



Ghana Statistical Service  
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# Newsletter

## Quarterly Gross Domestic Product (QGDP)

### Fourth Quarter 2019



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## **Main points**

- Ghana provisional Real Gross Domestic Product (GDP) in volume terms was estimated to have increased to 7.9% in quarter four (October to December) of 2019.
- When seasonally adjusted, Ghana Real GDP grew 1.9% in quarter 4 (October to December) of 2019; an increase from 1.4% as recorded in quarter 3 (July to September) of 2019.
- The main sub-sectors with double digit growth rate in October to December 2019 GDP were Information & Communication, Real Estate, Electricity and Education
- Information & Communication sub-sector increased from 12.3% in quarter four of 2018 to 67.6% in quarter four of 2019.
- The Real Estate sub-sector recovered from a contraction of -3.1% in quarter four of 2018 to 36.5% in quarter four of 2019.
- Electricity sub-sector recorded a growth of 10.5% in the 4<sup>th</sup> quarter of 2019 compared to 6.3% in same period of 2018
- The Education sub-sector increased to 10.7% in quarter four of 2019 from 4.0% in quarter four of 2018.
- Negative contributors to the QGDP growth came from the sub-sector of Water Supply, Sewerage, Waste Management & Remediation Activities and Construction activities.

## **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 4<sup>th</sup> quarter of 2019 using the product 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 in order 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 the majority of 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. In particular, some data that were 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.

### **Related Publications**

Users may refer to other publications on GDP on the **GSS website:** [\*\*www.statsghana.gov.gh\*\*](http://www.statsghana.gov.gh)

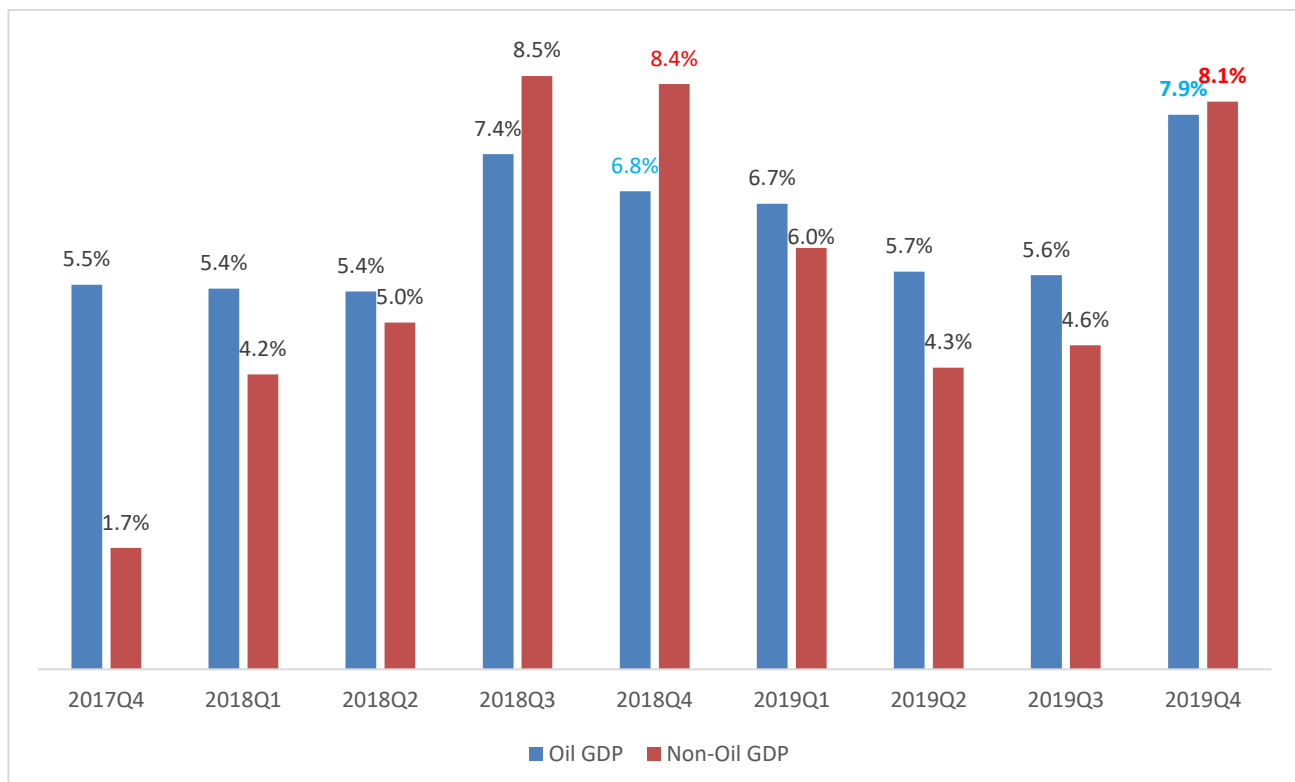
## Quarterly real GDP growth, Ghana: October to December 2019

Provisional real quarterly gross domestic product growth (QGDP) including Oil and Gas, by production is 7.9% (year on year) in the fourth quarter of 2019. In the same period in 2018, the growth was 6.8%.

GDP growth rate without oil and gas (Non-Oil GDP) for fourth quarter 2019 is 8.1% which compares to the same period in 2018 with a growth rate of 8.4%

The Services sector recorded the highest growth of 11.0%; the Agriculture sector expanded by 6.8% and the Industry sector 5.4%.

**Figure 1: Quarterly real GDP growth rate (2017Q4-2019Q4)**



## Real quarterly gross domestic product: October to December 2019

The **GDP** estimate at constant 2013 prices for the 4<sup>th</sup> quarter of 2019 was **GH¢42,600.0 million** compared to **GH¢39,473.2 million** in the 4<sup>th</sup> quarter of 2018.

The **Non-oil GDP** at constant 2013 prices for the 4<sup>th</sup> quarter of 2019 was **GH¢39,021.3 million** compared to **GH¢36,093.9 million** in the 4<sup>th</sup> quarter of 2018.

**Table1: Year-on-year growth rates in 4<sup>th</sup> quarter of 2019**

| <b>Sector</b>         | <b>Expanding sub-sectors</b>                     | <b>Contracting sub-sectors</b>                                    |       |
|-----------------------|--|---|-------|
| Agriculture<br>(6.8%) | Fishing  | 9.5%  |       |
|                       | Crops  | 7.3%  |       |
|                       | Forestry & Logging                               | 6.2%  |       |
|                       | Livestock  | 5.1%  |       |
| Industry<br>(5.4%)    | Electricity                                      | 10.5%   |       |
|                       | Manufacturing                                    | 7.9%  |       |
|                       | Mining & Quarrying                               | 7.7%  |       |
|                       |  | Water Supply, Sewerage, Waste Management & Remediation Activities | -2.0% |
|                       |  | Construction  | -2.6% |
| Services<br>(11.0%)   | Information & Communication                      | 67.6%   |       |
|                       | Real Estate                                      | 36.5%   |       |
|                       | Education  | 10.7%   |       |
|                       | Public Administration & Defence, Social Security | 9.0%  |       |
|                       | Trade, Repair of Vehicle, Household Goods        | 7.4%  |       |
|                       | Professional, Administrative & Support           | 7.2%  |       |
|                       | Hotel & Restuarants                              | 6.0%  |       |
|                       | Transport & Storage                              | 5.8%  |       |
|                       | Other Personal Service Activities                | 5.8%  |       |
|                       | Health & Social Work                             | 5.0%  |       |
|                       | Finance & Insurance                              | 1.6%  |       |

## Nominal quarterly gross domestic product: October to December 2019

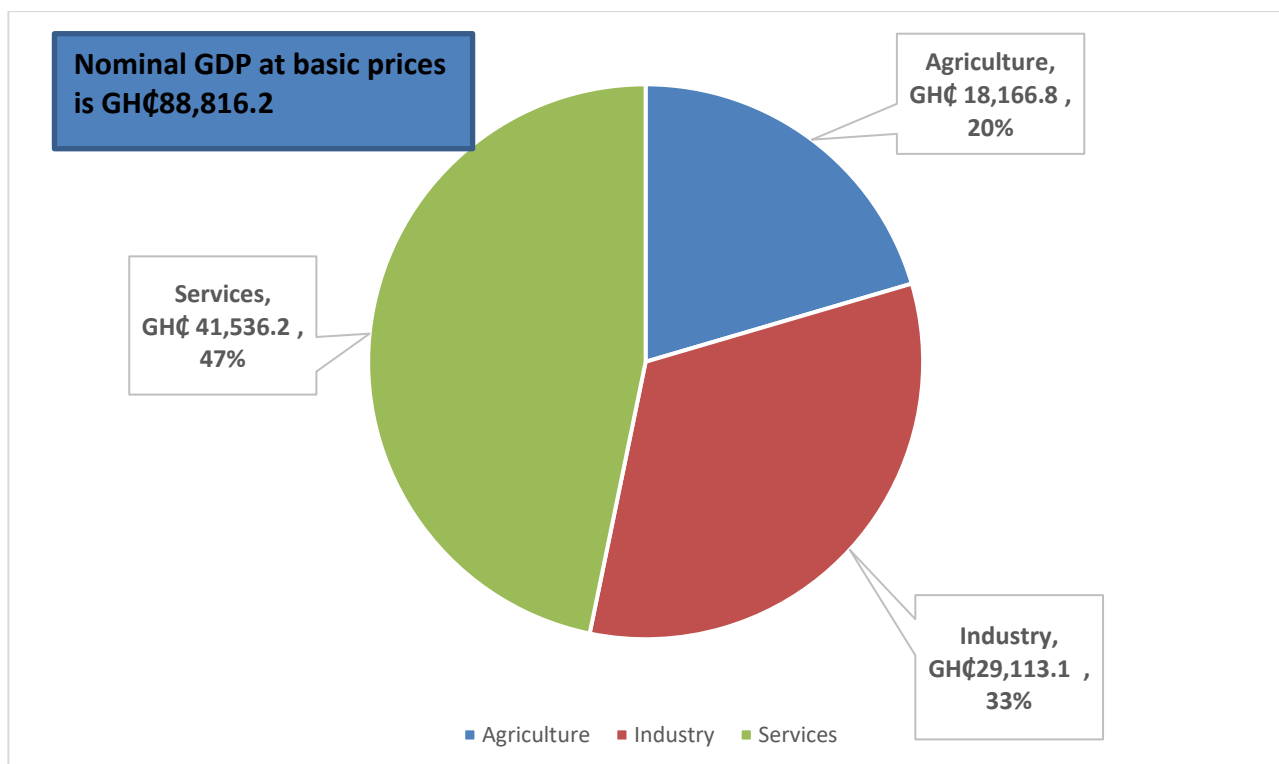
The GDP estimate at current prices in purchaser's value<sup>1</sup> for the 4<sup>th</sup> quarter of 2019 was **GH¢94,766.0 million** compared to **GH¢80,843.6 million** in the 4<sup>th</sup> quarter of 2018.

The **Non-oil GDP** (*GDP without Oil and Gas*) estimate at current prices for the 4<sup>th</sup> quarter of 2019 was **GH¢90,234.1 million** compared to **GH¢77,981.2 million** in the 4<sup>th</sup> quarter of 2018.

### GDP sectoral shares

The Services sector still remained the largest sector of the Ghanaian economy in the fourth quarter of 2019 with a share of 46.9 percent of GDP at basic prices. The GDP share of Industry and Agriculture were 32.8 percent and 20.3 percent respectively.

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



## Seasonally-Adjusted GDP

### **The Provisional quarter-on-quarter<sup>2</sup> seasonally-adjusted Real Gross Domestic Product (including Oil) growth rate for the 4<sup>th</sup> quarter of 2019 was 1.9 percent.**

For the 4<sup>th</sup> quarter of 2019, the quarter-on-quarter seasonally-adjusted growth rates (see Table 2) were as follows:

- In the Agriculture sector, the Fishing sub-sector grew by 2.2 percent in the 4<sup>th</sup> quarter, compared to 0.1 percent in the 3<sup>rd</sup> quarter of 2019 Agriculture sector. The Crops sub-sector grew by 2.0 percent, compared to 1.7 percent in the 3<sup>rd</sup> quarter of 2019. The Fishing sub-sector grew by 1.9 percent in the 4<sup>th</sup> quarter of 2019, compared to 1.4 percent growth rate recorded in the 3<sup>rd</sup> quarter of 2019. The Livestock subsector recorded the least growth rate of 1.7 percent compared to -0.2 in the 3<sup>rd</sup> quarter of 2019.
- Within the Industry sector, the Electricity sub-sector recorded 2.6 percent in the 4<sup>th</sup> quarter of 2019, compared to 2.7 percent growth recorded in the 3<sup>rd</sup> quarter of 2019. Manufacturing sub-sector grew by 1.8 percent in the 4<sup>th</sup> quarter of 2019, compared to 1.2 percent in the 3<sup>rd</sup> quarter of 2019. The Mining and Quarrying sub-sector slowed to 1.6 percent in the 4<sup>th</sup> quarter of 2019, from 2.2 percent recorded in the 3<sup>rd</sup> quarter of 2019. Construction recorded the least growth rate of growth rate of -0.6 percent in the 4<sup>th</sup> quarter of 2019 compared to 0.4 percent in the 3<sup>rd</sup> quarter of 2019.
- In the Services sector, Information and communication grew by 14.6 percent in the 4<sup>th</sup> quarter of 2019 compared to 5.5 percent in the 3<sup>rd</sup> quarter of 2019. The Real Estate also expanded to 6.8 percent in the 4<sup>th</sup> quarter of 2019 from 5.6 percent recorded in the 3<sup>rd</sup> quarter of 2019. The least growth rates of 0.4% was recorded in the Finance & Insurance sub-sector.

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<sup>2</sup> 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 behaviour or recurrent exogenous factors such as weather patterns, holidays, religious events, festive seasons, etc.



**Table 2: Quarter-on-quarter seasonally adjusted growth rates in 2019 Q4**

| <b>Sector</b>         | <b>Expanding sub-sectors</b>                     | <b>Contracting sub-sectors</b>  |
|-----------------------|--|---|
| Agriculture<br>(1.9%) | Fishing  | 2.2%  |
|                       | Crops  | 2.0%  |
|                       | Fishing  | 1.9%  |
|                       | Livestock  | 1.7%  |
| Industry<br>(1.2%)    | Electricity                                      | 2.6%  |
|                       | Manufacturing                                    | 1.8%  |
|                       | Mining & Quarring                                | 1.6%  |
|                       |  | Water Supply, Sewerage, Waste Management & Remediation Activities -0.5% |
|                       |  | Construction -0.6%  |
| Services<br>(2.6%)    | Information & Communication                      | 14.6%   |
|                       | Real Estate                                      | 6.8%  |
|                       | Education  | 2.5%  |
|                       | Public Administration & Defence, Social Security | 2.1%  |
|                       | Professional, Administrative & Support           | 1.8%  |
|                       | Trade, Repair of Vehicle, Household Goods        | 1.8%  |
|                       | Hotel & Restuarants                              | 1.5%  |
|                       | Other Personal Service Activities                | 1.6%  |
|                       | Health & Social Work                             | 1.4%  |
|                       | Transport & Storage                              | 1.3%  |
| Finance & Insurance   | 0.4%   |   |

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

| Year<br>Quarter | Value Added (Ghc Million) |          |          |  |                    |                                     |  | % of GDP (@ basic prices)                   |             |          |          |  |   |
|-----------------|---------------------------|----------|----------|--|--------------------|-------------------------------------|--|---|-------------|----------|----------|--|---|
|                 | Agriculture               | Industry | Services | Total Value Added<br>(GDP @_ basic prices) | Net indirect Taxes | Total (GDP in<br>purchaser's value) | ow InformalGDP in<br>purchaser's value | Total Non-Oil (GDP in<br>purchaser's value) | Agriculture | Industry | Services | Total Value Added<br>(GDP @_ basic prices) | ow Informal GDP in<br>purchaser's value |
| 2013_Q1*        | 5,878.2                   | 10,921.3 | 12,600.6 | <b>29,400.1</b>                            | 1,558.1            | <b>30,958.2</b>                     | <b>8,473.6</b>                         | <b>29,097.7</b>                             | 20.0        | 37.1     | 42.9     | 100.0                                      | 27.4                                    |
| 2013_Q2*        | 5,626.2                   | 10,912.2 | 12,442.4 | <b>28,980.8</b>                            | 1,744.9            | <b>30,725.7</b>                     | <b>8,199.2</b>                         | <b>28,958.5</b>                             | 19.4        | 37.7     | 42.9     | 100.0                                      | 26.7                                    |
| 2013_Q3*        | 6,026.7                   | 10,559.1 | 11,862.3 | <b>28,448.1</b>                            | 1,675.5            | <b>30,123.7</b>                     | <b>8,469.1</b>                         | <b>28,573.9</b>                             | 21.2        | 37.1     | 41.7     | 100.0                                      | 28.1                                    |
| 2013_Q4*        | 7,758.4                   | 10,711.8 | 11,602.9 | <b>30,073.2</b>                            | 1,869.3            | <b>31,942.5</b>                     | <b>10,167.5</b>                        | <b>30,317.0</b>                             | 25.8        | 35.6     | 38.6     | 100.0                                      | 31.8                                    |
| 2014_Q1*        | 8,152.2                   | 10,648.1 | 12,914.5 | <b>31,714.8</b>                            | 2,565.7            | <b>34,280.5</b>                     | <b>10,621.5</b>                        | <b>32,020.5</b>                             | 25.7        | 33.6     | 40.7     | 100.0                                      | 31.0                                    |
| 2014_Q2*        | 6,667.0                   | 13,032.9 | 15,124.7 | <b>34,824.6</b>                            | 2,376.6            | <b>37,201.2</b>                     | <b>9,669.9</b>                         | <b>34,655.0</b>                             | 19.1        | 37.4     | 43.4     | 100.0                                      | 26.0                                    |
| 2014_Q3*        | 7,161.8                   | 15,970.2 | 14,292.1 | <b>37,424.1</b>                            | 2,486.8            | <b>39,910.8</b>                     | <b>10,228.9</b>                        | <b>37,480.5</b>                             | 19.1        | 42.7     | 38.2     | 100.0                                      | 25.6                                    |
| 2014_Q4*        | 9,105.0                   | 14,116.2 | 13,800.7 | <b>37,021.9</b>                            | 3,018.1            | <b>40,040.0</b>                     | <b>11,946.0</b>                        | <b>38,275.8</b>                             | 24.6        | 38.1     | 37.3     | 100.0                                      | 29.8                                    |
| 2015_Q1*        | 9,430.4                   | 13,390.2 | 17,112.6 | <b>39,933.2</b>                            | 3,022.9            | <b>42,956.2</b>                     | <b>12,698.9</b>                        | <b>41,682.2</b>                             | 23.6        | 33.5     | 42.9     | 100.0                                      | 29.6                                    |
| 2015_Q2*        | 7,777.8                   | 15,685.1 | 17,648.2 | <b>41,111.1</b>                            | 3,296.7            | <b>44,407.7</b>                     | <b>11,293.3</b>                        | <b>42,749.0</b>                             | 18.9        | 38.2     | 42.9     | 100.0                                      | 25.4                                    |
| 2015_Q3*        | 8,519.4                   | 13,699.2 | 17,511.1 | <b>39,729.7</b>                            | 3,683.7            | <b>43,413.5</b>                     | <b>11,861.0</b>                        | <b>42,424.9</b>                             | 21.4        | 34.5     | 44.1     | 100.0                                      | 27.3                                    |
| 2015_Q4*        | 10,798.1                  | 14,380.7 | 19,061.8 | <b>44,240.6</b>                            | 4,381.1            | <b>48,621.7</b>                     | <b>14,469.5</b>                        | <b>47,851.0</b>                             | 24.4        | 32.5     | 43.1     | 100.0                                      | 29.8                                    |
| 2016_Q1*        | 11,776.3                  | 14,903.8 | 22,310.2 | <b>48,990.4</b>                            | 3,812.1            | <b>52,802.5</b>                     | <b>16,078.3</b>                        | <b>52,552.9</b>                             | 24.0        | 30.4     | 45.5     | 100.0                                      | 30.4                                    |
| 2016_Q2*        | 9,411.9                   | 14,614.2 | 23,206.5 | <b>47,232.6</b>                            | 4,356.7            | <b>51,589.3</b>                     | <b>13,821.8</b>                        | <b>51,459.1</b>                             | 19.9        | 30.9     | 49.1     | 100.0                                      | 26.8                                    |
| 2016_Q3*        | 10,518.0                  | 15,187.8 | 22,676.6 | <b>48,382.3</b>                            | 3,809.9            | <b>52,192.2</b>                     | <b>14,863.3</b>                        | <b>51,951.4</b>                             | 21.7        | 31.4     | 46.9     | 100.0                                      | 28.5                                    |
| 2016_Q4*        | 13,410.2                  | 16,003.2 | 24,486.5 | <b>53,900.0</b>                            | 4,593.0            | <b>58,493.0</b>                     | <b>18,153.6</b>                        | <b>58,086.6</b>                             | 24.9        | 29.7     | 45.4     | 100.0                                      | 31.0                                    |
| 2017_Q1*        | 13,147.3                  | 18,508.1 | 26,933.9 | <b>58,589.3</b>                            | 3,965.0            | <b>62,554.3</b>                     | <b>18,411.3</b>                        | <b>61,378.3</b>                             | 22.4        | 31.6     | 46.0     | 100.0                                      | 29.4                                    |
| 2017_Q2*        | 10,230.5                  | 19,587.9 | 28,593.5 | <b>58,411.9</b>                            | 4,329.5            | <b>62,741.5</b>                     | <b>15,870.0</b>                        | <b>61,228.3</b>                             | 17.5        | 33.5     | 49.0     | 100.0                                      | 25.3                                    |
| 2017_Q3*        | 12,213.4                  | 19,776.2 | 26,614.7 | <b>58,604.3</b>                            | 4,844.3            | <b>63,448.6</b>                     | <b>17,510.4</b>                        | <b>60,996.2</b>                             | 20.8        | 33.7     | 45.4     | 100.0                                      | 27.6                                    |
| 2017_Q4*        | 14,963.2                  | 20,142.8 | 27,555.4 | <b>62,661.5</b>                            | 5,265.5            | <b>67,927.0</b>                     | <b>20,456.3</b>                        | <b>64,622.6</b>                             | 23.9        | 32.1     | 44.0     | 100.0                                      | 30.1                                    |
| 2018_Q1*        | 14,575.5                  | 21,522.4 | 31,613.9 | <b>67,711.8</b>                            | 5,249.4            | <b>72,961.1</b>                     | <b>20,855.2</b>                        | <b>70,352.7</b>                             | 21.5        | 31.8     | 46.7     | 100.0                                      | 28.6                                    |
| 2018_Q2*        | 11,128.2                  | 23,712.9 | 32,706.6 | <b>67,547.7</b>                            | 4,921.8            | <b>72,469.5</b>                     | <b>17,787.7</b>                        | <b>69,813.9</b>                             | 16.5        | 35.1     | 48.4     | 100.0                                      | 24.5                                    |
| 2018_Q3*        | 13,199.9                  | 24,318.0 | 31,336.3 | <b>68,854.2</b>                            | 5,367.7            | <b>74,221.9</b>                     | <b>19,685.6</b>                        | <b>70,799.8</b>                             | 19.2        | 35.3     | 45.5     | 100.0                                      | 26.5                                    |
| 2018_Q4*        | 16,020.0                  | 25,217.1 | 33,622.2 | <b>74,859.2</b>                            | 6,084.4            | <b>80,943.6</b>                     | <b>22,925.3</b>                        | <b>77,981.2</b>                             | 21.4        | 33.7     | 44.9     | 100.0                                      | 28.3                                    |
| 2019_Q1*        | 15,569.5                  | 26,208.7 | 37,345.4 | <b>79,123.6</b>                            | 5,727.0            | <b>84,850.6</b>                     | <b>23,262.7</b>                        | <b>81,897.4</b>                             | 19.7        | 33.1     | 47.2     | 100.0                                      | 27.4                                    |
| 2019_Q2*        | 12,080.1                  | 27,998.5 | 38,715.0 | <b>78,793.5</b>                            | 5,518.5            | <b>84,312.0</b>                     | <b>20,173.4</b>                        | <b>80,645.1</b>                             | 15.3        | 35.5     | 49.1     | 100.0                                      | 23.9                                    |
| 2019_Q3*        | 14,765.9                  | 28,489.7 | 36,573.2 | <b>79,828.9</b>                            | 5,722.9            | <b>85,551.8</b>                     | <b>22,495.8</b>                        | <b>81,855.7</b>                             | 18.5        | 35.7     | 45.8     | 100.0                                      | 26.3                                    |
| 2019_Q4*        | 18,066.8                  | 29,113.1 | 41,636.2 | <b>88,816.2</b>                            | 5,949.9            | <b>94,766.0</b>                     | <b>26,598.3</b>                        | <b>90,234.1</b>                             | 20.3        | 32.8     | 46.9     | 100.0                                      | 28.1                                    |

\*Provisional

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

| Year<br>Quarter | Quarterly Value Added (Ghc Million) |          |          |  | Net indirect Taxes | Total (Oil GDP in purchaser's value) | ow Informal GDP in purchaser's value | Total (Non Oil GDP)** | Year-on-Year change (%) |          |          |                   |                                      |                       |  |
|-----------------|-------------------------------------|----------|----------|--|--------------------|--------------------------------------|--------------------------------------|-----------------------|-------------------------|----------|----------|-------------------|--------------------------------------|-----------------------|--|
|                 | Agriculture                         | Industry | Services | Total Value Added (GDP @ basic prices) |                    |                                      |                                      |                       | Agriculture             | Industry | Services | Total (Oil GDP)** | ow Informal GDP in purchaser's value | Total (Non-oil GDP)** |  |
| 2013_Q1*        | 5,878.2                             | 10,921.3 | 12,600.6 | <b>29,400.1</b>                        | 1,443.3            | <b>30,843.4</b>                      | 8,473.6                              | <b>29,052.0</b>       |                         |          |          |                   |                                      |                       |  |
| 2013_Q2*        | 5,626.2                             | 10,912.2 | 12,442.4 | <b>28,980.8</b>                        | 1,657.5            | <b>30,638.3</b>                      | 8,199.2                              | <b>28,910.2</b>       |                         |          |          |                   |                                      |                       |  |
| 2013_Q3*        | 6,026.7                             | 10,559.1 | 11,862.3 | <b>28,448.1</b>                        | 1,683.9            | <b>30,132.0</b>                      | 8,469.1                              | <b>28,568.3</b>       |                         |          |          |                   |                                      |                       |  |
| 2013_Q4*        | 7,758.4                             | 10,711.8 | 11,502.9 | <b>29,973.2</b>                        | 2,063.1            | <b>32,036.3</b>                      | 10,149.6                             | <b>30,316.6</b>       |                         |          |          |                   |                                      |                       |  |
| 2014_Q1*        | 6,361.7                             | 9,835.6  | 12,933.4 | <b>29,130.8</b>                        | 1,408.9            | <b>30,539.7</b>                      | 9,011.3                              | <b>28,735.7</b>       | 8.2                     | -9.9     | 2.6      | <b>-1.0</b>       | <b>6.3</b>                           | <b>-1.1</b>           |  |
| 2014_Q2*        | 5,456.3                             | 11,146.2 | 13,601.5 | <b>30,204.0</b>                        | 1,750.7            | <b>31,954.7</b>                      | 8,259.3                              | <b>30,235.5</b>       | -3.0                    | 2.1      | 9.3      | <b>4.3</b>        | <b>0.7</b>                           | <b>4.6</b>            |  |
| 2014_Q3*        | 6,038.5                             | 12,096.1 | 12,520.6 | <b>30,655.2</b>                        | 1,864.7            | <b>32,519.9</b>                      | 8,693.1                              | <b>30,690.0</b>       | 0.2                     | 14.6     | 5.5      | <b>7.9</b>        | <b>2.6</b>                           | <b>7.4</b>            |  |
| 2014_Q4*        | 7,671.4                             | 10,521.5 | 11,961.3 | <b>30,154.3</b>                        | 2,080.0            | <b>32,234.3</b>                      | 10,102.4                             | <b>30,321.1</b>       | -1.1                    | -1.8     | 4.0      | <b>0.6</b>        | <b>-0.5</b>                          | <b>0.0</b>            |  |
| 2015_Q1*        | 6,838.3                             | 10,675.8 | 13,466.0 | <b>30,980.1</b>                        | 1,526.1            | <b>32,506.1</b>                      | 9,603.2                              | <b>30,633.3</b>       | 7.5                     | 8.5      | 4.1      | <b>6.4</b>        | <b>6.6</b>                           | <b>6.6</b>            |  |
| 2015_Q2*        | 5,574.3                             | 11,720.4 | 13,267.2 | <b>30,561.9</b>                        | 1,770.3            | <b>32,332.2</b>                      | 8,385.9                              | <b>30,515.2</b>       | 2.2                     | 5.2      | -2.5     | <b>1.2</b>        | <b>1.5</b>                           | <b>0.9</b>            |  |
| 2015_Q3*        | 6,076.9                             | 11,400.7 | 12,702.3 | <b>30,179.8</b>                        | 1,821.8            | <b>32,001.6</b>                      | 8,762.6                              | <b>30,295.3</b>       | 0.6                     | -5.7     | 1.5      | <b>-1.6</b>       | <b>0.8</b>                           | <b>-1.3</b>           |  |
| 2015_Q4*        | 7,614.0                             | 10,283.9 | 13,111.1 | <b>31,009.0</b>                        | 2,157.0            | <b>33,166.0</b>                      | 10,279.9                             | <b>31,149.7</b>       | -0.7                    | -2.3     | 9.6      | <b>2.9</b>        | <b>1.8</b>                           | <b>2.7</b>            |  |
| 2016_Q1*        | 6,863.5                             | 11,242.4 | 13,825.1 | <b>31,931.0</b>                        | 1,588.3            | <b>33,519.3</b>                      | 9,744.2                              | <b>32,100.2</b>       | 0.4                     | 5.3      | 2.7      | <b>3.1</b>        | <b>1.5</b>                           | <b>4.8</b>            |  |
| 2016_Q2*        | 5,758.7                             | 11,023.8 | 13,675.1 | <b>30,457.7</b>                        | 1,835.6            | <b>32,293.3</b>                      | 8,571.5                              | <b>31,555.1</b>       | 3.3                     | -5.9     | 3.1      | <b>-0.1</b>       | <b>2.2</b>                           | <b>3.4</b>            |  |
| 2016_Q3*        | 6,310.1                             | 12,411.5 | 13,022.9 | <b>31,744.4</b>                        | 1,935.2            | <b>33,679.7</b>                      | 9,106.5                              | <b>31,866.5</b>       | 3.8                     | 8.9      | 2.5      | <b>5.2</b>        | <b>3.9</b>                           | <b>5.2</b>            |  |
| 2016_Q4*        | 7,930.0                             | 11,311.8 | 13,491.2 | <b>32,732.9</b>                        | 2,293.7            | <b>35,026.6</b>                      | 10,725.9                             | <b>32,742.5</b>       | 4.2                     | 10.0     | 2.9      | <b>5.6</b>        | <b>4.3</b>                           | <b>5.1</b>            |  |
| 2017_Q1*        | 7,333.6                             | 12,961.8 | 14,020.2 | <b>34,315.7</b>                        | 1,696.8            | <b>36,012.5</b>                      | 10,352.9                             | <b>33,760.0</b>       | 6.8                     | 15.3     | 1.4      | <b>7.4</b>        | <b>6.2</b>                           | <b>5.2</b>            |  |
| 2017_Q2*        | 5,980.3                             | 13,316.1 | 14,601.0 | <b>33,897.4</b>                        | 1,971.9            | <b>35,869.3</b>                      | 9,125.0                              | <b>33,651.3</b>       | 3.8                     | 20.8     | 6.8      | <b>11.1</b>       | <b>6.5</b>                           | <b>6.6</b>            |  |
| 2017_Q3*        | 6,835.5                             | 14,152.1 | 13,622.6 | <b>34,610.2</b>                        | 1,995.4            | <b>36,605.6</b>                      | 9,870.5                              | <b>33,438.6</b>       | 8.3                     | 14.0     | 4.6      | <b>8.7</b>        | <b>8.4</b>                           | <b>4.9</b>            |  |
| 2017_Q4*        | 8,353.8                             | 12,761.4 | 13,532.4 | <b>34,647.6</b>                        | 2,303.2            | <b>36,950.8</b>                      | 11,257.7                             | <b>33,309.8</b>       | 5.3                     | 12.8     | 0.3      | <b>5.5</b>        | <b>5.0</b>                           | <b>1.7</b>            |  |
| 2018_Q1*        | 7,676.1                             | 14,313.4 | 14,214.4 | <b>36,204.0</b>                        | 1,766.2            | <b>37,970.1</b>                      | 10,805.0                             | <b>35,182.7</b>       | 4.7                     | 10.4     | 1.4      | <b>5.4</b>        | <b>4.4</b>                           | <b>4.2</b>            |  |
| 2018_Q2*        | 6,267.9                             | 14,789.7 | 14,673.1 | <b>35,730.8</b>                        | 2,074.1            | <b>37,804.9</b>                      | 9,521.6                              | <b>35,317.9</b>       | 4.8                     | 11.1     | 0.5      | <b>5.4</b>        | <b>4.3</b>                           | <b>5.0</b>            |  |
| 2018_Q3*        | 7,209.8                             | 15,803.2 | 14,095.4 | <b>37,108.5</b>                        | 2,190.9            | <b>39,299.4</b>                      | 10,458.5                             | <b>36,272.7</b>       | 5.5                     | 11.7     | 3.5      | <b>7.4</b>        | <b>6.0</b>                           | <b>8.5</b>            |  |
| 2018_Q4*        | 8,723.6                             | 13,902.1 | 14,311.8 | <b>36,937.5</b>                        | 2,535.7            | <b>39,473.2</b>                      | 11,862.6                             | <b>36,093.9</b>       | 4.4                     | 8.9      | 5.8      | <b>6.8</b>        | <b>5.4</b>                           | <b>8.4</b>            |  |
| 2019_Q1*        | 7,845.5                             | 15,518.3 | 15,238.7 | <b>38,602.6</b>                        | 1,893.3            | <b>40,495.9</b>                      | 11,283.7                             | <b>37,301.0</b>       | 2.2                     | 8.4      | 7.2      | <b>6.7</b>        | <b>4.4</b>                           | <b>6.0</b>            |  |
| 2019_Q2*        | 6,464.4                             | 15,690.4 | 15,626.4 | <b>37,781.2</b>                        | 2,171.4            | <b>39,952.6</b>                      | 9,994.0                              | <b>36,839.7</b>       | 3.1                     | 6.1      | 6.5      | <b>5.7</b>        | <b>5.0</b>                           | <b>4.3</b>            |  |
| 2019_Q3*        | 7,638.8                             | 16,701.0 | 14,894.4 | <b>39,234.1</b>                        | 2,277.3            | <b>41,511.4</b>                      | 11,104.3                             | <b>37,951.2</b>       | 5.9                     | 5.7      | 5.7      | <b>5.6</b>        | <b>6.2</b>                           | <b>4.6</b>            |  |
| 2019_Q4*        | 9,317.4                             | 14,649.9 | 15,884.2 | <b>39,851.6</b>                        | 2,748.5            | <b>42,600.0</b>                      | 12,764.0                             | <b>39,021.3</b>       | 6.8                     | 5.4      | 11.0     | <b>7.9</b>        | <b>7.6</b>                           | <b>8.1</b>            |  |

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

| Year<br>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 InformalGDP in purchaser's value |
| 2013_Q1*        | 5,878.2                             | 10,921.3 | 12,580.6 | <b>29,380.1</b>                        | 1,443.3            | <b>30,823.4</b>                  | 8,470.1                              | -                             | -        | -       | -            | -                                   |
| 2013_Q2*        | 5,752.2                             | 10,916.7 | 12,496.1 | <b>29,165.1</b>                        | 1,550.4            | <b>30,715.5</b>                  | 8,331.9                              | -2.1                          | 0.0      | -0.7    | -0.4         | -1.6                                |
| 2013_Q3*        | 5,843.7                             | 10,797.5 | 12,291.4 | <b>28,932.6</b>                        | 1,594.9            | <b>30,527.5</b>                  | 8,378.8                              | 1.6                           | -1.1     | -1.6    | -0.6         | 0.6                                 |
| 2013_Q4*        | 6,322.4                             | 10,776.1 | 12,102.1 | <b>29,200.5</b>                        | 1,712.0            | <b>30,912.5</b>                  | 8,822.9                              | 8.2                           | -0.2     | -1.5    | 1.3          | 5.3                                 |
| 2014_Q1*        | 6,443.3                             | 10,504.7 | 12,190.3 | <b>29,138.2</b>                        | 1,703.4            | <b>30,841.6</b>                  | 8,958.2                              | 1.9                           | -2.5     | 0.7     | -0.2         | 1.5                                 |
| 2014_Q2*        | 6,400.8                             | 10,563.2 | 12,487.7 | <b>29,451.7</b>                        | 1,726.7            | <b>31,178.4</b>                  | 8,974.6                              | -0.7                          | 0.6      | 2.4     | 1.1          | 0.2                                 |
| 2014_Q3*        | 6,403.7                             | 10,947.4 | 12,647.4 | <b>29,998.6</b>                        | 1,771.9            | <b>31,770.5</b>                  | 9,029.7                              | 0.0                           | 3.6      | 1.3     | 1.9          | 0.6                                 |
| 2014_Q4*        | 6,382.0                             | 10,899.9 | 12,754.2 | <b>30,036.0</b>                        | 1,773.3            | <b>31,809.3</b>                  | 9,016.5                              | -0.3                          | -0.4     | 0.8     | 0.1          | -0.1                                |
| 2015_Q1*        | 6,501.1                             | 11,109.9 | 12,887.3 | <b>30,498.4</b>                        | 1,802.6            | <b>32,300.9</b>                  | 9,164.5                              | 1.9                           | 1.9      | 1.0     | 1.5          | 1.6                                 |
| 2015_Q2*        | 6,530.6                             | 11,253.5 | 12,803.8 | <b>30,587.9</b>                        | 1,807.4            | <b>32,395.3</b>                  | 9,196.1                              | 0.5                           | 1.3      | -0.6    | 0.3          | 0.3                                 |
| 2015_Q3*        | 6,540.2                             | 11,079.6 | 12,849.2 | <b>30,469.0</b>                        | 1,796.7            | <b>32,265.7</b>                  | 9,213.5                              | 0.1                           | -1.5     | 0.4     | -0.4         | 0.2                                 |
| 2015_Q4*        | 6,525.9                             | 11,020.2 | 13,136.7 | <b>30,682.7</b>                        | 1,815.8            | <b>32,498.5</b>                  | 9,257.9                              | -0.2                          | -0.5     | 2.2     | 0.7          | 0.5                                 |
| 2016_Q1*        | 6,532.2                             | 11,161.8 | 13,226.4 | <b>30,920.4</b>                        | 1,831.4            | <b>32,751.8</b>                  | 9,293.1                              | 0.1                           | 1.3      | 0.7     | 0.8          | 0.4                                 |
| 2016_Q2*        | 6,578.3                             | 10,987.7 | 13,328.4 | <b>30,894.4</b>                        | 1,847.8            | <b>32,742.1</b>                  | 9,339.5                              | 0.7                           | -1.6     | 0.8     | 0.0          | 0.5                                 |
| 2016_Q3*        | 6,636.6                             | 11,240.4 | 13,408.6 | <b>31,285.5</b>                        | 1,876.1            | <b>33,161.7</b>                  | 9,425.5                              | 0.9                           | 2.3      | 0.6     | 1.3          | 0.9                                 |
| 2016_Q4*        | 6,715.6                             | 11,497.4 | 13,503.6 | <b>31,716.5</b>                        | 1,910.1            | <b>33,626.6</b>                  | 9,537.0                              | 1.2                           | 2.3      | 0.7     | 1.4          | 1.2                                 |
| 2017_Q1*        | 6,833.1                             | 11,927.2 | 13,552.3 | <b>32,312.7</b>                        | 1,935.9            | <b>34,245.3</b>                  | 9,689.2                              | 1.8                           | 3.7      | 0.4     | 1.8          | 1.6                                 |
| 2017_Q2*        | 6,888.5                             | 12,500.3 | 13,783.8 | <b>33,172.6</b>                        | 1,967.1            | <b>35,139.7</b>                  | 9,827.6                              | 0.8                           | 4.8      | 1.7     | 2.6          | 1.4                                 |
| 2017_Q3*        | 7,019.9                             | 12,935.4 | 13,933.7 | <b>33,889.0</b>                        | 1,980.2            | <b>35,869.2</b>                  | 10,018.6                             | 1.9                           | 3.5      | 1.1     | 2.1          | 1.9                                 |
| 2017_Q4*        | 7,125.8                             | 13,297.9 | 13,944.1 | <b>34,367.7</b>                        | 1,991.8            | <b>36,359.5</b>                  | 10,151.5                             | 1.5                           | 2.8      | 0.1     | 1.4          | 1.3                                 |
| 2018_Q1*        | 7,211.4                             | 13,635.8 | 13,992.6 | <b>34,839.8</b>                        | 2,009.2            | <b>36,849.0</b>                  | 10,264.6                             | 1.2                           | 2.5      | 0.3     | 1.3          | 1.1                                 |
| 2018_Q2*        | 7,283.3                             | 14,004.2 | 14,010.6 | <b>35,298.1</b>                        | 2,034.7            | <b>37,332.9</b>                  | 10,363.7                             | 1.0                           | 2.7      | 0.1     | 1.3          | 1.0                                 |
| 2018_Q3*        | 7,376.9                             | 14,417.0 | 14,128.8 | <b>35,922.7</b>                        | 2,083.6            | <b>38,006.3</b>                  | 10,510.7                             | 1.3                           | 2.9      | 0.8     | 1.8          | 1.4                                 |
| 2018_Q4*        | 7,469.4                             | 14,702.1 | 14,323.7 | <b>36,495.2</b>                        | 2,141.7            | <b>38,636.9</b>                  | 10,661.9                             | 1.3                           | 2.0      | 1.4     | 1.7          | 1.4                                 |
| 2019_Q1*        | 7,511.7                             | 15,003.3 | 14,579.8 | <b>37,094.8</b>                        | 2,173.5            | <b>39,268.4</b>                  | 10,781.6                             | 0.6                           | 2.0      | 1.8     | 1.6          | 1.1                                 |
| 2019_Q2*        | 7,560.8                             | 15,228.5 | 14,818.1 | <b>37,607.4</b>                        | 2,197.8            | <b>39,805.3</b>                  | 10,899.7                             | 0.7                           | 1.5      | 1.6     | 1.4          | 1.1                                 |
| 2019_Q3*        | 7,668.1                             | 15,452.9 | 15,017.8 | <b>38,138.8</b>                        | 2,219.4            | <b>40,358.3</b>                  | 11,061.2                             | 1.4                           | 1.5      | 1.3     | 1.4          | 1.5                                 |
| 2019_Q4*        | 7,816.5                             | 15,639.9 | 15,410.9 | <b>38,867.3</b>                        | 2,272.6            | <b>41,140.0</b>                  | 11,286.5                             | 1.9                           | 1.2      | 2.6     | 1.9          | 2.0                                 |

\*Provisional