1,366.9	1,371.3		
10	Structures	533.1	494.8	457.9	434.1	417.5		
11	Equipment and software	909.5	897.0	895.9	932.8	953.9		
12	Residential	374.6	345.9	358.8	364.5	355.5		
13	Change and private investories	-127.4	-176.2	-156.5	-23.6	36.9		
14	Net export of foods and services	-378.5	-339.1	-402.2	-449.5	-499.4		
15	Exports	1,509.3	1,493.7	1,573.8	1,680.1	1,729.3		
16	Goods	989.5	978.1	1,045.2	1.140.6	1,180.0		
17	Services	519.8	515.6	528.5	539.6	549.3		
18	Imports	1,887.9	1,832.8	1,976.0	2,129.7	2,228.7		
19	Goods	1,508.2	1,461.1	1,592.8	1,739.4	1,827.8		
20	Services	379.6	371.7	383.1	390.3	400.9		
21	Government consumption expenditures and gross investment	2,879.0	2,929.4	2,955.4	2,959.2	2,974.7		
22	Federal	1,106.7	1,138.3	1,164.3	1,170.1	1,186.4		
23	National defense	750.7	776.2	795.8	793.5	805.6		
24	Nondefense	356.0	362.1	368.5	376.7	380.7		
25	State and local	1,772.3	1,791.2	1,791.1	1,789.0	1,788.3		

Source: U.S. Bureau of Economic analysis

# Study methodology

The study was conducted through using literature review methods and was implemented from 25 January to 17 February 2011. The literature review was realized through online search, review of published works from relevant local and international organizations. Secondary data includes also materials and information published in books, journals, statistical abstracts and periodicals. Sources of such data include UNECA, World Bank, African Development Bank (AfDB), United Nations Conference on Trade and Development (UNCTAD), African Union Commission, REC Secretariats, Private Sector Periodicals and Member States' publications.

Several techniques were applied in procuring secondary data from the various sources. These include materials published online from the websites of the authors of such publications using Google or World Wide Web – based search engines. Among the websites visited from where data was collected are the World Bank, Organization for Economic Cooperation and Development (OECD), European Union and United Nations' agencies, especially the United Nations Conference on Trade and Development (UNCTAD) web sites.

## The conceptual framework

Gross Domestic Product (GDP)

Let's start with the concept of GDP. Historically, GDP was first developed by Simon Kuznets in his report for a US Congress in 1934, who immediately said not to use it as a measure for welfare. It is related to Macroeconomics - which is the branch of economics that focuses on the determinants of such economic aggregates as national income, employment, the price level, interest rates, and exchange rates and on how government economic policy might be used to influence the behavior of these aggregates (Miller, R. L. 2004) and the Microeconomic. Hence, microeconomics and macroeconomics are the two major categories within the field of economics. Microeconomics and macroeconomics are the fundamental tools to be learnt, in order to understand how the economic system is administered, and sustained.

Thus, there is a question that needs to be answered: What are differences between the two economic branches? Or how does Microeconomics differ from Macroeconomics?

#### Microeconomics vs. Macroeconomics

Microeconomics examines the behavior of individual economic entities: firms and consumers. How do individuals make consumption decisions? How do firms make profits and price their goods and services? The focus of microeconomics is markets: wage markets, the market for gasoline, rent markets, etc. Microeconomics focuses on the market's supply and demand factors that determine the economy's price levels. In other words, microeconomics concentrates on the 'ups' and 'downs' of the markets for services and goods, and how the price affects the growth of these markets. An important aspect of this economy is also to examine market failure, i.e. when the markets do not provide effectual results. In our present time, microeconomics has become one of the most important strategies in business and economics. Its main importance is to analyze the economy forces, consumer behavior, and methods of determining the supply and demand of the market. Microeconomics and macroeconomics are important studies within economics, which are essential to sustain the overall growth and standard of the economy. While the two studies are different, with microeconomics focusing on the smaller business sectors, and macroeconomics focusing on the larger income of the nation, they are interdependent, and work in harmony with each other. The main differences are:

1. Microeconomics focuses on the market's supply and demand factors, and determines the economic price levels.

- 2. Macroeconomics is a vast field, which concentrates on two major areas, increasing economic growth and changes in the national income
- 3. Microeconomics facilitates decision making for smaller business sectors.
- 4. Macroeconomics focuses on unemployment rates, GDP and price indices, of larger industries and entire economies.

Macroeconomists are interested in total production in the economy, so it is essential that we create a measure of total output. Macroeconomics is the study of the economy as a whole. Macroeconomics asks questions like: Why does a country's economy "such as US" generally experience higher rates of growth than other European economies? What causes inflation? What effect does the national debt have on economic growth? etc. So, the focus of Macroeconomics is basically on a country's income, and the position of foreign trades, with the study of unemployment rates, GDP and price indices. Macroeconomists are often found to make different types of models, and relationships, between factors such as output, national income, unemployment, consumption, savings, inflation, international trade, investment, and international finances. Overall, Macroeconomics is a vast field that concentrates on two areas. economic growth and changes in the national income (DifferentBetween.net, 2012). This measure is called GDP. The Gross Domestic Product represents the total market value of the nation's annual final product, or output, produced per year by factors of production located within national borders, GDP according to Miller, R.L., (2004) is the total market value of all final goods and services produced in an economy during an ear. So, we may refer here to flow of production. So, there are three things to note about this definition of GDP:

- a. total market value,
- b. final goods and services, and
- c. produced in a country

Wheras economic growth, defined as the monetary aggregate GDP (gross domestic product) that is used widely by economists and the press to measure the economic performance of industrial societies. Over the following pages it is argued that the specific form of education system, characterized by universal compulsory classroom schooling, is an indispensable component of an industrial growth society. This is a broader, more historically grounded hypothesis that aims to encompass the wide range of economic, social and political reasons for associating education with growth. It is a hypothesis that rests on clarifying the role of one specific way of organizing learning, universal mass compulsory classroom schooling and the preponderant kinds of knowledge that emerge from this process, with the creation of one particular form of prosperity, typically summarized by the metric of gross domestic product (GDP).

Though, a nation produces at a certain rate, just as one receives income at a certain rate. Her or, his "income-s" flow might be at rate of \$5,000 per year ( $\in$ 3.900) or \$50,000 ( $\in$ 39.000) per year (as for January 2012 estimate), as an example, one told that he earns \$500 ( $\in$ 390), but he did not tell when, "period of time" she/ he is earning this salary. Thus, would we consider this a good salary for high school teacher, "professor"? There is no way to answer that question unless one knows whether the person is earning \$500 ( $\in$ 390) per day orper week or per mount. Therefore, we have allready specify

a time period for all flows. Thus, income received is a flow, we must contrast this with, for example, our total accumulated saving, which are astock measured at a point time, not over time. Hence, implicit in just about everything we deal with this paper is a time period- frequently one year. All the measures of domestic product (DP) and incomare specified as rates measured in dollars (US\$) per year. Final word *GDP* is the total market value of all final goods and sevices produced in a country in a given year. According to Goossnes, Yanne, (2007)

Economic performance is generally being measured through GDP (Gross Domestic Product), a variable that has also become the de facto universal metric for 'standards of living'. In otherwords, GDP per capita is often considered an indicator of a country's standard of living; GDP per capita is not a measure of personal income.

#### GDP vs. GNP

Gross Domestic Product (GDP) as we mentioned is the total value in current market prices of all services and goods produced by residents (citizens or foreigners) of a country before deduction of depreciation charges on fixed capital. It is according to Ronkainen, Ilkka, A. & Czinkota, Michael, R., (1998) equal to the sum of (a) personal consumption expenditure; (b) gross domestic capital formation (investments), including inventory changes; (c) the net of exports minus imports of goods and services; and (d) government consumption expenditure. Therefore, GDP differs from Gross National Product (GNP) by excluding net factor income received from abroad (an amount usually about 1 percent of GDP). Consequently, GDP and GNP reports tend to run late and are subject to constant revision.

GDP can be contrasted with Gross National Product (GNP) or Gross National Income (GNI). The difference is that GDP defines its scope according to location, while GNP defines its scope according to ownership. In a global context, World GDP and World GNP are, therefore, equivalent terms. It is not to be confused with Gross National Product (GNP) which allocates production based on ownership. Gross domestic product is related to National Accounts, a subject in Macroeconomic. So while GDP is a crucial measure of the size and health of an economy, keep in mind it is not the ONLY measure of well-being.

#### How GDP affects a country economy:

GDP according to Amadeo, Kimberly, (2012) is important for three reasons:

- Most importantly, it is used to determine if a country economy is growing more quickly or more slowly than the quarter before, or the same quarter the year before.
- 2. It is also used to compare the size of economies throughout the world.
- 3. It is to compare the relative growth rate of economies throughout the world.

The following are the most important components of GDP:

- 1. Consumption Expenditure (CE): falls under durable consumer goods, nondurable consumer goods.
- 2. Gross Private Domestic Investment (GPDI): falls under Investments.
- 3. Fixed Versus Inventory Investment (FVII) falls under Producer durables, or capital goods which is called fixed investment.

4. Government Expenditures (GE): falls under goods and services that government buys from private firms and pay wages and salaries to government employees, as well as help other people.

All the above mentioned factors are presenting the Expenditure approach, as mentioned early the GDP has its components see the following table, when we add them together, we get the following mathematical definition:

$$GDP = C+I+G+x$$

Where: C = Consumption Expenditures

I = Investment Expenditures

G = Government Expenditures, and

X = Net Exports

Definition of 'Purchasing Power Parity - PPP'

An economic theory that estimates the amount of adjustment needed on the exchange rate between countries in order for the exchange to be equivalent to each currency's purchasing power.

The relative version of PPP is calculated as:

$$S = \frac{P_1}{P_2}$$

Where:

"S" represents exchange rate of currency 1 to currency 2

"P<sub>1</sub>" represents the cost of good "x" in currency 1 "P<sub>2</sub>" represents the cost of good "x" in currency 2

In other words, the exchange rate adjusts so that an identical good in two different countries has the same price when expressed in the same currency. To explains 'Purchasing Power Parity - PPP'; here is an example: if a chocolate bar that sells for C\$1.50 in a Canadian city should cost US\$1.00 in a U.S. city when the exchange rate between Canada and the U.S. is 1.50 USD/CDN. (Both chocolate bars cost US\$1.00.) The income approach works on the principle that the incomes of the productive factors ("producers," colloquially) must be equal to the value of their product, and determines GDP by finding the sum of all producers' incomes.

Example: the expenditure method:

GDP =private consumption +gross investment +government spending + + (exports – imports), or GDP = C+I+G(X-M)

We have to note that:

- (a) "Gross" means that GDP measures production regardless of the various uses to which that production can be put. Production can be used for immediate consumption, for investment in new fixed assets or inventories, or for replacing depreciated fixed assets,
- (b) "Domestic" means that GDP measures production that takes place within the country's borders. In the expenditure-method equation given above, the exports-minus-imports term is necessary in order to null out expenditures on things not produced in the country (imports) and add in things produced but not sold in the country (exports).

#### Definition of 'Consumer Price Index - CPI'

A measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care. The CPI is calculated by taking price changes for each item in the predetermined basket of goods and averaging them; the goods are weighted according to their importance. Changes in CPI are used to assess price changes associated with the cost of living. (Sometimes referred to as "headline inflation.")(Investopedia ULC, 2011)

Each jurisdiction has its own rules governing margin transactions. In the United States you can purchase up to 50% of securities on margin, so, if you had \$10,000 in a margin account, you'd be able to purchase up to \$20,000 worth of securities. Said another way, you have an extra \$10,000 of purchasing power (buying power).

The use of (PPP) instead of exchange rates is intended to achieve the above mentioned objectives. The goods and services in different countries have to be valued consistently if the differences are to reflect real differences in the volumes of goods produced, so, PPPs according to Ronkainen, Ilkka, A. & Czinkota, Michael, R. (1998), shows how units of currency are needed in one country to buy the amount of goods, and services that one unit of currency will buy in an other country; the following table provides an example of PPPs data:

#### Top economies of 20 countries in Africa 2012

Table 2 Macro and micro economic (an economies of 20 Africa countries in 2012) (in Billion)

S.N	State	GDP	C. SECTOR/GDP*			POP**.	UNEMP***	
		(PPP)	Agricultural	Industrial	Services	101 .	CITEIII	
4th	Algeria	US\$251.1	8.3%	61.6%	30.1%	36,423,000	10%	
6th	Angola	US\$107.3	9.6%	65.8%	24.6%	18,498,000^	NA	
14th	Cameroon	US\$44.33	19.7%	31.4%	48.9%	19,100,000^	30%∼	
16th	Cote dIvoire	US\$37.0	28%	21.3%	50.7%	20,617,068^	40-50%	
19th	DRC @	US\$23.12	48.4	22.7%	29%	71,712,867 ^^	NA	
S2	Egypt	US\$497.8	14%	37.5%	48.3%	80,801,170^^	9.7%	
18th	EQG	US\$23.82		93.9%	3.8%	676,000^	22.3%^	
10th	Ethiopia	US\$86.12	50%	11%	39%	82,101,998^^	NA	
20th	Gabon	US\$22.48	5.2%	53.7%	41.1%	1,475,000^	21%^***	
12th	Ghana	US\$61.97	29.9%	18.6%	51.4%	24,233,431	11%^~	

S.N	State	GDP (PPP)	C. SECTOR/GDP*			POP**.	UNEMP***	
5.11			Agricultural	Industrial	Services	101 .	01121111	
11th	Kenya	US\$66.03	22%	16%	62%	41,070,934^^	40%^~~	
9th	Libya	US\$90.57	2.6%	62.9%	34.6%	6,420,000	30% ^*	
5th	Morocco	US\$151.4	17.1%	31.6%	51.4%	32,208,557^^	9.1%	
3d	Nigeria	US\$377.9	30%	32%	38%	155,215,573	4.9%^***	
17th	Senegal	US\$23.88	15.9%	21.7%	62.4%	13,711,597^	48%~	
F1	South Africa	US\$524	2.5%	30.8%	66.7%	50,586,757	24.9%	
7th	Sudan	US\$100	30.5%	29.5%	39.9%	30,894,000^~~	18.7% ^**	
13th	Tanzania	US\$58.44	28.4%	24%	47.6%	43,739,000^	NA	
7th	Tunisia	US\$100	10.6%	34.6%	54.8%	10,432,500	13%	
15th	Uganda	US\$42.15	23.6%	24.5%	51.9%	32,369,558^	NA	

#### Legend:

@ = Democratic Republic of the Congo

EQG= Equatorial Guinea

\*= % Contribution of Sector in GDP

\*\*= POPULTION

\*\*\*= UNEMPLOYMENT Rate

 $^**= (As of 2002)$ 

 $^* = (as of 2004)$ 

^\*\*\*\* (as of 2006)

 $^***=(As of 2007)$ 

 $\sim = (as of 2008)$ 

 $^{\circ} = (As \text{ of } 2009)$ 

^~ - (as of 2000)

 $\sim = (As \text{ of } 2001)$ 

Source: http://www.oecd.org/dataoecd/59/53/37984314.pdf

## The African Economic Outlook

Africa is by far the world's poorest inhabited continent. Although, some parts of the continent have made significant gains over the last few years; the decolonization of Africa was fraught with instability aggravated by cold war conflict. Since the mid-20th century, the Cold War, and the Arabic Spring in the second decade of the millennium (which spread over the global) and increased corruption and despotism have also contributed to Africa's poor and rich economy. The biggest contrast in terms of development has been between Africa and the economy of Europe. The African Economic Outlook report specifically mentions that Africa's trade with China (such as Sudan, Libya) has multiplied by 10 since 2001, reaching over USD 100 billion in 2008. While no African nation has joined the ranks of the developed nations in the Organization for Economic Co-operation and Development (OECD) yet, the entire

continent is not utterly impoverished and there is considerable variation in its wealth. North Africa has long been closely linked to the economies of Europe and the Middle East. South Africa is by far the continents wealthiest state in total GDP, accounting for 30% of the continents GDP in nominal terms and 24% by PPP; but, the small oil-rich countries of Gabon, and Equatorial Guinea round out the list of the ten wealthiest countries in Africa. The entry above gives the gross domestic product (GDP) or value of all final goods and services produced within a nation in a given year. The top 20 Largest Economies in Africa as of January 1, 2011 (The above table is a comparative figure).

Beside that the pictures of the Cape to Cairo "FTA" Free Trade agreement, outline the relative economic facts for 26 African countries as illustrated below that make up its region:

Table 3 Economic settings for the Southern African Development Community

Reporter	Population	GNI		GDP	Agriculture	Total	Food imports	
,	, porter			share	imports	. 200po/ to		
					of GDP			
			Per				%	
		4.	capita	4.	~	_	Import	
	million	\$bn	\$	\$bn	%	\$m	S	\$m
SADC	215.4	403.3	1,872	434.8		167,359	8.9%	14,946
South Africa	48	274	5,720	284	3	99,500	6.1	6,070
Angola	17	43	2,540	61.4	9	20,982	14	2,937
Botswana	1.9	11.5	6,120	12.3	2	5,212	12.7	662
Zambia	12	9.2	770	11.4	22	5,060	6	304
DRC	62	8.6	140	9	42	4,400	20.8	915
Namibia	2.1	7.2	3,450	7	11	4,340	17.1	742
Mozambique	21	7.1	330	7.8	28	3,804	16.2	616
Mauritius	1.3	7	5,580	6.8	5	4,651	23.6	1,098
Madagascar	20	6.4	320	7.4	26	3,980	10.7	426
Zimbabwe	13	4.5	340	3.4	19	2,950	21.1	622
Malawi	14	3.5	250	3.6	34	1,650	17.2	284
Swaziland	1.1	2.9	2,560	2.9	7	1,700	12.1	206
Lesotho	2	2.1	1,030	1.6	12	2,005	3.2	64
EAC	127.2	55.6	437	56.5		17,149		2,257
Tanzania	40	16.3	410	16.2	45	7,125	13.9	990
Kenya	38	24	640	24.2	26	11,074	13	1,440
Uganda	31	11.3	370	11.8	24	4,526	14	634
Rwanda	9.7	3.1	320	3.3	40	1,146	12.5	143
Burundi	8.5	0.9	110		35	403	10	40
COMESA	205.55	232.69	1,132	258.02	29.5%	77,245	19.1%	14,743
Egypt	75	119.5	1,580	130.5	14	48,382	19.7	9,531
Libya	6.2	55.5	9,010	58.3	2	9,150	19.9	1,821
Sudan	39	36.7	950	46.2	28	9,352	13.8	1,291
Ethiopia	79	17.6	220	19.4	46	8,036	13.9	1,117
Eritrea	4.8	1.3	270	1.34	24	530	46.5	246
Djibouti	0.83	0.9	1,090	1.1	4	574	77.7	446
Seychelles	0.90	0.76	8,960	0.73	3	1,041	22.4	233
Comoros	0.63	0.43	680	0.45	47	180	32.1	58
Total	548	675.29	1,232	733.12		261,753	12.6%	32,936

Source: Sandrey, Ron - Vink, Nick, 2011, www.tralac.org

The above table is out lining the relative economic facts of the 26 countries that make up this region. This is shown in Table 1. The first point to note is the concentration of the (GDP): South Africa, Egypt, Angola, Libya and Sudan account for 79.2 percent of the total regional GDP. Conversely, the smallest 12 countries represent only 4.5 percent of the total with a combined GDP of little more than Kenya's. South Africa alone accounts for 38.7 percent of the GDP (and an even greater 40.6 percent of the regional Gross National Income (GNI), while Egypt accounts for another 17.8 percent of the Gross Domestic Product. Table 1 also shows the wide dispersion in GNI per capita. This ranges from \$9,010 (Libya) to Burundi with \$110. A great numbers of impoverished people live in the region – 15 of the 26 countries have an average GNI per capita below \$1,000 annually. Note that this data reflects the actual GNI per capita figures, and that when adjusted for purchasing power parity (PPP) they often increase by as much as three times at the poorest end of the spectrum. For example, the American CIA (2010) reports that the Democratic Republic of Congo (DRC) ranked 227th on its listing of GDP per capita using purchasing power parity (last in the CIA 2009 listings) but with a value per capita of \$300 as opposed to the \$140 shown in Table 1. Using this 2009 CIA data for PPP GDP the region can be placed in perspective globally, as 12 of the 26 countries are placed in the bottom 28 places on their listing: from Tanzania's 200th place to the DRC's number 227. These countries are Zambia, Tanzania, Uganda, Comoros, Madagascar, Ethiopia, Rwanda, Malawi, Mozambique, Eritrea, Burundi and the DRC. It is no coincidence that the CIA's listing of birth rates also shows that eight of the top thirteen in the world are in the region, as in order for per capita GDP to increase GDP growth must exceed the rate of population growth. Generally, The right-hand side of the table shows the agriculture value-added (contribution to GDP), again reflecting considerable variation. The resourcerich countries, particularly Botswana, Libya and South Africa (the only country in Africa with significant industrial capacity) are in stark contrast to many of the poorer countries such as DRC, Tanzania, Ethiopia and Rwanda where this contribution is 40 percent or more. Next is the import trade data, with the percentage of imports designated as 'food' and the derived value of the food imports.

Many African countries have imported above the average 12.6& of total imports as that average is reduced by Sout Africa's 6.1%. not shown is that the average food import value is 4.5% of Gross Domestic Product, and that several important bu very poor states (e.g. Eritera & Zimbabowe and DRC) have a % value above ten % of their GDP, at 18.4%, 18.3% and 10.2% respectively. Whereas, the oil-rich countries, Libya & Sudan (Sudan which suposed to be the food packet for the Arab states), have food imports expressed as a % of the GDP of only 3.1 and 2.8 percent respectively, while Angola's 4.8% is only marginally above average Note at the onset that the trade values for the so-called BLNS (Botswana, Lesotho, Namibia and Swaziland) Southern African Customs Union (SACU) countries are significantly under- reported in this and subsequent analysis as Sout h Africa and the BLNS as well as Libya often do not report their bilateral trade data.

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