



Ghana Statistical Service
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Newsletter

Quarterly Gross Domestic Product (QGDP)

First Quarter 2023



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Main points

- Ghana provisional real Gross Domestic Product (GDP) in volume terms was estimated to have increased by 4.2% in quarter one (January to March) of 2023 compared to the same period in 2022.
- When seasonally adjusted, Ghana real GDP increased by 1.1 % in quarter one (January to March) of 2023; 0.3 percentage points higher than what was recorded in quarter four (October to December) of 2022.
- Public Administration, Defense & Social Security, Health, Education, Information & Communication sub-sectors were the main drivers of GDP growth for the first quarter of 2023.

- Main sub-sectors with more than 10 percentage expansion in quarter one of 2023 are:
 1. Public Administration, Defense & Social Security (37.6%)
 2. Health & Social Work (31.6%)
 3. Education (26.0%)
 4. Information & Communication (18.9%)

- Seven sub-sectors contracted in quarter one of 2023. These are:
 1. Water Supply, Sewerage, Waste Management & Remediation Activities (-6.4%)
 2. Construction (-6.0%)
 3. Wholesale and retail trade; repair of motor vehicles and motorcycles (-5.3%)
 4. Fishing (-3.3%)
 5. Mining and quarrying (-2.9%)
 6. Manufacturing (-2.5%)
 7. Hotels and Restaurants (-0.2%)

Things you need to note about this release.

Gross Domestic Product (GDP) growth is the main indicator of economic performance. There are three approaches used to measure GDP: the output approach, the expenditure approach, and the income approach.

This Statistical Release contains independently compiled quarterly estimates of the Gross Domestic Product (GDP) for the 1st quarter of 2023 using the production approach. The estimates are based on the 2008 System of National Accounts (SNA), the International Standard Industrial Classification (Rev.4) published by the United Nations, and the Quarterly National Accounts Manual: Concepts, Data Sources and Compilation prepared by the International Monetary Fund (IMF). This means that the methodology, concepts, and classifications are in accordance with the guidelines and recommendations of an internationally agreed system of national accounts. The estimates of real GDP are expressed in terms of the base year, 2013. The Annual GDP estimates are derived independent of the quarterly estimates. Short-term indicators are used to estimate the quarterly GDP (see IMF’s Quarterly National Accounts Manual: Concepts, Data Sources and Compilation) and benchmarked to the annual GDP.

Current or Nominal GDP is the value of final goods and services evaluated at current quarter prices.

Constant or Real GDP is the value of final goods and services evaluated at base year prices. In Ghana, the base year is 2013. By using the prices from the base-year (or holding prices constant over time), we eliminate the impact of rising prices on GDP to get a measure of “Real” economic activity.

Seasonal Adjustment

The quarterly value added, and GDP estimates have been seasonally adjusted. Seasonal adjustment is the process of estimating and removing seasonal effects from time series to reveal non-seasonal features. This process is to provide a clearer view of short-term movements and trends and to allow early identification of turning points.

Revision Policy

While most revisions are made to the four most recent quarters of the series, there is no restriction on when an estimate of the quarterly series for a given period can be revised. The main causes of revisions are as follows:

- a) Incorporation of additional and improved data: Most revisions reflect the incorporation of a wider range of data. Some data that was not available at the release date are incorporated through revisions into subsequent releases.
- b) Reconciliation of quarterly and annual measures: The process of reconciling the quarterly measures with the annual measures can lead to further revisions. The quarterly measures of these series are based on a smaller range of data than the annual measures.
- c) The rebased provisional quarterly GDP estimates may be revised further and finalized based on the availability of additional data. The next revision of the quarterly and annual GDP estimates will be done in September 2023.

Related Publications

Users may refer to other publications on GDP on the **GSS website: www.statsghana.gov.gh**

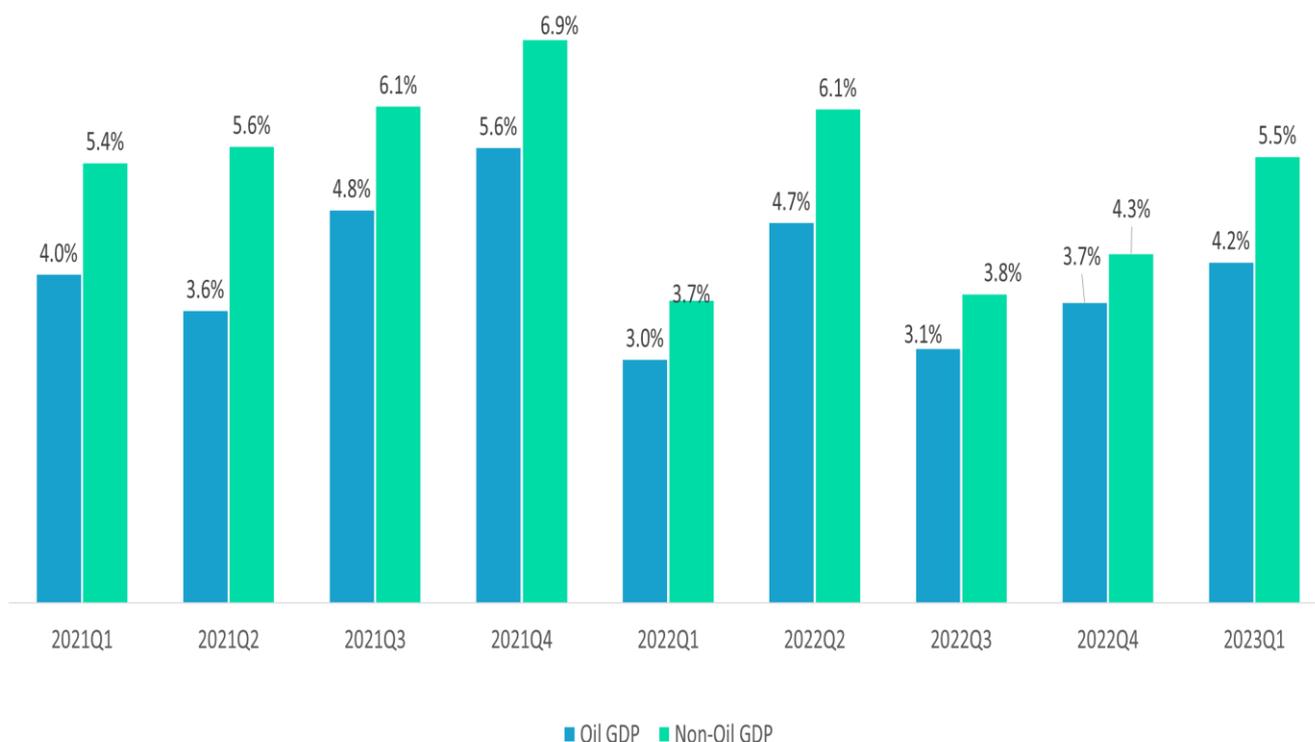
Quarterly real GDP growth: January to March 2023

Provisional real quarterly gross domestic product (QGDP) growth rate including Oil and Gas, is 4.2% (year on year) in the first quarter of 2023. In the same period of 2022, the growth was 3.0%.

GDP growth rate without oil and gas (Non-Oil GDP) for first quarter of 2023 is 5.5% which compares to the same period in 2022 with a growth rate of 3.7%.

The Services sector recorded the highest growth of 10.1%, followed by the Agriculture sector with a growth of 4.8% and the Industry sector with a contraction of 3.2 percent growth rate.

Figure1: Quarterly real GDP growth rate (2021Q1-2023Q1)



Real quarterly gross domestic product: January to March 2023

The **GDP** (Including Oil & Gas) estimate at constant 2013 prices for the 1st quarter of 2023 was **GH¢48,863.7 million** compared to **GH¢46,877.1 million** in the 1st quarter of 2022.

The **Non-oil GDP** at constant 2013 prices for the 1st quarter of 2023 was **GH¢46,548.2 million** compared to **GH¢44,113.8 million** in the 1st quarter of 2022.

Table1: Year-on-year growth rates in 1st quarter of 2023

Sector	Expanding sub-sectors	Contracting sub-sectors
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Agriculture (4.8%)	Livestock	6.6%	Fishing	-3.3
	Crops and cocoa	5.2%		
	Forestry & Logging	1.5%		
Industry (-3.2%)	Electricity	3.5%	Water Supply, Sewerage, Waste Management & Remediation Activities	-6.4%
			Construction	-6.0%
			Mining & Quarrying	-2.9%
			Manufacturing	-2.5%
Services (10.1%)	Public Administration & Defense, Social Security	37.6%	Trade, Repair of Vehicle, Household Goods	-5.3%
	Health & Social Work	31.6%		
	Education	26.0%	Hotel & Restaurants	-0.2%
	Information & Communication	18.9%		
	Finance & Insurance	8.6%		
	Professional, Administrative & Support	7.8%		
	Transport & Storage	6.4%		
	Real Estate	5.1%		
Other Personal Service Activities	4.6%			

Nominal quarterly gross domestic product: January to March 2023

The GDP estimate at current prices in purchaser's value¹ for the 1st quarter of 2023 was **GH¢202,628.6 million** compared to **GH¢141,116.0 million** in the 1st quarter of 2022.

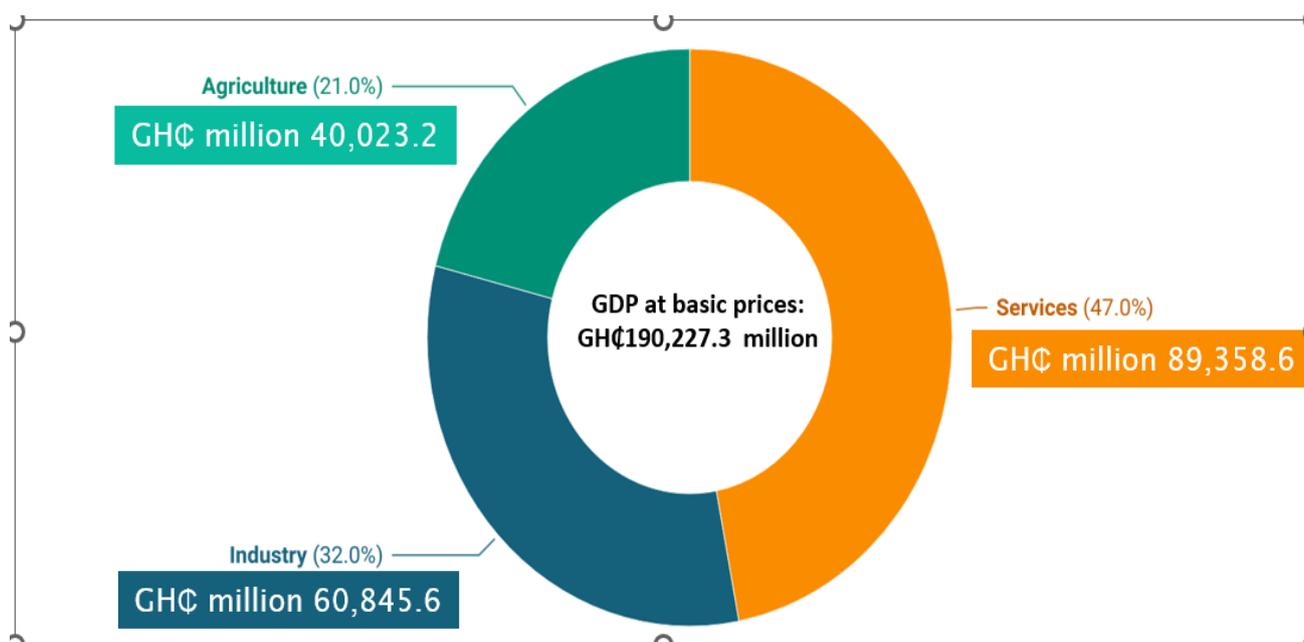
¹

The **Non-oil GDP** (GDP without Oil and Gas) estimate at current prices for the 1st quarter of 2023 was **GH¢193,535.8 million** compared to **GH¢133,234.5 million** in the 1st quarter of 2022.

GDP sectoral shares

The Services sector continue to be the largest sector of the Ghanaian economy in the first quarter of 2023 with a share of 47 percent of GDP at basic prices. The GDP share of Industry and Agriculture were 32 percent and 21 percent respectively.

Figure 2: Sectoral distribution (%) of nominal GDP at basic prices



Seasonally Adjusted GDP

The Provisional quarter-on-quarter² seasonally adjusted Real Gross Domestic Product (including Oil) growth rate for the 1st quarter of 2023 was 1.1 percent.

For the 1st quarter of 2023, the quarter-on-quarter seasonally adjusted growth rates (see Table 2) were as follows:

- The Agriculture sector expanded by 1.3 percent in the 1st quarter of 2023 compared to 1.0 percent in the 4th quarter of 2022. The Livestock sub-sector decreased by 0.1 percentage points from 1.7 percent in the 4th quarter 2022 to 1.6 percent in the 1st quarter of 2023. In the first quarter of 2023, the growth of Crops & Cocoa sub-sector improved slightly, growing at 1.4 percent compared to 1.0 percent in the 4th quarter of 2022. The Fishing subsector declined further to

² Quarter-on-quarter GDP estimates provide a short term (within three months) picture of current economic developments. Estimates are influenced by seasonal patterns that are caused by economic behavior or recurrent exogenous factors such as weather patterns, holidays, religious events, festive seasons, etc.

-0.7 percent in the first quarter of 2023 from a contraction of 0.4 percent recorded in the 4th quarter of 2022. The expansion in Forestry and Logging sub-sector decreased marginally by 0.3 percentage points from 0.7 percent in the 4th quarter of 2022 to 0.4 percent in the 1st quarter of 2023.

- Within the Industry sector which contracted by 0.8 percent (quarter on quarter), the Mining & Quarrying sub-sector declined from 3.2 percent in the 4th quarter of 2022, to -0.7 percent in the 1st quarter of 2023. The Electricity subsector had a growth of 0.9 percent in the 1st quarter of 2023 compared to -3.4 percent in the 4th quarter of 2022. The manufacturing sub-sector improved slightly to - 0.7 percent in the first quarter of 2023 from -2.5 percent in the 4th quarter of 2022. There were minimal improvement in the Water Supply, Sewerage, Waste Management & Remediation Activities (-1.2%), and the construction (-1.5%) sub-sectors in the 1st quarter of 2023 compared to the 4th quarter 2022.

In the Services sector, Information & Communication sub-sector slowed to 4.4 percent in the 1st quarter of 2023 from 5.0 percent in the 4th quarter of 2022. Public Administration, Defense & Social Security, Health & Social Work activities and Education recorded growth rates of 8.3 percent and 7.3 percent and 5.7 percent in quarter one of 2023 from 3.7 percent, 2.2 percent and 3.0 percent respectively in quarter four of 2022. The growth in Finance & Insurance activities declined by 0.4 percentage points from 2.4 percent in quarter four of 2022 to 2 percent in quarter one of 2023. Transport & Storage expanded to 1.6 percent in the 1st quarter of 2023 compared to a growth of 1.0 percent in the 4th quarter of 2022. Real Estate grew at 0.9 percent in the 1st quarter of 2023 from -3.9 percent in the 4th quarter of 2022. The activities of Professional, Administrative & Support Services expanded by 1.1 percentage points from the -1.7 percent recorded in quarter four of 2022 to 0.8 percent in quarter one of 2023.

Trade, Repair of Vehicle, Household Goods declined to -1.7 percent in quarter one of 2023 from 0.7 percent in quarter four of 2022.

Table 2: Quarter-on-quarter seasonally adjusted growth rates in 2023Q1

Sector	Expanding sub-sectors	Contracting sub-sectors
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Agriculture (1.3%)	Livestock	1.6%	Fishing	-0.7%
	Crops and Cocoa	1.4%		
	Forestry & Logging	0.4%		
Industry (-0.8%)	Electricity	0.9%	Water Supply, Sewerage, Waste Management & Remediation Activities	-1.2%
			Construction	-1.5%
			Manufacturing	-0.7%
			Mining & Quarrying	-0.7%
Services (2.6%)	Public Administration & Defense, Social Security	8.3%	Trade; Repair of Vehicles, Household Goods	-1.7%
	Health & Social Work	7.3%	Hotels & Restaurants	-0.1%
	Education	5.7%		
	Information & Communication	4.4%		
	Finance & Insurance	2.0%		
	Transport and Storage	1.6%		
	Other Personal Service Activities	1.4%		
	Real Estate	0.9%		
Professional, Administrative & Support	0.8%			

Appendix 1- Quarterly Gross Domestic Product at current prices by economic activity and respective sectoral distribution

Year Quarter	Value Added (Ghc Million)								% of GDP (@ basic prices)				
	Agriculture	Industry	Services	Total Value Added (GDP @ basic prices)	Net indirect Taxes	Total (GDP in purchaser's value)	Low Informal GDP in purchaser's value	Total Non-Oil (GDP in purchaser's value)	Agriculture	Industry	Services	Total Value Added (GDP @ basic prices)	Low Informal GDP in purchaser's value
2013_Q1	6,698.2	11,056.7	10,733.0	28,487.9	1,319.6	29,807.5	9,155.8	28,038.9	23.5	38.8	37.7	100	30.7
2013_Q2	5,521.8	10,753.2	12,632.2	28,907.2	1,507.6	30,414.8	8,289.1	28,715.7	19.1	37.2	43.7	100	27.3
2013_Q3	5,933.7	10,335.5	12,666.1	28,935.2	1,514.2	30,449.4	8,646.8	28,924.8	20.5	35.7	43.8	100	28.4
2013_Q4	7,202.2	10,288.8	14,492.4	31,983.5	1,822.4	33,805.9	10,196.4	32,149.4	22.5	32.2	45.3	100	30.2
2014_Q1	8,008.4	10,889.4	11,653.6	30,551.4	3,189.8	33,741.2	10,558.9	32,301.4	26.2	35.6	38.1	100	31.3
2014_Q2	6,749.9	12,717.3	14,930.9	34,398.1	3,358.4	37,756.5	9,973.4	35,475.4	19.6	37.0	43.4	100	26.4
2014_Q3	7,356.8	15,459.3	16,912.4	39,728.6	3,671.1	43,399.7	11,138.6	40,426.8	18.5	38.9	42.6	100	25.7
2014_Q4	8,961.1	14,725.0	15,872.6	39,558.8	4,227.8	43,786.6	12,525.7	40,924.6	22.7	37.2	40.1	100	28.6
2015_Q1	9,528.0	13,111.5	17,669.7	40,309.2	3,652.8	43,962.1	13,105.1	42,016.2	23.6	32.5	43.8	100	29.8
2015_Q2	7,885.1	15,330.2	18,629.0	41,844.3	3,602.4	45,446.7	11,785.8	44,003.5	18.8	36.6	44.5	100	25.9
2015_Q3	8,712.4	13,938.0	18,115.6	40,766.0	3,776.1	44,542.1	12,441.7	43,680.7	21.4	34.2	44.4	100	27.9
2015_Q4	10,547.8	14,732.3	19,941.5	45,221.7	4,353.0	49,574.7	14,686.6	49,133.4	23.3	32.6	44.1	100	29.6
2016_Q1	12,099.8	14,969.4	22,294.6	49,363.8	3,801.2	53,165.0	16,582.3	53,070.6	24.5	30.3	45.2	100	31.2
2016_Q2	9,690.3	14,882.7	23,556.0	48,129.0	4,355.5	52,484.5	14,364.4	52,440.4	20.1	30.9	48.9	100	27.4
2016_Q3	10,870.7	15,127.1	24,036.0	50,033.8	3,814.4	53,848.2	15,622.9	53,636.2	21.7	30.2	48.0	100	29.0
2016_Q4	13,112.2	15,833.7	26,550.3	55,496.2	4,600.7	60,096.9	18,356.4	59,420.3	23.6	28.5	47.8	100	30.5
2017_Q1	12,478.6	18,401.6	27,420.0	58,300.2	3,968.8	62,269.0	17,799.0	60,905.3	21.4	31.6	47.0	100	28.6
2017_Q2	10,039.7	19,210.8	29,674.0	58,924.5	4,331.0	63,255.5	15,792.4	61,179.2	17.0	32.6	50.4	100	25.0
2017_Q3	12,689.8	21,206.5	29,499.0	63,395.2	4,843.1	68,238.3	18,555.6	65,330.0	20.0	33.5	46.5	100	27.2
2017_Q4	16,199.7	19,895.0	27,679.1	63,773.8	5,261.4	69,035.1	21,647.0	66,361.0	25.4	31.2	43.4	100	31.4
2018_Q1	15,053.6	24,271.9	32,874.8	72,200.3	5,242.7	77,443.0	21,286.2	72,938.6	20.8	33.6	45.5	100	27.5
2018_Q2	12,228.9	23,411.1	31,201.3	66,841.3	4,917.0	71,758.3	18,142.1	67,897.1	18.3	35.0	46.7	100	25.3
2018_Q3	12,983.5	25,402.2	35,007.9	73,393.6	5,368.0	78,761.7	19,791.2	74,147.8	17.7	34.6	47.7	100	25.1
2018_Q4	15,701.0	23,125.5	35,702.4	74,528.9	6,095.5	80,624.4	22,502.7	76,632.8	21.1	31.0	47.9	100	27.9
2019_Q1	17,536.5	26,376.3	38,436.5	82,349.4	5,752.2	88,101.5	24,127.3	82,086.7	21.3	32.0	46.7	100	27.4
2019_Q2	13,595.0	26,911.4	39,874.0	80,380.4	5,528.6	85,909.0	20,531.7	80,556.8	16.9	33.5	49.6	100	23.9
2019_Q3	14,227.0	29,533.8	41,504.1	85,264.8	5,691.6	90,956.4	21,683.5	85,495.6	16.7	34.6	48.7	100	23.8
2019_Q4	16,406.5	28,091.3	41,133.6	85,631.4	5,945.9	91,577.3	23,708.5	87,070.5	19.2	32.8	48.0	100	25.9
2020_Q1	19,957.3	29,326.4	46,717.8	96,001.5	4,589.2	100,590.7	29,125.4	96,590.2	20.8	30.5	48.7	100	29.0
2020_Q2	17,508.8	27,587.8	38,159.4	83,256.0	5,218.7	88,474.7	24,027.4	85,869.6	21.0	33.1	45.8	100	27.2
2020_Q3	17,129.9	29,668.3	42,528.7	89,326.9	7,012.3	96,339.1	22,928.4	92,699.6	19.2	33.2	47.6	100	23.8
2020_Q4	19,299.7	30,516.6	49,705.0	99,521.4	7,014.9	106,536.2	25,332.7	102,988.5	19.4	30.7	49.9	100	23.8
2021_Q1	21,500.9	33,326.6	53,472.2	108,299.7	5,723.1	114,022.8	28,747.8	109,446.5	19.9	30.8	49.4	100	25.2
2021_Q2	20,499.4	30,144.0	45,451.0	96,094.3	6,852.7	102,947.0	26,553.3	97,865.0	21.3	31.4	47.3	100	25.8
2021_Q3	22,277.4	32,882.4	51,686.1	106,846.0	7,740.2	114,586.1	29,250.0	109,117.8	20.9	30.8	48.4	100	25.5
2021_Q4	26,479.9	34,791.5	58,640.2	119,911.5	10,227.4	130,139.0	34,328.1	124,184.2	22.1	29.0	48.9	100	26.4
2022_Q1*	26,941.3	44,110.4	62,409.2	133,460.9	7,655.1	141,116.0	35,998.1	133,234.5	20.2	33.1	46.8	100	25.5
2022_Q2*	26,799.4	40,486.6	54,243.1	121,529.0	9,128.5	130,657.5	34,580.5	121,411.4	22.1	33.3	44.6	100	26.5
2022_Q3*	33,073.7	48,031.9	60,978.5	142,084.1	10,310.7	152,394.8	42,125.6	142,537.9	23.3	33.8	42.9	100	27.6
2022_Q4*	38,559.4	56,615.9	78,818.4	173,993.7	12,060.2	186,053.9	49,554.7	180,099.2	22.2	32.5	45.3	100	26.6
2023_Q1**	40,023.2	60,845.6	89,358.6	190,227.3	12,401.3	202,628.6	53,190.5	193,535.8	21.0	32.0	47.0	100	26.3

*revised ** provisional

Appendix 2 - Quarterly value added and GDP at constant 2013 prices by economic activity

Year	Quarterly Value Added (Ghc Million)							Year-on-Year change (%)						
	Agriculture	Industry	Services	Total Value Added (GDP @ basic prices)	Net indirect Taxes	Total (Oil GDP in purchaser's value)	ow Informal GDP in purchaser's value	Total (Non Oil GDP)***	Agriculture	Industry	Services	Total (Oil GDP)***	ow Informal GDP in purchaser's value	Total (Non-oil GDP)***
2013_Q1	6,698.2	11,056.7	10,733.0	28,487.9	1,319.6	29,807.5	9,155.8	28,038.9						
2013_Q2	5,521.8	10,753.2	12,632.2	28,907.2	1,507.6	30,414.8	8,289.1	28,715.7						
2013_Q3	5,933.7	10,335.5	12,666.1	28,935.2	1,514.2	30,449.4	8,646.8	28,924.8						
2013_Q4	7,202.2	10,288.8	14,492.4	31,983.5	1,822.4	33,805.9	10,196.4	32,149.4						
2014_Q1	6,594.6	9,859.3	11,780.5	28,234.3	1,243.8	29,478.1	9,206.1	27,670.0	-1.5	-10.8	9.8	-1.1	0.5	-1.3
2014_Q2	5,534.3	10,803.0	13,432.7	29,770.0	1,549.1	31,319.1	8,432.7	29,627.1	0.2	0.5	6.3	3.0	1.7	3.2
2014_Q3	6,065.7	11,178.2	13,825.6	31,069.5	1,761.0	32,830.5	9,034.1	31,013.8	2.2	8.2	9.2	7.8	4.5	7.2
2014_Q4	7,389.6	11,073.6	14,115.4	32,578.6	1,826.6	34,405.3	10,412.7	32,455.8	2.6	7.6	-2.6	1.8	2.1	1.0
2015_Q1	6,818.0	10,852.6	13,698.7	31,369.4	1,298.9	32,668.3	9,814.2	30,825.5	3.4	10.1	16.3	10.8	6.6	11.4
2015_Q2	5,575.5	11,129.0	13,985.7	30,690.2	1,653.0	32,343.2	8,651.2	30,582.9	0.7	3.0	4.1	3.3	2.6	3.2
2015_Q3	6,161.5	10,456.1	12,965.0	29,582.6	1,713.6	31,296.2	9,011.6	29,563.9	1.6	-6.5	-6.2	-4.7	-0.2	-4.7
2015_Q4	7,555.5	10,970.4	14,033.4	32,559.3	1,881.2	34,440.5	10,642.2	32,363.5	2.2	-0.9	-0.6	0.1	2.2	-0.3
2016_Q1	6,891.9	10,870.9	13,415.6	31,178.4	1,350.0	32,528.3	9,858.6	31,058.9	1.1	0.2	-2.1	-0.4	0.5	0.8
2016_Q2	5,746.5	10,551.5	13,679.6	29,977.7	1,564.1	31,541.8	8,708.0	30,807.0	3.1	-5.2	-2.2	-2.5	0.7	0.7
2016_Q3	6,355.9	12,036.7	14,407.1	32,799.7	1,979.6	34,779.3	9,546.6	32,969.0	3.2	15.1	11.1	11.1	5.9	11.5
2016_Q4	7,829.8	11,825.4	14,688.8	34,344.0	1,965.5	36,309.5	11,042.9	34,069.5	3.6	7.8	4.7	5.4	3.8	5.3
2017_Q1	7,302.5	12,643.8	13,654.3	33,600.6	1,410.9	35,011.6	10,400.1	32,731.3	6.0	16.3	1.8	7.6	5.5	5.4
2017_Q2	5,980.8	12,483.0	15,311.9	33,775.8	1,699.7	35,475.5	9,338.5	33,248.0	4.1	18.3	11.9	12.5	7.2	7.9
2017_Q3	6,907.8	13,664.5	14,719.2	35,291.6	1,930.3	37,221.9	10,246.2	34,049.8	8.7	13.5	2.2	7.0	7.3	3.3
2017_Q4	8,299.8	13,564.1	14,442.5	36,306.4	2,130.6	38,437.0	11,577.7	34,838.4	6.0	14.7	-1.7	5.9	4.8	2.3
2018_Q1	7,825.8	14,475.4	14,989.2	37,290.4	1,532.0	38,822.4	11,000.5	35,992.5	7.2	14.5	9.8	10.9	5.8	10.0
2018_Q2	6,440.1	13,606.8	14,783.9	34,830.7	1,823.3	36,654.0	9,524.6	34,119.6	7.7	9.0	-3.4	3.3	2.0	2.6
2018_Q3	6,996.0	15,403.5	15,110.5	37,510.1	2,160.7	39,670.8	10,307.7	36,365.3	1.3	12.7	2.7	6.6	0.6	6.8
2018_Q4	8,618.1	14,368.6	14,877.8	37,864.6	2,195.2	40,059.8	11,814.9	36,554.8	3.8	5.9	3.0	4.2	2.0	4.9
2019_Q1	8,307.1	15,641.9	15,629.0	39,578.0	1,525.5	41,103.5	11,698.7	37,938.7	6.2	8.1	4.3	5.9	6.3	5.4
2019_Q2	6,773.7	15,503.7	15,703.7	37,981.1	2,001.1	39,982.2	10,181.7	36,692.3	5.2	13.9	6.2	9.1	6.9	7.5
2019_Q3	7,313.6	16,060.1	16,246.2	39,619.9	2,146.6	41,766.5	10,871.8	37,948.4	4.5	4.3	7.5	5.3	5.5	4.4
2019_Q4	8,876.7	14,331.6	16,737.8	39,946.1	2,509.2	42,455.3	12,403.7	38,795.8	3.0	-0.3	12.5	6.0	5.0	6.1
2020_Q1	9,158.2	15,855.7	17,286.0	42,299.8	1,443.0	43,742.8	12,230.0	40,340.5	10.2	1.4	10.6	6.4	4.5	6.3
2020_Q2	7,152.7	14,519.4	14,263.1	35,935.2	1,791.1	37,726.3	9,614.0	34,424.1	5.6	-6.3	-9.2	-5.6	-5.6	-6.2
2020_Q3	7,545.6	14,938.5	15,749.1	38,233.3	2,172.8	40,406.0	10,250.6	37,114.2	3.2	-7.0	-3.1	-3.3	-5.7	-2.2
2020_Q4	9,692.2	14,687.6	17,456.3	41,836.1	2,446.0	44,282.1	12,710.7	40,990.4	9.2	2.5	4.3	4.3	2.5	5.7
2021_Q1	9,527.6	15,807.7	18,649.5	43,984.7	1,415.3	45,512.7	12,317.4	42,528.1	4.0	-0.3	7.9	4.0	0.7	5.4
2021_Q2	7,990.9	13,791.9	15,886.2	37,669.0	1,745.8	39,084.3	10,313.6	36,360.0	11.7	-5.0	11.4	3.6	7.3	5.6
2021_Q3	8,132.3	14,890.2	17,593.6	40,616.1	2,115.9	42,361.9	10,744.0	39,384.9	7.8	-0.3	11.7	4.8	4.8	6.1
2021_Q4	10,735.1	15,224.4	18,690.4	44,649.8	2,395.4	46,765.7	13,490.1	43,834.6	10.8	3.7	7.1	5.6	6.1	6.9
2022_Q1*	9,964.5	15,769.2	19,557.0	45,290.7	1,586.4	46,877.1	12,852.2	44,113.8	4.6	-0.2	4.9	3.0	4.3	3.7
2022_Q2*	8,308.9	14,387.8	16,715.7	39,412.3	1,502.4	40,914.7	10,769.6	38,571.7	4.0	4.3	5.2	4.7	4.4	6.1
2022_Q3*	8,508.0	15,035.5	18,345.9	41,889.3	1,800.0	43,689.4	11,190.2	40,884.0	4.6	1.0	4.3	3.1	4.2	3.8
2022_Q4*	11,116.3	15,074.5	20,106.1	46,296.9	2,187.4	48,484.4	13,999.6	45,708.0	3.6	-1.0	7.6	3.7	3.8	4.3
2023_Q1*	10,443.2	15,264.6	21,523.7	47,231.6	1,632.2	48,863.7	13,497.0	46,548.2	4.8	-3.2	10.1	4.2	5.0	5.5

*revised ** provisional

Appendix 3- Seasonally adjusted quarterly value added and Gross Domestic Product at constant 2013 prices by economic activity

Year Quarter	Quarterly Value Added (GHc Million)							Quarter-on-Quarter Change				
	Agriculture	Industry	Service	Total Value Added (GDP @_basic prices)	Net indirect Taxes	Total (GDP in purchaser's value)	ow Informal GDP in purchaser's value	Agriculture	Industry	Service	Total GDP***	ow Informal GDP in purchaser's value
2013_Q1	6,698.2	11,056.7	10,733.0	28,487.9	1,319.6	29,807.5	9,342.4	-	-	-	-	-
2013_Q2	6,073.9	10,904.9	11,682.6	28,661.5	1,413.6	30,075.1	8,688.6	-9.3	-1.4	8.8	0.9	-1.6
2013_Q3	6,051.2	10,715.1	12,010.4	28,776.8	1,447.1	30,223.9	8,604.4	-0.4	-1.7	2.8	0.5	0.6
2013_Q4	6,339.0	10,608.5	12,630.9	29,578.4	1,541.0	31,119.4	8,834.7	4.8	-1.0	5.2	3.0	5.3
2014_Q1	6,313.1	10,309.2	12,892.8	29,515.0	1,522.0	31,037.0	8,814.4	-0.4	-2.8	2.1	-0.3	1.5
2014_Q2	6,316.2	10,321.6	13,092.9	29,730.8	1,532.4	31,263.1	8,865.7	0.0	0.1	1.6	0.7	0.2
2014_Q3	6,349.2	10,532.3	13,382.8	30,264.3	1,594.1	31,858.4	8,937.4	0.5	2.0	2.2	1.9	0.6
2014_Q4	6,396.1	10,728.5	13,288.5	30,413.1	1,595.1	32,008.2	9,025.4	0.7	1.9	-0.7	0.5	-0.1
2015_Q1	6,451.9	10,976.9	13,768.1	31,196.9	1,608.9	32,805.8	9,108.2	0.9	2.3	3.6	2.5	1.6
2015_Q2	6,462.2	11,058.4	13,906.4	31,426.9	1,634.9	33,061.8	9,115.9	0.2	0.7	1.0	0.8	0.3
2015_Q3	6,486.2	10,877.8	13,691.2	31,055.2	1,623.0	32,678.2	9,149.4	0.4	-1.6	-1.5	-1.2	0.2
2015_Q4	6,527.6	10,852.0	13,670.7	31,050.4	1,636.7	32,687.1	9,254.4	0.6	-0.2	-0.1	0.0	0.5
2016_Q1	6,546.1	10,856.6	13,599.9	31,002.6	1,649.5	32,652.1	9,296.6	0.3	0.0	-0.5	-0.1	0.4
2016_Q2	6,588.9	10,712.2	13,523.4	30,824.5	1,627.2	32,451.7	9,345.2	0.7	-1.3	-0.6	-0.6	0.5
2016_Q3	6,637.5	11,107.4	13,883.9	31,628.8	1,693.7	33,322.5	9,431.4	0.7	3.7	2.7	2.7	0.9
2016_Q4	6,706.0	11,321.1	14,047.8	32,074.9	1,714.8	33,789.7	9,521.8	1.0	1.9	1.2	1.4	1.2
2017_Q1	6,808.7	11,764.4	14,107.5	32,680.5	1,730.0	34,613.1	9,661.4	1.5	3.9	0.4	2.4	1.6
2017_Q2	6,867.3	12,247.2	14,515.5	33,630.0	1,763.9	35,394.0	9,793.8	0.9	4.1	2.9	2.3	1.4
2017_Q3	7,005.2	12,654.2	14,593.5	34,253.0	1,751.6	36,004.6	9,987.7	2.0	3.3	0.5	1.7	1.9
2017_Q4	7,122.7	13,088.9	14,532.0	34,743.6	1,792.9	36,536.5	10,140.5	1.7	3.4	-0.4	1.5	1.3
2018_Q1	7,253.6	13,546.8	14,865.7	35,666.0	1,823.2	37,489.2	10,301.1	1.8	3.5	2.3	2.6	1.1
2018_Q2	7,368.4	13,827.7	14,733.7	35,929.8	1,854.0	37,783.8	10,435.9	1.6	2.1	-0.9	0.8	1.0
2018_Q3	7,390.4	14,262.5	14,831.5	36,484.4	1,911.6	38,396.1	10,516.3	0.3	3.1	0.7	1.6	1.4
2018_Q4	7,470.0	14,463.6	14,940.3	36,874.0	1,927.8	38,801.8	10,652.4	1.1	1.4	0.7	1.1	1.4
2019_Q1	7,590.3	14,755.2	15,100.3	37,445.9	1,926.2	39,372.1	10,938.5	1.6	2.0	1.1	1.5	2.6
2019_Q2	7,673.7	15,229.4	15,330.3	38,233.4	1,970.7	40,204.1	11,104.2	1.1	3.2	1.5	2.1	1.5
2019_Q3	7,753.1	15,393.6	15,614.2	38,760.9	1,967.1	40,728.0	11,246.7	1.0	1.1	1.9	1.3	1.3
2019_Q4	7,817.8	15,384.3	16,079.2	39,281.3	2,045.6	41,326.9	11,395.3	0.8	-0.1	3.0	1.5	1.3
2020_Q1	8,030.5	15,437.8	16,493.4	39,961.7	2,025.0	41,986.7	11,707.3	2.7	0.3	2.6	1.6	2.7
2020_Q2	8,125.3	15,191.7	16,133.3	39,450.3	1,972.5	41,422.7	11,744.5	1.2	-1.6	-2.2	-1.3	0.3
2020_Q3	8,183.3	14,911.3	16,009.0	39,103.6	1,979.0	41,082.6	11,768.4	0.7	-1.8	-0.8	-0.8	0.5
2020_Q4	8,387.2	15,000.3	16,188.6	39,576.1	1,963.2	41,539.3	12,024.3	2.5	0.6	1.1	1.1	1.9
2021_Q1	8,479.5	14,988.3	16,529.5	39,997.3	1,956.3	41,953.6	12,124.7	1.1	-0.1	2.1	1.0	0.8
2021_Q2	8,689.1	14,806.4	16,935.3	40,430.8	1,945.0	42,375.7	12,310.7	2.5	-1.2	2.5	1.0	1.5
2021_Q3	8,835.8	14,794.3	17,396.4	41,026.5	1,930.7	42,957.2	12,452.9	1.7	-0.1	2.7	1.4	1.2
2021_Q4	9,096.5	14,928.5	17,704.9	41,729.9	1,918.1	43,648.0	12,717.7	3.0	0.9	1.8	1.6	2.1
2022_Q1*	9,205.7	14,918.9	17,931.8	42,056.4	1,960.9	44,017.3	12,827.8	1.2	-0.1	1.3	0.8	0.9
2022_Q2*	9,285.2	15,067.9	18,139.2	42,492.2	1,900.0	44,392.3	12,920.3	0.9	1.0	1.2	0.9	0.7
2022_Q3*	9,379.1	15,104.2	18,327.2	42,810.5	1,821.1	44,631.6	13,012.5	1.0	0.2	1.0	0.5	0.7
2022_Q4*	9,474.4	15,066.8	18,681.2	43,222.3	1,769.1	44,991.4	13,102.5	1.0	-0.2	1.9	0.8	0.7
2023_Q1*	9,594.1	14,940.6	19,172.9	43,707.5	1,780.5	45,488.0	13,211.4	1.3	-0.8	2.6	1.1	0.8

*revised ** provisional