

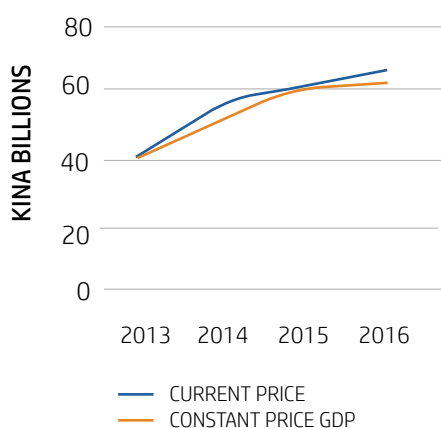


# PAPUA NEW GUINEA NATIONAL ACCOUNTS 2009 to 2016

## GROSS DOMESTIC PRODUCT AT CURRENT AND CONSTANT PRICE

EMBARGO: 11:30am, Wednesday 10th April, 2019

**PNG GDP LEVELS, 2013 to 2016**



### GDP LEVELS, CURRENT PRICE AND CONSTANT PRICE

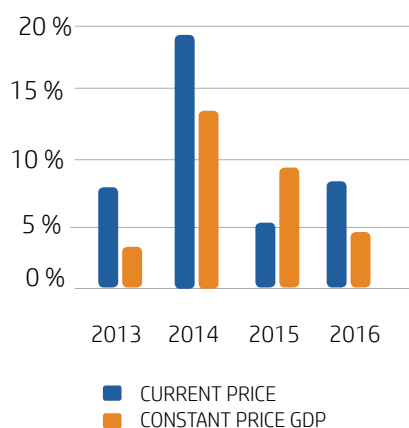
(KINA BILLIONS)

	2013	2014	2015	2016
CURRENT PRICE GDP	47.7	57.1	60.1	65.0
CONSTANT PRICE GDP	47.7	54.2	59.3	61.7

### GDP GROWTH, CURRENT PRICE AND CONSTANT PRICE, PERCENTAGE (%) CHANGE

	2013	2014	2015	2016
CURRENT PRICE GDP	7.5%	19.7%	5.3%	8.1%
CONSTANT PRICE GDP	3.8%	13.5%	9.5%	4.1%

**PNG GDP GROWTH, 2013 to 2016**



### MAIN HIGHLIGHTS OF 2016 GROSS DOMESTIC PRODUCT (GDP)

#### GDP at Current Prices

Current Price GDP for 2016 is 65.0 billion Kina. This is an increase of 4.9 billion Kina or 8.1% from 2015 Current Price GDP.

#### GDP at Constant Price

Constant Price GDP for 2016 is 61.7 billion Kina. This is an increase of 2.4 billion Kina or 4.1% from 2015 Constant Price GDP.

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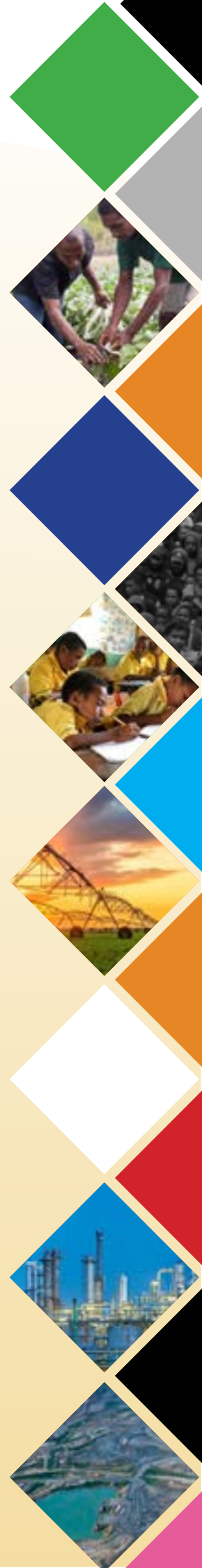
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## FOREWORD

It is my pleasure to release the Papua New Guinea National Accounts publication on Gross Domestic Product (GDP) at Current and Constant prices for the years 2009 to 2016. The release of this National Accounts series is another milestone achievement for the National Statistical Office (NSO) in its endeavor to provide timely and quality statistics to the many users of statistical information.

Production of timely and quality statistics to meet the ever increasing demand for statistical information is always challenging to Statistical Offices around the world and PNG NSO is no exception. A key challenge faced by PNG NSO currently is the coordination and collection of source data, in particular administrative data collected by other state agencies. The compilation of data from these sources into a coherent set of accounts is also a challenge. As the mandated agency to provide statistical services to the community, the NSO strives to overcome these challenges, thus, this release of the national accounts figures is an indication of the efforts the NSO is putting into improving the production of timely and reliable statistics. However, more work needs to be done by the NSO and the reporting community as we move towards the annual production of National Accounts for Papua New Guinea.

In the production of this series of National Accounts figures, there were other stakeholders that assisted NSO and I wish to acknowledge their efforts and contribution including other international organisations for the continuous support to NSO. Thus, our sincere gratitude to the Australian Bureau of Statistics (ABS) for the technical assistance provided through their advisors under the partnership arrangement between ABS and PNG NSO in providing advice, guidance, training and mentoring of NSO staff and assistance in the compilation process.

I acknowledge the contributions of the Department of Treasury, and the Bank of Papua New Guinea, our major stakeholders, in providing data and being part of the GDP discussion team with NSO throughout the whole process.

I also extend our appreciation to the Internal Revenue Commission (IRC) for providing the Goods and Services Tax (GST) and Company Income Tax (CIT) data for 2016; and other government agencies that provided the required data to compile this series of National Accounts.

My gratitude goes to all the business houses in the private sector throughout Papua New Guinea which provided the raw financial and non-financial data needed either through NSO's Survey of Business Activities (SBA) or the Business Liaison Survey (BLS) conducted by the Bank of Papua New Guinea. The provision of these data has enabled NSO to produce this National Accounts series, 2009 - 2016.

I take this opportunity to urge all stakeholders to foster and promote this collaborative effort which will contribute to making NSO's statistical system effective because we do have the legitimacy backed up by the Statistical Services Act (1980) that provides both the safeguards of confidentiality for the providers of raw data and assurance of integrity and accessibility for users.

Finally, with improved data sources, sound statistical methods, new technologies and strengthened statistical systems, these are critical enablers to better decisions that eventually results in better lives for all of us. As the saying goes: Better Data, Better Lives!

**JULIANA KOMUN - KUBAK**  
**ACTING NATIONAL STATISTICIAN**

## REVISION ANALYSIS

### REVISIONS IN THIS PUBLICATION FROM PREVIOUSLY RELEASED PRELIMINARY GDP

It is a standard international practice to revise previous GDP estimates as new or more comprehensive data becomes available.

The NSO made available preliminary GDP 2006 – 2015 in March 2018. This release contains revisions to 2014 and 2015 current and constant price GDP. These revisions are due to refinements made to a number of industries as new data became available.

### REVISIONS TO CURRENT PRICE GDP

In the 2015 preliminary release, 2015 Current Price GDP was estimated to be 57,136 million Kina. In this release, 2015 Current Price GDP is estimated to be 60,139 million Kina, this is a revision of 3,003 million Kina.

In the 2015 preliminary release, 2014 Current Price GDP was estimated to be 56,760 million Kina. In this release 2014 Current Price GDP is estimated to be 57,131 million Kina, this is a revision of 371 million Kina.

Table 1 shows revision by industries for 2014 and 2015. The five (5) industries shown contribute most of the revision for 2015 and Extraction of Crude Petroleum and Natural Gas contribute most of the revision for 2014.

**Table 1. Revisions to Current Price GVA (K Million) - Key contributors by industry**

	2014	2015
Mining and Quarrying		
Extraction of Crude Petroleum and Natural Gas	383	1,900
Other Mining	-6	161
Construction	0	602
Public Administration and Defence, Compulsory Social Security	0	71
Education	-1	108
Human Health and Social Work Activities	-17	165

### MINING AND QUARRYING.

#### Revision to Extraction of Crude Petroleum and Natural Gas

- 2014 revision = 383 million Kina
- 2015 revision = 1,900 million Kina

In this industry, Extraction of Crude Petroleum and Natural Gas is reported separately, the other division are combined to form Other Mining. This is due to the importance of the Extraction of Crude Petroleum and Natural Gas to PNG's economy.

The Extraction of Crude Petroleum and Natural Gas has seen large revisions in 2014 and 2015. These revisions are due to refinement to the ratio between intermediate consumption and output. In the 2015 preliminary release of 2015 GDP, the ratio of intermediate consumption to output was 38% for 2013 to

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2015, this was based on available information at that time. In this release, the NSO has updated the ratio of the intermediate consumption to output with new administrative and survey data. The ratio of intermediate consumption to output is now estimated to be 22% in 2016. This lower ratio was gradually applied from 2013 to 2016, so that the ratio in 2013 remains at 38% and falls to 22% in 2016.

GDP is calculated by subtracting Intermediate Consumption from Output. The level of Output for Extraction of Crude Petroleum and Natural Gas has not been revised. The refinement to the ratio has reduced the level of Intermediate Consumption causing an upward revision to the Gross Value Added (GVA) of Extraction of Crude Petroleum and Natural Gas.

### **Revision to Other Mining**

- 2015 revision = 161 million Kina

In the 2015 preliminary GDP release, Other Mining fell by 15.3%, the revised percentage change is now negative 12.1%. This revision is due to aligning NSO's estimates with new administrative and survey data.

### **CONSTRUCTION**

- 2015 revision = 602 million Kina

In the 2015 preliminary GDP release, Construction fell by 16.8%, the revised percentage change is now negative 4.6%.

NSO calculates GVA for Construction using the administrative data. This data showed strong decline in the current price output of this industry. For the 2016 GDP release, the movement for Construction is validated against the additional administrative and survey data which showed a moderate decline. NSO has refined its estimates to reflect this moderate decline.

### **GOVERNMENT SECTOR**

The government sector consists of:

- Public Administrative and Defence, Compulsory Social Security
- Education
- Human Health and Social Work Activities

The NSO uses government salaries and wages as an indicator for the changes to current price GVA of the government sector. In the 2015 preliminary GDP release, the total for these three (3) Industries was 5,378 million Kina in 2014 and 5,471 million Kina in 2015, this is an increase of 1.7%. For this release, the total for these three (3) Industries was 5,360 million Kina in 2014 and 5,815 million Kina in 2015, this is an increase of 8.5%. This revision is due to aligning the growth of these three (3) industries with the growth in government salaries and wages.

### **REVISIONS TO CONSTANT PRICE GDP**

In the 2015 preliminary release, 2015 Constant Price GDP was estimated to be 58,172 million Kina. In this release 2015 Constant Price GDP is estimated to be 59,323 million Kina, this is a revision of 1,151 million Kina.

In the 2015 preliminary release, 2014 Constant Price GDP was estimated to 55,080 million Kina. In this release 2014 Constant Price GDP is estimated to be 54,185 million Kina, this is a downward revision of 895 million Kina.

**Table 2. Revisions to Constant Price GVA (K Million) - Key contributors by industry for 2014 & 2015**

	2014	2015
Agriculture, Forestry and Fishing	0	0
Mining and Quarrying	0	0
Extraction of Crude Petroleum and Natural Gas	305	2752
Other Mining	0	0
Manufacturing	-41	-83
Electricity, Gas, Steam and Air-conditioning Supply	-12	18
Water Supply, Sewage, Waste Management	-20	-19
Construction	-109	35
Wholesale and Retail Trade	-52	-114
Transport and Storage	-58	8
Accommodation and Food Service Activity	-20	-39
Information and Communication	59	60
Financial and Insurance Activities	-189	-201
Real Estate Activities	-32	-73
Professional, Scientific and Technical Activities	-41	-61
Administrative and Support Service Activities	-448	-976
Public Administration and Defence, Compulsory Social Security	-108	-164
Education	-50	-1
Human Health and Social Work Activities	-59	34
Others	-19	-27

The revision to 2014 Constant Price GDP of negative 895 million Kina was driven by the positive revision to Extraction of Crude Petroleum and Natural Gas and offset by negative revision in other industries. The revision to Constant Price of Extraction of Crude Petroleum and Natural Gas is due to revisions to Current Price Extraction of Crude Petroleum and Natural Gas.

The 2014 revisions in the other industries are due to updates to deflators. As part of the compilation process for the 2016 GDP, the NSO reviewed the deflators used to compile Constant Price estimates. The review was to ensure the deflator selected for a particular industry was the most appropriate for that industry.

The revision to 2015 Constant Price GDP of 1,151 million Kina was driven by the positive revision to Extraction of Crude Petroleum and Natural Gas and offset by negative revision in other industries. The revision to Constant Price of Extraction of Crude Petroleum and Natural Gas is due to revisions to Current Price Extraction of Crude Petroleum and Natural Gas.

The 2015 revisions in the other industries are due to updates to deflators.

## OVERVIEW OF PAPUA NEW GUINEA ECONOMY, 2009 to 2016

### PNG Gross Domestic Product (GDP), 2009 to 2016

#### GDP at Current Prices

Current Price GDP for 2016 is 65,038 million Kina, this is an increase of 4,899 million Kina or 8.1% from 2015 Current Price GDP.

Key contributing industries were:

- 1,121 million Kina or 10.7 % increase in Agriculture, Forestry and Fishing
- 1,317 million Kina or 29.0 % increase in Other Mining
- 426 million Kina or 9.0 % increase in Construction
- 529 million Kina or 9.1 % increase in Wholesale and Retail
- 448 million Kina or 12.3 % increase in Real Estate Activities
- 388 million Kina or 9.0 % increase in Administrative and Support Services Activities

The main offset to this positive contribution was the Extraction of Crude Petroleum and Natural Gas with a fall of 314 million Kina or -3.1%.

#### GDP at Constant Price

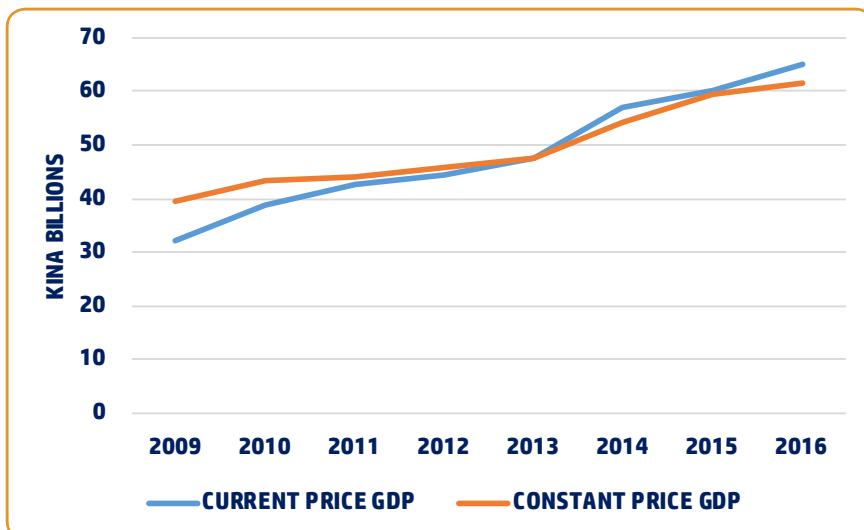
Constant Price GDP for 2016 is 61,742 million Kina, this is an increase of 2,419 million Kina or 4.1 % from 2015 Constant Price GDP.

Key contributing industries were:

- 245 million Kina or 2.7 % increase in Agriculture, Forestry and Fishing
- 859 million Kina or 6.7 % increase in Extraction of Crude Petroleum and Natural Gas
- 928 million Kina or 17.4 % increase in Other Mining

The main offset to this positive contribution was the Extraction of Crude Petroleum and Natural Gas with a fall of 314 million Kina or -3.1%.

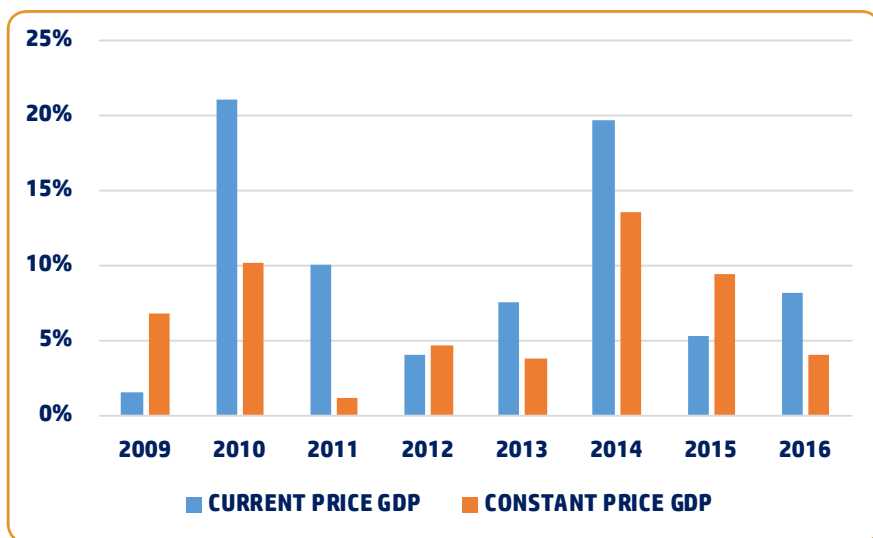
**FIGURE 1. GDP LEVELS 2009 to 2016**



The Gross Domestic Product (GDP) in levels show a moderate increase in PNG's economy from years 2009 to 2016 (See Figure 1). The GDP at Current Prices increased from 32.0 billion Kina in 2009 to 65.0 billion Kina in 2016, this is an increase of 33 billion Kina or an average annual growth of 10.8 % over the reporting period. Whereas GDP at Constant Prices increased by 22.3 billion Kina or an average growth of 6.7 %, from 39.4 billion Kina to 61.7 billion Kina, 2009 to 2016.

In 2013, the Current and Constant Price GDP figures are the same as the year 2013 is the base year for the calculation of Constant Price GDP estimates; thus, the Constant Price estimates are all in 2013 prices whereas the Current Price GDP is valued using the prices prevailing in the respective years.

**FIGURE 2. PNG GDP GROWTH 2009 to 2016**

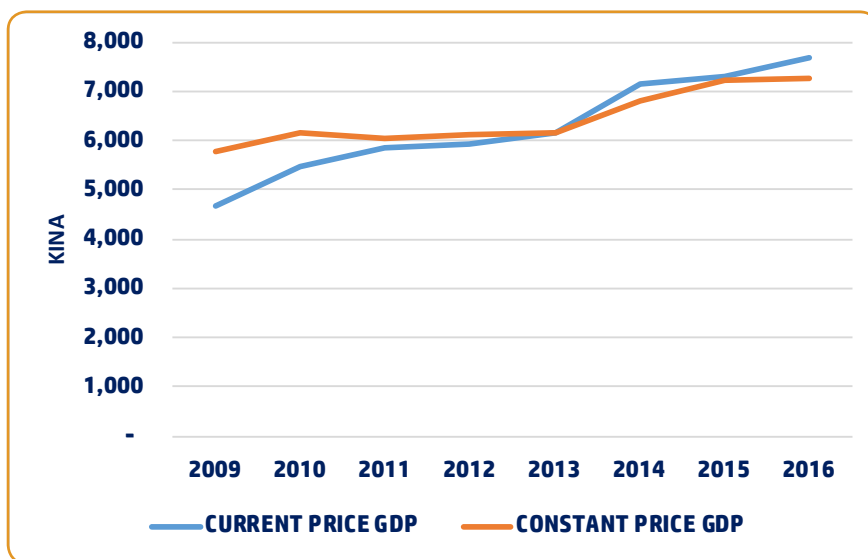


The Gross Domestic Product (GDP) in Current Price and Constant Price for PNG showed positive growth for all years (2009 to 2016). Despite the impact of the Global Financial Crisis in PNG's economy in 2009, the Current Price GDP still showed positive growth (up 1.6%).

Current Price GDP growth is stronger than Constant Price GDP growth when prices are increasing. In the years 2009, 2012 and 2015, Constant Price GDP growth was stronger than Current Price GDP growth due to falling prices in the economy.

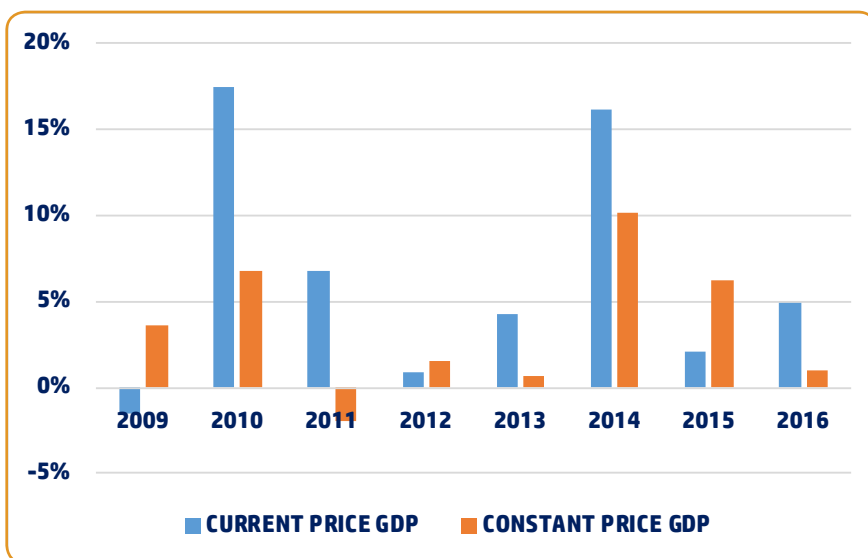
Current Price GDP in 2010 showed that the economy grew by 21.1 %, which is deemed to be the highest for this time period and was driven by the construction phase of the LNG project. Current Price GDP in 2014 showed that the economy grew by 19.7 % which was the result of the commencement of LNG production.

**FIGURE 3. GDP PER CAPITA IN LEVELS, KINA, 2009 to 2016**



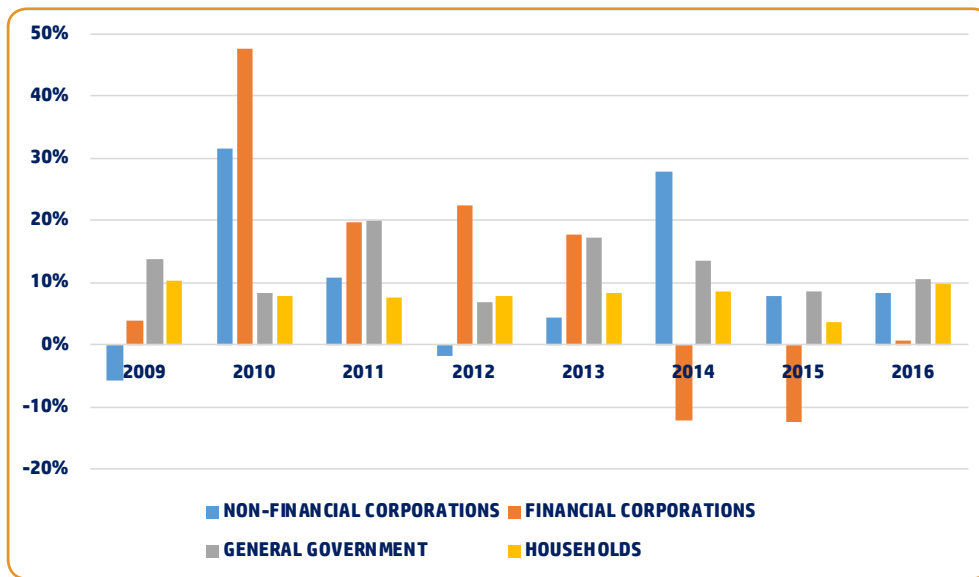
The level of GDP per capita has increased from 4,679 Kina in 2009 to 7,672 Kina in 2016 in Current Price GDP terms.

**FIGURE 4. GDP PER CAPITA, PERCENTAGE (%), 2009 to 2016**



GDP per Capita level increased from 7,314 Kina in 2015 to 7,672 Kina in 2016, this equates to an average increase in GDP per Capita of 7.5 % per annum (in Current Prices). There was a decline in the GDP per Capita in 2009 (-1.5 %) which was an effect of the population (up 3.1%) growing faster than Current Price GDP (up 1.6%). However, in year 2010, PNG recorded its strongest GDP per Capita with an increase of 17.4 percent followed by 16.1% in 2014.

**FIGURE 5. GVA GROWTH BY INSTITUTIONAL SECTORS, 2009 to 2016**



The graph above details the growth of four institutional sectors: Non-Financial Corporations, General Government, Financial Corporations and Households.

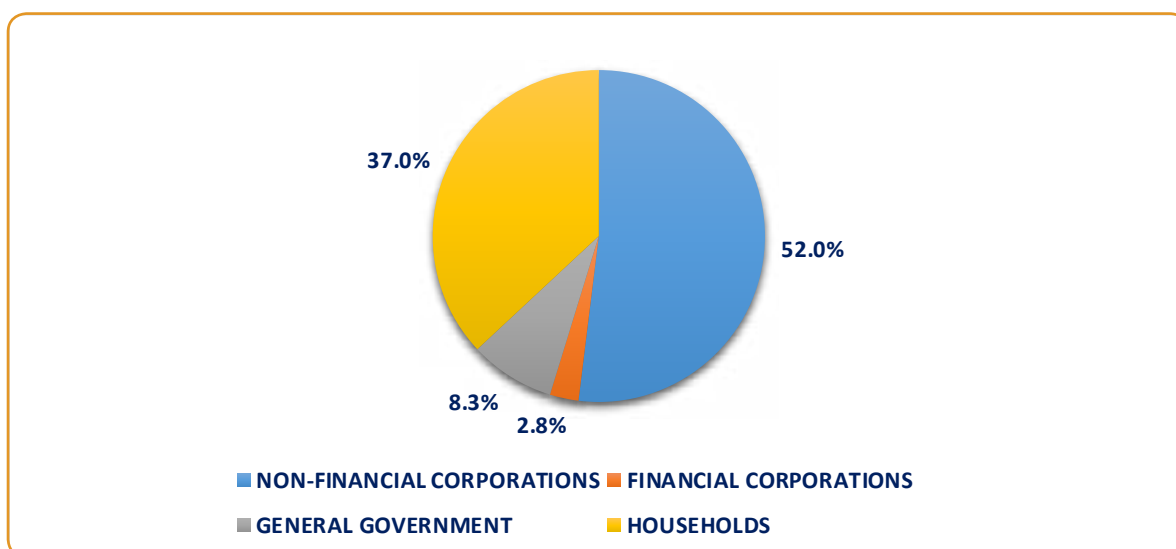
Non-Financial Corporations Sector recorded a growth of 7.9% in 2015 and 8.2% in 2016. The Non-Financial Sector highest recorded growth was 31.6% in 2010 due to strong growth in both Construction and Mining and Quarrying.

General Government Sector has shown moderate positive increases in time over the period (2009 to 2016). The strongest increase was 19.8 % in 2011.

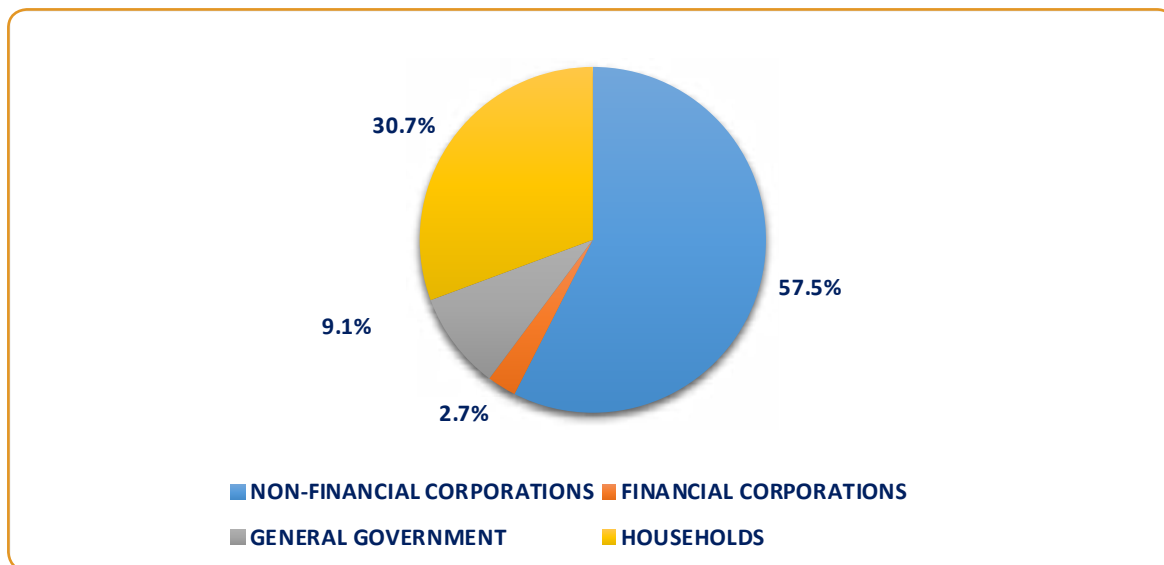
The Financial Corporations Sector showed a decline in 2014 and 2015, due to new policies implemented by the Government to the commercial banks to restrict foreign exchange fees and explicit charges.

Household Sector has shown moderate positive increases in time over the period (2009 to 2016). However, 2015 reported a low increase of 3.7 % due to the impact of the drought.

**FIGURE 6a. INSTITUTIONAL SECTOR SHARE, 2009 CURRENT PRICE**



**FIGURE 6b. INSTITUTIONAL SECTOR SHARE, 2016 CURRENT PRICE**



Non-Financial Corporations Sector is the largest contributor in 2016 with a 57.5% share (Figure 6b). This is up from 52.0% share in 2009 (Figure 6a), the increase is due to growth in the Mining and Quarrying industry.

## TABLE 1. KEY AGGREGATES

**TABLE 1A. GDP LEVELS, CURRENT PRICE AND CONSTANT PRICE  
(KINA BILLIONS)**

	2009	2010	2011	2012	2013	2014	2015	2016
CURRENT PRICE GDP	32.0	38.8	42.6	44.4	47.7	57.1	60.1	65.0
CONSTANT PRICE GDP	39.4	43.4	43.9	46.0	47.7	54.2	59.3	61.7

**TABLE 1B. GDP GROWTH, CURRENT PRICE AND CONSTANT PRICE, PERCENTAGE (%) CHANGE <sup>(b)</sup>**

	2009	2010	2011	2012	2013	2014	2015	2016
CURRENT PRICE GDP	1.6%	21.1%	10.0%	4.1%	7.5%	19.7%	5.3%	8.1%
CONSTANT PRICE GDP	6.8%	10.1%	1.1%	4.7%	3.8%	13.5%	9.5%	4.1%

**TABLE 1C. GDP PER CAPITA, CURRENT PRICE AND CONSTANT PRICE  
(KINA)**

	2009	2010	2011	2012	2013	2014	2015	2016
CURRENT PRICE GDP PER CAPITA (a)	4,679	5,493	5,861	5,915	6,169	7,163	7,314	7,672
CONSTANT PRICE GDP PER CAPITA	5,765	6,157	6,037	6,127	6,169	6,794	7,214	7,283

**TABLE 1D. GDP PER CAPITA, CURRENT PRICE AND CONSTANT PRICE, PERCENTAGE (%) CHANGE <sup>(b)</sup>**

	2009	2010	2011	2012	2013	2014	2015	2016
CURRENT PRICE GDP PER CAPITA	-1.5%	17.4%	6.7%	0.9%	4.3%	16.1%	2.1%	4.9%
CONSTANT PRICE GDP PER CAPITA	3.6%	6.8%	-1.9%	1.5%	0.7%	10.1%	6.2%	0.9%

(a) Population estimates from 2000 and 2011 Census and NSO projections.

(b) Percentage change on preceding year.

**TABLE 2. INDUSTRY OUTPUT, CURRENT PRICE ESTIMATES**

(KINA MILLIONS)

	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	10,127	11,307	12,192	12,469	13,211	14,792	15,018	16,438
B MINING AND QUARRYING - TOTAL	9,690	12,436	12,197	10,068	10,515	18,640	21,206	21,784
Extraction of crude petroleum and natural gas	1,728	2,336	2,556	2,241	2,447	10,282	13,850	12,382
Other Mining	7,963	10,100	9,641	7,827	8,068	8,358	7,356	9,402
C MANUFACTURING	4,167	4,954	5,536	5,724	6,070	6,317	5,771	6,391
D ELECTRICITY,GAS,STEAM AND AIRCONDITIONING SUPPLY	701	768	873	984	1,129	1,229	1,264	1,329
E WATER SUPPLY, SEWAGE, WASTE MANAGEMENT	215	235	252	268	325	361	369	384
F CONSTRUCTION	5,651	9,478	10,329	11,971	12,338	13,476	12,590	13,687
G WHOLESALE AND RETAIL TRADE	5,406	6,057	6,715	7,064	7,521	7,964	7,905	8,536
H TRANSPORT AND STORAGE	2,703	3,733	4,372	4,671	5,024	4,532	4,664	4,860
I ACCOMODATION AND FOOD SERVICE ACTIVITY	1,109	1,189	1,375	1,525	1,619	1,700	1,818	1,885
J INFORMATION AND COMMUNICATION	1,147	1,393	1,489	1,634	1,661	2,125	2,239	2,341
K FINANCIAL AND INSURANCE ACTIVITIES	1,463	2,083	2,505	2,888	3,411	3,472	3,209	3,303
L REAL ESTATE ACTIVITIES	2,757	3,081	3,401	3,638	4,040	4,354	4,760	5,353
M PROFESSIONAL,SCIENTIFIC AND TECHNICAL ACTIVITIES	434	656	1,283	1,365	1,388	1,350	1,170	1,224
N ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	3,996	4,801	6,246	6,623	6,609	7,080	7,314	7,842
O PUBLIC ADMINISTRATION AND DEFENCE, COMPULSORY SOCIAL SECURITY	4,052	4,658	5,954	6,039	7,980	8,013	6,820	7,025
P EDUCATION	942	953	1,251	1,415	1,840	1,935	2,012	2,029
Q HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	1,151	1,237	1,675	1,889	2,406	3,200	3,138	2,745
OTHER SERVICE ACTIVITIES (a)	424	803	1,159	1,540	1,691	1,618	1,484	1,538
<b>OUTPUT AT BASIC PRICES</b>	<b>56,138</b>	<b>69,822</b>	<b>78,804</b>	<b>81,773</b>	<b>88,777</b>	<b>102,159</b>	<b>102,749</b>	<b>108,693</b>

(a) PNGSIC Sections R, S and T

**TABLE 3. INDUSTRY OUTPUT, CURRENT PRICE ESTIMATES - PERCENTAGE (%) CHANGE <sup>(b)</sup>**

	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	6.7%	11.6%	7.8%	2.3%	6.0%	12.0%	1.5%	9.5%
B MINING AND QUARRYING - TOTAL	-22.6%	28.3%	-1.9%	-17.5%	4.4%	77.3%	13.8%	2.7%
Extraction of crude petroleum and natural gas	-53.1%	35.2%	9.4%	-12.3%	9.2%	320.1%	34.7%	-10.6%
Other Mining	-9.8%	26.8%	-4.5%	-18.8%	3.1%	3.6%	-12.0%	27.8%
C MANUFACTURING	2.5%	18.9%	11.7%	3.4%	6.0%	4.1%	-8.7%	10.7%
D ELECTRICITY,GAS,STEAM AND AIRCONDITIONING SUPPLY	12.9%	9.6%	13.7%	12.7%	14.8%	8.9%	2.9%	5.1%
E WATER SUPPLY, SEWAGE, WASTE MANAGEMENT	6.4%	9.3%	7.2%	6.3%	21.3%	11.1%	2.2%	4.2%
F CONSTRUCTION	28.5%	67.7%	9.0%	15.9%	3.1%	9.2%	-6.6%	8.7%
G WHOLESALE AND RETAIL TRADE	8.0%	12.1%	10.9%	5.2%	6.5%	5.9%	-0.7%	8.0%
H TRANSPORT AND STORAGE	-1.7%	38.1%	17.1%	6.8%	7.6%	-9.8%	2.9%	4.2%
I ACCOMODATION AND FOOD SERVICE ACTIVITY	3.8%	7.2%	15.7%	10.9%	6.2%	5.0%	6.9%	3.7%
J INFORMATION AND COMMUNICATION	39.6%	21.4%	6.9%	9.7%	1.7%	27.9%	5.4%	4.6%
K FINANCIAL AND INSURANCE ACTIVITIES	2.7%	42.4%	20.3%	15.3%	18.1%	-1.8%	-7.6%	2.9%
L REAL ESTATE ACTIVITIES	8.0%	11.8%	10.4%	7.0%	11.0%	7.8%	9.3%	12.5%
M PROFESSIONAL,SCIENTIFIC AND TECHNICAL ACTIVITIES	1.7%	51.0%	95.5%	6.4%	1.7%	-2.7%	-13.3%	4.6%
N ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	6.9%	20.1%	30.1%	6.0%	-0.2%	7.1%	3.3%	7.2%
O PUBLIC ADMINISTRATION AND DEFENCE, COMPULSORY SOCIAL SECURITY	-14.1%	14.9%	27.8%	1.4%	32.2%	0.4%	-14.9%	3.0%
P EDUCATION	-2.8%	1.1%	31.3%	13.1%	30.1%	5.2%	4.0%	0.8%
Q HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	-13.1%	7.5%	35.3%	12.8%	27.4%	33.0%	-1.9%	-12.5%
OTHER SERVICE ACTIVITIES (a)	11.2%	89.2%	44.3%	32.9%	9.8%	-4.3%	-8.3%	3.6%
<b>OUTPUT AT BASIC PRICES</b>	<b>-0.6%</b>	<b>24.4%</b>	<b>12.9%</b>	<b>3.8%</b>	<b>8.6%</b>	<b>14.9%</b>	<b>0.6%</b>	<b>5.8%</b>

(a) PNGSIC Sections R, S and T

(b) Percentage change on preceding year.

**TABLE 4. INDUSTRY GROSS VALUE ADDED, CURRENT PRICE ESTIMATES**

(KINA MILLIONS)

	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	6,929	7,599	8,187	8,552	9,191	10,108	10,498	11,620
B MINING AND QUARRYING - TOTAL	6,110	7,906	7,954	6,255	6,478	11,959	14,517	15,520
Extraction of crude petroleum and natural gas	1,094	1,490	1,674	1,399	1,515	6,786	9,972	9,658
Other Mining	5,016	6,415	6,281	4,856	4,963	5,173	4,545	5,862
C MANUFACTURING	830	946	1,070	1,094	1,165	1,216	1,069	1,256
D ELECTRICITY,GAS,STEAM AND AIRCONDITIONING SUPPLY	294	307	348	386	453	497	514	541
E WATER SUPPLY, SEWAGE, WASTE MANAGEMENT	57	61	77	83	96	112	113	125
F CONSTRUCTION	2,240	3,635	3,913	4,417	4,473	4,947	4,720	5,145
G WHOLESALE AND RETAIL TRADE	3,986	4,326	4,791	5,130	5,543	5,887	5,817	6,346
H TRANSPORT AND STORAGE	843	1,092	1,256	1,314	1,423	1,304	1,381	1,462
I ACCOMODATION AND FOOD SERVICE ACTIVITY	671	721	810	879	949	1,007	1,071	1,131
J INFORMATION AND COMMUNICATION	550	662	714	730	774	966	1,002	1,048
K FINANCIAL AND INSURANCE ACTIVITIES	969	1,389	1,648	1,999	2,340	2,083	1,855	1,881
L REAL ESTATE ACTIVITIES	2,111	2,356	2,571	2,753	3,057	3,307	3,632	4,080
M PROFESSIONAL,SCIENTIFIC AND TECHNICAL ACTIVITIES	268	400	790	853	863	835	676	696
N ADMINISTRATIVE AND SUP-PORT SERVICE ACTIVITIES	2,139	2,735	3,398	3,888	3,949	4,166	4,317	4,705
O PUBLIC ADMINISTRATION AND DEFENCE, COMPULSORY SOCIAL SECURITY	1,442	1,686	1,953	2,003	2,334	2,737	2,986	3,193
P EDUCATION	776	799	994	1,124	1,392	1,571	1,697	1,875
Q HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	590	676	773	869	974	1,052	1,132	1,375
OTHER SERVICE ACTIVITIES (a)	146	265	353	468	501	493	462	454
<b>GVA AT BASIC PRICES</b>	<b>30,950</b>	<b>37,559</b>	<b>41,601</b>	<b>42,796</b>	<b>45,955</b>	<b>54,247</b>	<b>57,459</b>	<b>62,454</b>
TAXES LESS SUBSIDIES ON PRODUCT	1,063	1,193	1,041	1,576	1,766	2,884	2,680	2,584
<b>GROSS DOMESTIC PRODUCT (GDP)</b>	<b>32,013</b>	<b>38,752</b>	<b>42,642</b>	<b>44,372</b>	<b>47,721</b>	<b>57,131</b>	<b>60,139</b>	<b>65,038</b>

(a) PNGSIC Sections R, S and T

**TABLE 5. INDUSTRY GROSS VALUE ADDED, CURRENT PRICE ESTIMATES - PERCENTAGE (%) CHANGE (b)**

	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	9.0%	9.7%	7.7%	4.5%	7.5%	10.0%	3.9%	10.7%
B MINING AND QUARRYING - TOTAL	-23.2%	29.4%	0.6%	-21.4%	3.6%	84.6%	21.4%	6.9%
Extraction of crude petroleum and natural gas	-53.4%	36.2%	12.3%	-16.4%	8.3%	347.9%	46.9%	-3.1%
Other Mining	-10.5%	27.9%	-2.1%	-22.7%	2.2%	4.2%	-12.1%	29.0%
C MANUFACTURING	4.8%	14.0%	13.1%	2.3%	6.4%	4.4%	-12.1%	17.5%
D ELECTRICITY,GAS,STEAM AND AIRCONDITIONING SUPPLY	15.3%	4.4%	13.3%	11.0%	17.4%	9.7%	3.4%	5.3%
E WATER SUPPLY, SEWAGE, WASTE MANAGEMENT	8.3%	5.9%	27.7%	6.8%	16.3%	16.5%	0.8%	10.7%
F CONSTRUCTION	25.6%	62.3%	7.7%	12.9%	1.3%	10.6%	-4.6%	9.0%
G WHOLESALE AND RETAIL TRADE	9.3%	8.5%	10.8%	7.1%	8.1%	6.2%	-1.2%	9.1%
H TRANSPORT AND STORAGE	2.7%	29.5%	15.0%	4.6%	8.4%	-8.4%	5.8%	5.9%
I ACCOMODATION AND FOOD SERVICE ACTIVITY	3.2%	7.5%	12.3%	8.5%	7.9%	6.2%	6.3%	5.6%
J INFORMATION AND COMMUNICATION	41.5%	20.3%	7.8%	2.3%	6.0%	24.8%	3.8%	4.6%
K FINANCIAL AND INSURANCE ACTIVITIES	4.6%	43.4%	18.6%	21.3%	17.0%	-11.0%	-10.9%	1.4%
L REAL ESTATE ACTIVITIES	8.4%	11.6%	9.1%	7.1%	11.0%	8.2%	9.8%	12.3%
M PROFESSIONAL,SCIENTIFIC AND TECHNICAL ACTIVITIES	2.0%	49.4%	97.5%	8.0%	1.2%	-3.3%	-19.1%	2.9%
N ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	5.3%	27.8%	24.3%	14.4%	1.6%	5.5%	3.6%	9.0%
O PUBLIC ADMINISTRATION AND DEFENCE, COMPULSORY SOCIAL SECURITY	12.3%	16.9%	15.9%	2.5%	16.5%	17.3%	9.1%	6.9%
P EDUCATION	10.6%	3.0%	24.4%	13.0%	23.8%	12.9%	8.0%	10.5%
Q HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	11.2%	14.7%	14.3%	12.3%	12.2%	8.0%	7.6%	21.4%
OTHER SERVICE ACTIVITIES (a)	9.3%	80.9%	33.4%	32.4%	7.1%	-1.5%	-6.3%	-1.8%
<b>GVA AT BASIC PRICES</b>	<b>1.4%</b>	<b>21.4%</b>	<b>10.8%</b>	<b>2.9%</b>	<b>7.4%</b>	<b>18.0%</b>	<b>5.9%</b>	<b>8.7%</b>
TAXES LESS SUBSIDIES ON PRODUCT	7.1%	12.2%	-12.8%	51.4%	12.1%	63.3%	-7.1%	-3.6%
<b>GROSS DOMESTIC PRODUCT (GDP)</b>	<b>1.6%</b>	<b>21.1%</b>	<b>10.0%</b>	<b>4.1%</b>	<b>7.5%</b>	<b>19.7%</b>	<b>5.3%</b>	<b>8.1%</b>

(a) PNGSIC Sections R, S and T

(b) Percentage change on preceding year.

**TABLE 6. INDUSTRY SHARE OF GROSS VALUE ADDED, CURRENT PRICE-PERCENTAGE (%) <sup>(b)</sup>**

	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	22.4%	20.2%	19.7%	20.0%	20.0%	18.6%	18.3%	18.6%
B MINING AND QUARRYING	19.7%	21.0%	19.1%	14.6%	14.1%	22.0%	25.3%	24.9%
C MANUFACTURING	2.7%	2.5%	2.6%	2.6%	2.5%	2.2%	1.9%	2.0%
D ELECTRICITY,GAS,STEAM AND AIRCONDITIONING SUPPLY	0.9%	0.8%	0.8%	0.9%	1.0%	0.9%	0.9%	0.9%
E WATER SUPPLY, SEWAGE, WASTE MANAGEMENT	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
F CONSTRUCTION	7.2%	9.7%	9.4%	10.3%	9.7%	9.1%	8.2%	8.2%
G WHOLESALE AND RETAIL TRADE	12.9%	11.5%	11.5%	12.0%	12.1%	10.9%	10.1%	10.2%
H TRANSPORT AND STORAGE	2.7%	2.9%	3.0%	3.1%	3.1%	2.4%	2.4%	2.3%
I ACCOMODATION AND FOOD SERVICE ACTIVITY	2.2%	1.9%	1.9%	2.1%	2.1%	1.9%	1.9%	1.8%
J INFORMATION AND COMMUNICATION	1.8%	1.8%	1.7%	1.7%	1.7%	1.8%	1.7%	1.7%
K FINANCIAL AND INSURANCE ACTIVITIES	3.1%	3.7%	4.0%	4.7%	5.1%	3.8%	3.2%	3.0%
L REAL ESTATE ACTIVITIES	6.8%	6.3%	6.2%	6.4%	6.7%	6.1%	6.3%	6.5%
M PROFESSIONAL,SCIENTIFIC AND TECHNICAL ACTIVITIES	0.9%	1.1%	1.9%	2.0%	1.9%	1.5%	1.2%	1.1%
N ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	6.9%	7.3%	8.2%	9.1%	8.6%	7.7%	7.5%	7.5%
O PUBLIC ADMINISTRATION AND DEFENCE, COMPULSORY SOCIAL SECURITY	4.7%	4.5%	4.7%	4.7%	5.1%	5.0%	5.2%	5.1%
P EDUCATION	2.5%	2.1%	2.4%	2.6%	3.0%	2.9%	3.0%	3.0%
Q HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	1.9%	1.8%	1.9%	2.0%	2.1%	1.9%	2.0%	2.2%
OTHER SERVICE ACTIVITIES (a)	0.5%	0.7%	0.8%	1.1%	1.1%	0.9%	0.8%	0.7%
<b>GVA AT BASIC PRICES</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

(a) PNGSIC Sections R, S and T

(b) Percentage of the total

**TABLE 7A. GROSS VALUE ADDED BY INSTITUTIONAL SECTOR,  
CURRENT PRICE ESTIMATES**

(KINA MILLIONS)

	2009	2010	2011	2012	2013	2014	2015	2016
NON-FINANCIAL CORPORATIONS	16,080	21,156	23,447	23,031	24,059	30,739	33,165	35,895
FINANCIAL CORPORATIONS	867	1,279	1,530	1,872	2,202	1,933	1,692	1,702
GENERAL GOVERNMENT	2,566	2,783	3,335	3,566	4,185	4,749	5,157	5,699
HOUSEHOLDS	11,436	12,341	13,291	14,327	15,510	16,825	17,445	19,159
<b>GVA AT BASIC PRICES</b>	<b>30,950</b>	<b>37,559</b>	<b>41,601</b>	<b>42,796</b>	<b>45,955</b>	<b>54,247</b>	<b>57,459</b>	<b>62,454</b>

**TABLE 7B. CURRENT PRICE, PERCENTAGE (%) CHANGE <sup>(a)</sup>**

	2009	2010	2011	2012	2013	2014	2015	2016
NON-FINANCIAL CORPORATIONS	-5.7%	31.6%	10.8%	-1.8%	4.5%	27.8%	7.9%	8.2%
FINANCIAL CORPORATIONS	3.9%	47.5%	19.6%	22.4%	17.6%	-12.2%	-12.5%	0.6%
GENERAL GOVERNMENT	13.9%	8.4%	19.8%	7.0%	17.3%	13.5%	8.6%	10.5%
HOUSEHOLDS	10.3%	7.9%	7.7%	7.8%	8.3%	8.5%	3.7%	9.8%
<b>GVA AT BASIC PRICES</b>	<b>1.4%</b>	<b>21.4%</b>	<b>10.8%</b>	<b>2.9%</b>	<b>7.4%</b>	<b>18.0%</b>	<b>5.9%</b>	<b>8.7%</b>

(a) Percentage change on preceding year.

**TABLE 8. INDUSTRY GROSS VALUE ADDED, CONSTANT PRICE ESTIMATES**

(KINA MILLIONS)

	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	7,992	8,217	8,287	8,781	9,191	9,503	9,252	9,497
B MINING AND QUARRYING - TOTAL	8,167	8,115	6,888	6,166	6,478	11,264	18,161	19,947
Extraction of crude petroleum and natural gas	1,636	1,715	1,489	1,463	1,515	6,055	12,824	13,683
Other Mining	6,531	6,401	5,399	4,703	4,963	5,209	5,336	6,264
C MANUFACTURING	1,023	1,100	1,151	1,145	1,165	1,155	1,006	1,043
D ELECTRICITY,GAS,STEAM AND AIRCONDITIONING SUPPLY	362	357	374	404	453	473	487	512
E WATER SUPPLY, SEWAGE, WASTE MANAGEMENT	71	71	83	86	96	86	87	91
F CONSTRUCTION	2,763	4,230	4,206	4,621	4,473	4,644	4,103	4,182
G WHOLESALE AND RETAIL TRADE	4,826	4,984	5,223	5,380	5,543	5,612	5,274	5,363
H TRANSPORT AND STORAGE	1,009	1,237	1,327	1,331	1,423	1,233	1,312	1,344
I ACCOMODATION AND FOOD SERVICE ACTIVITY	813	831	882	922	949	949	969	972
J INFORMATION AND COMMUNICATION	680	771	767	764	774	1,049	1,104	1,152
K FINANCIAL AND INSURANCE ACTIVITIES	1,193	1,615	1,773	2,092	2,340	1,980	1,664	1,581
L REAL ESTATE ACTIVITIES	2,543	2,709	2,812	2,889	3,057	3,136	3,234	3,392
M PROFESSIONAL,SCIENTIFIC AND TECHNICAL ACTIVITIES	330	466	849	892	863	798	653	640
N ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	2,633	3,179	3,657	4,069	3,949	4,023	3,926	3,949
O PUBLIC ADMINISTRATION AND DEFENCE, COMPULSORY SOCIAL SECURITY	1,826	2,069	2,181	2,152	2,334	2,604	2,703	2,749
P EDUCATION	981	978	1,109	1,206	1,392	1,500	1,552	1,640
Q HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	740	812	851	924	974	972	965	1,117
OTHER SERVICE ACTIVITIES (a)	179	307	381	489	501	462	408	400
<b>GVA AT BASIC PRICES</b>	<b>38,129</b>	<b>42,048</b>	<b>42,800</b>	<b>44,315</b>	<b>45,955</b>	<b>51,443</b>	<b>56,858</b>	<b>59,570</b>
TAXES LESS SUBSIDIES ON PRODUCT	1,313	1,389	1,118	1,648	1,766	2,741	2,465	2,172
<b>GROSS DOMESTIC PRODUCT (GDP)</b>	<b>39,442</b>	<b>43,437</b>	<b>43,918</b>	<b>45,963</b>	<b>47,721</b>	<b>54,185</b>	<b>59,323</b>	<b>61,742</b>

(a) PNGSIC Sections R, S and T

**TABLE 9. INDUSTRY GROSS VALUE ADDED, CONSTANT PRICE ESTIMATES  
- PERCENTAGE (%) CHANGE <sup>(b)</sup>**

	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	5.8%	2.8%	0.9%	6.0%	4.7%	3.4%	-2.6%	2.7%
B MINING AND QUARRYING -TOTAL	17.4%	-0.6%	-15.1%	-10.5%	5.1%	73.9%	61.2%	9.8%
Extraction of crude petroleum and natural gas	-17.0%	4.8%	-13.2%	-1.7%	3.6%	299.6%	111.8%	6.7%
Other Mining	30.9%	-2.0%	-15.7%	-12.9%	5.5%	4.9%	2.4%	17.4%
C MANUFACTURING	-2.0%	7.6%	4.6%	-0.5%	1.7%	-0.9%	-12.9%	3.8%
D ELECTRICITY,GAS,STEAM AND AIRCONDITIONING SUPPLY	7.9%	-1.5%	4.7%	8.1%	12.2%	4.5%	2.9%	5.1%
E WATER SUPPLY, SEWAGE, WASTE MANAGEMENT	1.3%	-0.2%	17.8%	4.0%	11.2%	-10.9%	1.8%	4.2%
F CONSTRUCTION	17.5%	53.1%	-0.6%	9.9%	-3.2%	3.8%	-11.7%	1.9%
G WHOLESALE AND RETAIL TRADE	2.2%	3.3%	4.8%	3.0%	3.0%	1.2%	-6.0%	1.7%
H TRANSPORT AND STORAGE	-0.8%	22.6%	7.3%	0.4%	6.9%	-13.4%	6.4%	2.4%
I ACCOMODATION AND FOOD SERVICE ACTIVITY	-3.6%	2.2%	6.1%	4.5%	2.9%	0.1%	2.1%	0.3%
J INFORMATION AND COMMUNICATION	32.4%	13.4%	-0.5%	-0.4%	1.3%	35.5%	5.2%	4.4%
K FINANCIAL AND INSURANCE ACTIVITIES	-2.2%	35.4%	9.8%	18.0%	11.9%	-15.4%	-16.0%	-5.0%
L REAL ESTATE ACTIVITIES	1.3%	6.5%	3.8%	2.7%	5.8%	2.6%	3.1%	4.9%
M PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	-4.6%	40.9%	82.3%	5.2%	-3.3%	-7.5%	-18.2%	-2.0%
N ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	-1.5%	20.7%	15.0%	11.3%	-3.0%	1.9%	-2.4%	0.6%
O PUBLIC ADMINISTRATION AND DEFENCE, COMPULSORY SOCIAL SECURITY	9.0%	13.3%	5.4%	-1.4%	8.5%	11.6%	3.8%	1.7%
P EDUCATION	7.1%	-0.2%	13.4%	8.8%	15.4%	7.8%	3.5%	5.7%
Q HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	6.5%	9.8%	4.9%	8.6%	5.4%	-0.2%	-0.8%	15.8%
OTHER SERVICE ACTIVITIES <sup>(a)</sup>	2.2%	71.8%	24.0%	28.5%	2.4%	-7.8%	-11.6%	-2.1%
<b>GVA AT BASIC PRICES</b>	<b>7.0%</b>	<b>10.3%</b>	<b>1.8%</b>	<b>3.5%</b>	<b>3.7%</b>	<b>11.9%</b>	<b>10.5%</b>	<b>4.8%</b>
TAXES LESS SUBSIDIES ON PRODUCT	0.2%	5.8%	-19.5%	47.4%	7.1%	55.2%	-10.1%	-11.9%
<b>GROSS DOMESTIC PRODUCT (GDP)</b>	<b>6.8%</b>	<b>10.1%</b>	<b>1.1%</b>	<b>4.7%</b>	<b>3.8%</b>	<b>13.5%</b>	<b>9.5%</b>	<b>4.1%</b>

(a) PNGSIC Sections R, S and T.

(b) Percentage change on preceding year.

**TABLE 10. GDP IMPLICIT PRICE INDICES BY INDUSTRY**

PRICE INDEXES (2013 = 100.0)	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	86.7	92.5	98.8	97.4	100.0	106.4	113.5	122.4
B MINING AND QUARRYING - TOTAL	74.8	97.4	115.5	101.4	100.0	106.2	79.9	77.8
Extraction of crude petroleum and natural gas	66.9	86.9	112.4	95.6	100.0	112.1	77.8	70.6
Other Mining	76.8	100.2	116.3	103.2	100.0	99.3	85.2	93.6
C MANUFACTURING	81.2	86.0	93.0	95.6	100.0	105.3	106.3	120.4
D ELECTRICITY,GAS AND AIRCONDITIONING	81.1	86.0	93.0	95.6	100.0	105.0	105.5	105.7
E WATER SUPPLY AND WASTE MANAGEMENT	81.0	85.9	93.1	95.6	100.0	130.7	129.5	137.6
F CONSTRUCTION	81.1	85.9	93.0	95.6	100.0	106.5	115.0	123.0
G WHOLESALE AND RETAIL TRADE	82.6	86.8	91.7	95.3	100.0	104.9	110.3	118.3
H TRANSPORT AND STORAGE	83.5	88.3	94.6	98.7	100.0	105.8	105.2	108.8
I ACCOMODATION AND FOOD SERVICE	82.5	86.8	91.8	95.4	100.0	106.1	110.4	116.3
J INFORMATION AND COMMUNICATION	81.0	85.9	93.1	95.6	100.0	92.1	90.8	91.0
K FINANCIAL AND INSURANCE ACTIVITIES	81.2	86.0	93.0	95.6	100.0	105.2	111.5	119.0
L REAL ESTATE ACTIVITIES	83.0	87.0	91.4	95.3	100.0	105.4	112.3	120.3
M PROFESSIONAL AND SCIENTIFIC	81.0	85.9	93.1	95.6	100.0	104.6	103.5	108.7
N ADMINISTRATIVE AND SUPPORT SERVICES	81.2	86.0	92.9	95.6	100.0	103.6	110.0	119.1
O PUBLIC ADMINISTRATION AND DEFENCE	79.0	81.5	89.5	93.1	100.0	105.1	110.5	116.2
P EDUCATION	79.1	81.7	89.6	93.2	100.0	104.7	109.4	114.3
Q HEALTH AND SOCIAL WORK ACTIVITIES	79.7	83.3	90.8	94.0	100.0	108.2	117.4	123.1
OTHER SERVICE ACTIVITIES (a)	81.9	86.2	92.7	95.5	100.0	106.8	113.2	113.5
<b>GVA AT BASIC PRICES</b>	<b>81.2</b>	<b>89.3</b>	<b>97.2</b>	<b>96.6</b>	<b>100.0</b>	<b>105.4</b>	<b>101.1</b>	<b>104.8</b>
TAXES LESS SUBSIDIES ON PRODUCT	81.0	85.9	93.1	95.6	100.0	105.2	108.7	119.0
<b>GROSS DOMESTIC PRODUCT (GDP)</b>	<b>81.2</b>	<b>89.2</b>	<b>97.1</b>	<b>96.5</b>	<b>100.0</b>	<b>105.4</b>	<b>101.4</b>	<b>105.3</b>

(a) PNGSIC Sections R, S and T.

**TABLE 11. GDP IMPLICIT PRICE INDICES - PERCENTAGE (%) CHANGE (b)  
BY INDUSTRY**

PRICE INDEXES PERCENTAGE CHANGE

	2009	2010	2011	2012	2013	2014	2015	2016
A AGRICULTURE, FORESTRY AND FISHING	3.0%	6.7%	6.8%	-1.4%	2.7%	6.4%	6.7%	7.8%
B MINING AND QUARRYING - TOTAL	-34.5%	30.2%	18.6%	-12.2%	-1.4%	6.2%	-24.7%	-2.7%
Extraction of crude petroleum and natural gas	-43.9%	29.9%	29.4%	-14.9%	4.6%	12.1%	-30.6%	-9.2%
Other Mining	-31.7%	30.5%	16.1%	-11.3%	-3.1%	-0.7%	-14.2%	9.9%
C MANUFACTURING	6.9%	6.0%	8.1%	2.8%	4.6%	5.3%	0.9%	13.3%
D ELECTRICITY,GAS AND AIRCONDITIONING	6.9%	6.0%	8.2%	2.8%	4.6%	5.0%	0.4%	0.2%
E WATER SUPPLY AND WASTE MANAGEMENT	6.9%	6.1%	8.4%	2.7%	4.6%	30.7%	-0.9%	6.3%
F CONSTRUCTION	6.9%	6.0%	8.3%	2.7%	4.6%	6.5%	8.0%	7.0%
G WHOLESALE AND RETAIL TRADE	6.9%	5.1%	5.7%	3.9%	4.9%	4.9%	5.2%	7.3%
H TRANSPORT AND STORAGE	3.5%	5.7%	7.2%	4.3%	1.3%	5.8%	-0.5%	3.4%
I ACCOMODATION AND FOOD SERVICE	7.1%	5.2%	5.8%	3.9%	4.9%	6.1%	4.1%	5.3%
J INFORMATION AND COMMUNICATION	6.9%	6.1%	8.4%	2.7%	4.6%	-7.9%	-1.4%	0.2%
K FINANCIAL AND INSURANCE ACTIVITIES	6.9%	5.9%	8.1%	2.8%	4.6%	5.2%	6.0%	6.7%
L REAL ESTATE ACTIVITIES	7.0%	4.8%	5.1%	4.2%	4.9%	5.4%	6.5%	7.1%
M PROFESSIONAL AND SCIENTIFIC	6.9%	6.1%	8.4%	2.7%	4.6%	4.6%	-1.1%	5.0%
N ADMINISTRATIVE AND SUPPORT SERVICES	6.9%	5.9%	8.0%	2.8%	4.6%	3.6%	6.2%	8.4%
O PUBLIC ADMINISTRATION AND DEFENCE	3.0%	3.1%	9.9%	4.0%	7.5%	5.1%	5.1%	5.1%
P EDUCATION	3.2%	3.2%	9.8%	3.9%	7.3%	4.7%	4.4%	4.6%
Q HEALTH AND SOCIAL WORK ACTIVITIES	4.4%	4.5%	9.0%	3.5%	6.4%	8.2%	8.5%	4.9%
OTHER SERVICE ACTIVITIES (a)	6.9%	5.3%	7.6%	3.0%	4.7%	6.8%	6.0%	0.3%
<b>GVA AT BASIC PRICES</b>	<b>-5.3%</b>	<b>10.0%</b>	<b>8.8%</b>	<b>-0.6%</b>	<b>3.5%</b>	<b>5.5%</b>	<b>-4.2%</b>	<b>3.7%</b>
TAXES LESS SUBSIDIES ON PRODUCT	6.9%	6.1%	8.4%	2.7%	4.6%	5.2%	3.4%	9.4%
<b>GROSS DOMESTIC PRODUCT (GDP)</b>	<b>-4.9%</b>	<b>9.9%</b>	<b>8.8%</b>	<b>-0.6%</b>	<b>3.6%</b>	<b>5.4%</b>	<b>-3.9%</b>	<b>3.9%</b>

(a) PNGSIC Sections R, S and T.

(b) Percentage change on preceding year.

### INTRODUCTION

This publication contains National Accounts estimates for the eight years from 2009 to 2016. Estimates are provided for Gross Domestic Product (GDP) by industry and institutional sector. For definitions and description of items in the national accounts, see Glossary.

### CONCEPTS, SOURCES AND METHODS

Papua New Guinea national accounts statistics are compiled in accordance with international standards contained in the System of National Accounts (SNA). These standards are presented in the System of National Accounts, 2008 (SNA08). National estimates are based on the concepts and conventions embodied in the SNA08.

### GROSS DOMESTIC PRODUCT

GDP can be derived by three broad approaches: the income approach (I), the expenditure approach (E) and the production approach (P). A description of each approach is provided in the following paragraphs. While each approach should conceptually deliver the same GDP estimate, the results may differ with some possible differences when compiled independently using different data sources. The estimates presented in this publication have largely been derived by the production approach. The GDP derivation can incorporate the income and expenditure approaches as additional data sources on households and businesses becomes available.

#### *Income approach (I)*

GDP using the income approach is derived as the sum of compensation of employees, gross operating surplus, gross mixed income and taxes less subsidies on production and imports.

#### *Expenditure approach (E)*

GDP using the expenditure approach is derived as the sum of all final expenditures, changes in inventories and exports of goods and services less imports of goods and services.

#### *Production approach (P)*

GDP using the production approach is derived as the sum of gross value added for each industry, at basic prices, plus taxes less subsidies on products. Basic values represent the amounts received by producers, including the value of any subsidies on products, but before any taxes on products.

### FINANCIAL INTERMEDIATION SERVICES

In the national accounts, estimates are made for the output of banks and similar institutions who produce services through the provision of deposit and loan services. Often there is no single explicit charge for these services and instead the relevant financial institutions set interest rates such that a service margin can be earned. Thus, interest rates on loans are higher than would otherwise be the case if there were no service element provided and interest rates on deposits are lower than would otherwise be the case.

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## **FOREIGN AID (COMPENSATION OF EMPLOYEES)**

The output of foreign aid workers working within PNG domestic aid programs falls within the scope of PNG's Gross Domestic Product. The activity of foreign aid workers is classified within the PNG Standard Industry Classification as 'Activities of extra territorial organisations and bodies'. This foreign aid' output has been estimated for 2009 through to 2016 and is included within the 'Public administration and defence' Industry (Industry O).

## **FORMAL AND INFORMAL ECONOMIC ACTIVITY**

Formal activity (usually production) of businesses, employees or households is often regulated by government laws. These activities are observable to National Statistical Offices, either through administrative data or survey collection activity. Given some data gaps on the size of the economically active businesses population in Papua New Guinea, the formal business sector is effectively defined by businesses remitting with respect to Goods and Services Tax (GST). The business is non-dormant and is generating economic output evidenced by GST debits or GST credits remitted to the Internal Revenue Commission (IRC). In contrast, the economic activity of businesses either not remitting GST (above or below the GST threshold) constitutes informal economic activity. The production of goods, particularly agricultural products consumed by the household, constitutes informal economic activity. The production of goods and services which are sold in local markets is also defined as informal economic activity.

## **INDUSTRY CLASSIFICATION**

The industry statistics in this publication are based on the Papua New Guinea Standard Industrial Classification (PNGSIC), 2014. The classification has been derived from the United Nations (UN) International Standard Industrial Classification (ISIC) Revision 4 of all economic activities modified in order to better reflect the forms of economic activity which exist in PNG. The PNGSIC 2014 replaces PNGSIC 2000 which was developed using ISIC Rev. 3 which was used in the last published national accounts in respect of 2006. The structure of PNGSIC 2014 is more detailed than PNGSIC 2000 and identifies new industries separately. This is especially so in respect of services, where a new section entitled "Information and communication" has been introduced to better reflect current economic phenomena.

## **INSTITUTIONAL SECTOR**

Data has been collected and compiled for the following main institutional units, in preparing the production measure of GDP estimates:

- Non-Financial Corporations
- Financial Corporations
- General Government
- Households

## **NATIONAL ACCOUNTS**

A set of seven accounts defined within the System of National Accounts which measures the economic activity, corresponding financial flows and stock changes within a country during a specified period. One of these accounts is the production account, which measures the level of economic activity within a country during a specified period (usually one year).

## **OUTPUT OF NON-FINANCIAL CORPORATIONS**

Business register information was not available to estimate the level of economic activity during the

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compilation of these GDP estimates. Therefore taxation data, complemented with business survey data (the Annual Survey of Business Activities and the quarterly Business Liaison Survey) has been used to define the contribution of formal economic activity for the Non-financial corporations sector.

Output for the Non-Financial Corporations Sector has been estimated using GST sales data collected from the Internal Revenue Commission (IRC). The IRC provided non-identifiable GST records to the NSO exclusively for statistical purpose. GST sales data includes sales subject to 10% GST, GST exempt sales and also sales subject to GST, but charged at a zero rate. Imputation has been undertaken for missing or partially incomplete GST records.

### **OUTPUT OF FINANCIAL CORPORATIONS – LENDING INSTITUTIONS**

The output of banks is measured indirectly by calculating their income. Banks obtain income from two principal sources. Firstly, through direct charges made in respect of specified services such as credit card and account keeping fees, and secondly, through financial intermediation whereby they accept deposits from customers with surplus funds and make loans to customers requiring finance. The interest rate paid on deposits is generally lower than the rate charged on loans and the differential between the two rates constitutes an implicit service charge. The 2008 SNA terms this charge FISIM, or financial intermediation charge indirectly measured. The sum of FISIM and direct charges is deemed to constitute the value of the banks output.

The output of PNG Financial sector was estimated using bank deposit and lending data (deposit and loan volumes) obtained from the Bank of Papua New Guinea (BPNG) along with their corresponding borrowing and lending interest rates. Information on direct banking charges was also sourced from the Bank of PNG.

### **OUTPUT OF FINANCIAL CORPORATIONS – INSURANCE COMPANIES**

As with the commercial banks, the output of insurance companies is estimated indirectly. The 2008 SNA defines the output of general insurance services as premiums plus premium supplements less expected claims. Premium supplements constitute earnings on the insurance companies' technical reserves. The other component of output is expected claims. The output of life insurance and superannuation funds is defined as the change in available funds after deducting payments (claims) from premiums and earnings. The output of PNG's Insurance sector was estimated using insurance premiums and claims data supplied by the Bank of PNG and data collected directly via the Business Liaison Survey. GST sales (Insurance premiums) were also used in the output compilation.

### **OUTPUT OF GENERAL GOVERNMENT**

The PNG Treasury budget is the principal source of information for output of the general government sector. General government includes the national, provincial and local government levels. The national government is the principal source of funds for provincial governments and transfers to other levels of government are contained in the budget papers. Government services are provided on a non-market basis and are conventionally valued at cost. The value of output is therefore calculated as compensation of employees plus intermediate consumption. Data for these components of government expenditure are sourced directly from the PNG Budget papers.

### **OUTPUT OF HOUSEHOLDS**

A large proportion of economic activity is undertaken in the household sector. This includes most agricultural production and a significant proportion of retail activity, transport and housing services.

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Household production includes production for own consumption and production for sale through informal outlets such as local markets and street vendors. Informal outlets are those falling outside the regulatory/tax system and do not attract GST. The principal source of informal production data is the Household Income and Expenditure Survey (HIES) of 2009. Household production was estimated for the 2009 reference year and extrapolated using Consumer Price Indexes and National Statistics Office population estimates.

Information from the 2009 HIES was used to estimate the informal economic contribution of the following informal activities:

- betelnut production and distribution
- payday lending activity
- retailing by street vendors
- the provision of local transport
- household manufacturing activity
- construction of low-cost housing

## **GROSS VALUE ADDED (GVA)**

GVA is calculated by subtracting intermediate consumption from the estimate of output. HIES data contained estimates of the costs associated with household production. These estimates were used to produce an estimate of intermediate consumption for 2009-10. Household intermediate consumption estimates for 2009-10 were extrapolated across the 2007 to 2014 time series using Consumer Price Indexes (CPI) and population estimates produced by the National Statistical Office.

## **CALCULATION OF CONSTANT PRICE GDP**

### ***Introduction***

The nominal GDP or GDP at current prices of a given year is computed using that year's prices, while the real GDP or GDP at constant prices of that year is computed using the base year's prices. For real PNG GDP, the base year is 2013.

The reason for deflating nominal GDP is to remove the direct effects of the price movements over period of time. The deflation intends to measure the real activity or volume of production and so, ideally it reflects the real measure of economic growth.

### ***Introduction of Single Extrapolation into Papua New Guinea's GDP***

Volume measurement is a critical component of the national accounts compilation to quantify additional production of goods and services into value, price and volume. An example of a volume measure is GDP at constant prices, also referred to as real GDP, which excludes the impact of price changes.

There are three techniques to derive volume measures for GDP: double deflation, single deflation, and single extrapolation. A detailed discussion is provided in <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2017/02/02/Measure-up-A-Better-Way-to-Calculate-GDP-44598> upon which this note is based. The last of these techniques (single deflation) is not recommended as it fails to correctly capture relative price change.

With the release of the 2016 PNG GDP, the National Statistical Office has introduced an improvement for its method for compiling volume (constant Price) measures. The improved technique has been implemented in the GDP time series from the current base year (2013) to 2016. The new method will impact on constant price GDP in 2014, 2015 and 2016. The level of impact is minimal (compared to single deflation) and is around 0.5 percentage points for 2014, 2015 and 2016.

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**Double deflation** means that outputs and inputs are deflated separately using relevant output and input price indices and tends to yield the best results. The technique is data intensive, as it requires data on a broad range of price measures for both outputs and inputs. To derive the volume estimates of inputs (more precisely, intermediate inputs or intermediate consumption), the compiler needs to derive price indices for the broad range of goods and services used in production. For example, if an establishment produces tuna (output) using boat fuel (intermediate consumption) output and intermediate consumption should be deflated with appropriate deflators (i.e. tuna and fuel respectively). Different price indices are needed because the goods and services included in intermediate consumption are not the same as the output and input, and output prices vary across industries.

**Single extrapolation** refers to the use of a volume indicator to extrapolate value added and is considered the second best. This technique is considered an acceptable second best, provided GDP is compiled using an up-to-date base year (five years ago or less) to reflect the relative size of each industry. Value added is extrapolated from the base period using the growth of output in constant prices. Single extrapolation can be performed by using readily available volume indicators (such as the quantity of tuna caught) or deflated values (e.g. sales of tuna deflated by a price index for tuna). The technique assumes changes in the volume of output require a proportionate change in the volume of intermediate consumption, and is reasonable in the short term, as changes in technology frequently take many years to introduce. For example, if a more fuel efficient boat is incorporated in the production process, which reduces the use of fuel, single extrapolation will overestimate the change in intermediate consumption and thus understate the change in value added.

**Single deflation** means that output and input prices are deflated with the same index and typically reduces the accuracy of the estimates. This process is used when output and input price indices are not available. Value added in volume terms is derived by deflating current value added directly by one price indicator. Commonly, the output price is used to deflate gross value added because it is readily observable. The underlying assumption is that prices at which output is produced move at the same rate as prices at which intermediate consumption is acquired.

### ***Application of Three Deflation Methods in Papua New Guinea's GDP***

The three deflation methods are applied to PNG GDP computation to derive real GDP or GDP at constant prices. The methods are:

- Single Deflation,
- Single Extrapolation using readily available volume indicator, and
- Single Extrapolation using deflated values of output by a price index and fixed intermediate consumption to output ratio of base year 2013.

These three (3) methods were chosen based on the data availability and the implications or results arising from the methods used as explained above.

### ***Method 1 – Single Deflation method***

This method is applied in 2 institutional sectors namely General Government and Financial Corporations. Nominal gross value added for each of the industries in the two sectors are deflated by an appropriate index (2013 as a base year) to derive gross value added at constant prices for each industry. Then, gross value added at constant prices for all industries in the sector are summed up for that sector.

- **General Government Sector**  
This sector has a total of three industries; Public Authority & Defence, Education and Human health & Social Work Activities. The deflator used for this sector is public servants salary index.

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- **Financial Corporations Sector**  
This sector has only one industry known as Financial and Insurance Activities. The deflator used for this sector is Consumer Price Index for all groups.

***Method 2 – Single Extrapolation method using readily available volume indicator***

This method is applied in the Household sector which has a total of 20 industries. Gross Value Added derived for the base year (2013) is extrapolated annually using PNG population annual average growth rate of 3.1% as per the National (PNG) Population & Housing Census, 2011.

***Method 3 – Single Extrapolation method using deflated values of output by a price index and (fixed) intermediate consumption to output ratio of base year 2013***

This method is applied only in the Non-Financial Corporations Sector which has a total of 20 industries. A number of steps were followed as listed below to derive Real GVA:

- Step 1.** Derive Real output or output at constant prices by deflating nominal output or output at current prices for each industry by appropriate price index (deflator) for each industry
- Step 2.** Derive Real Intermediate Consumption (IC) at constant prices by applying (multiplying) IC to Output ratio of base year for each industry
- Step 3.** Compute Real gross value added (GVA) or GVA at constant prices by deducting real IC from real output for each industry
- Step 4.** Compute Real GVA for the Non-Financial Corporations Sector by summing up all the real GVA of all 20 industries.

## ABBREVIATIONS

<b>ABS</b>	Australian Bureau of Statistics
<b>BLS</b>	Business Liaison Survey
<b>BPNG</b>	Bank of Papua New Guinea
<b>COICOP</b>	Classification of Individual Consumption According to Purpose
<b>CPI</b>	Consumer Price Index
<b>GDP</b>	Gross Domestic Product
<b>GST</b>	Goods and Services Tax
<b>GVA</b>	Gross Value Added
<b>HIES</b>	Household Income and Expenditure Survey
<b>IMF</b>	International Monetary Fund
<b>IRC</b>	Internal Revenue Commission
<b>ISIC</b>	International Standard Industry Classification
<b>NSO</b>	National Statistics Office
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PNGSIC</b>	Papua New Guinea Standard Industrial Classification
<b>SBA</b>	Survey of Business Activity
<b>SNA</b>	System of National Accounts
<b>SNA08</b>	System of National Accounts 2008 version

## **Administrative Data**

Data collected by government agencies in the process of carrying out regulatory functions such as registering businesses or the population; collecting taxes; running health care or education systems; and undertaking law, order, or justice activities.

## **Annual Income Tax Returns**

Annual taxation data collected on business profits by the Internal Revenue Commission (IRC). The data includes components of business income, wages & salaries and details on business expenditure.

## **Basic Price**

The amount receivable by the producer from the purchaser for a unit of a good or service produced as output, minus any tax payable plus any subsidy receivable, on that unit as a consequence of its production or sale; it excludes any transport charges invoiced separately by the producer.

## **Bank of Papua New Guinea (BPNG)**

The Bank of Papua New Guinea (BPNG) is the central bank for the government of Papua New Guinea. The BPNG has prudential responsibility for the PNG banking system and conducts monetary policy on behalf of the central Government. The BPNG undertakes survey activity such as the Business Liaison Survey as part of its operations.

## **Business Liaison Survey (BLS)**

The Business Liaison Survey is a quarterly economic survey run in cooperation with the Bank of Papua New Guinea. The BLS collects business income, expenses including wages and capital expenditure.

## **Capital Transfers**

Transactions in which the ownership of an asset (other than cash and inventories) is transferred from one institutional unit to another, in which cash is transferred to enable the recipient to acquire another asset or in which the funds realised by the disposal of another asset are transferred. Examples include general government capital transfers to private schools for the construction of science blocks or libraries and transfers to charitable organisations for the construction of homes for the aged.

## **Collective Consumption**

Services provided simultaneously to all members of the community or to all members of a particular section of the community, such as all households living in a particular region. Collective services are automatically acquired and consumed by all members of the community, or group of households in question, without any action on their part. Typical examples are public administration and the provision of security, either at a national or local level. Collective services are the 'public goods' of economic theory. By their nature, collective services cannot be sold to individuals on the market, and they are financed by government units out of taxation or other incomes. The defining characteristics of collective services are as follows: collective services can be delivered simultaneously to every member of the community or of particular sections of the community, such as those in a particular region; the use of such services is usually passive and does not

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require the explicit agreement or active participation of all the individuals concerned; and the provision of a collective service to one individual does not reduce the amount available to others in the same community or section of the community, i.e. there is no rivalry in acquisition. See also Individual consumption.

### **Compensation of Employees**

The total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the employee during the accounting period. It is further classified into two sub-components: wages and salaries; and employers' social contributions.

Compensation of employees is not payable in respect of unpaid work undertaken voluntarily, including the work done by members of a household within an unincorporated enterprise owned by the same household. Compensation of employees excludes any taxes payable by the employer on the wage and salary bill (e.g. payroll tax).

### **Consumption of Fixed Capital**

The reduction in the value of fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence or normal accidental damage. Unforeseen obsolescence, major catastrophes and the depletion of natural resources are not taken into account.

### **Current Prices**

Estimates are valued at the prices of the period to which the observation relates. For example, estimates for 2012 are valued using 2012 prices.

### **Current Transfers**

Transfers, other than those classified as capital transfers, in which one institutional unit provides a good, service or cash to another unit without receiving from the latter anything of economic value in return.

### **Current transfers to Non-Profit Institutions**

Transfers for non-capital purposes to private non-profit institutions serving households such as hospitals, independent schools, and religious and charitable organisations.

### **Economically Significant Prices**

Prices which have a significant influence on both the amounts producers are willing to supply and the amounts purchasers wish to buy.

### **Employers' Social Contributions**

Payments by employers which are intended to secure for their employees the entitlement to social benefits should certain events occur, or certain circumstances exist, that may adversely affect their employees' income or welfare – namely work-related accidents and retirement.

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## **Exports of Goods and Services**

The value of goods exported and amounts receivable from non-residents for the provision of services by residents.

## **Financial Corporations (Institutional Units)**

Financial corporations consist of all resident corporations that are principally engaged in providing financial services, including banks, insurance and pension funding services, to other institutional units. The provision of financial services is regulated by the Bank of Papua New Guinea.

## **Fixed Assets**

Are defined as produced assets that are used repeatedly, or continuously, in processes of production for more than one year. Fixed assets not only include structures, machinery and equipment and intellectual property products but also cultivated assets such as trees and animals that are used repeatedly or continuously to produce other products such as fruit and dairy products.

## **Formal (Economic Activity) Sector**

Activities (usually production) of businesses, employees or households that are regulated by government laws. These activities are observable to National Statistical Offices, either through administrative data or survey collection activity.

## **General Government (Institutional Units)**

The general government sector consists of institutional units that, in addition to fulfilling their political responsibilities and their role of economic regulation, produce services (and possibly goods) for individual or collective consumption mainly on a non-market basis and redistribute income and wealth (2008 SNA 2.17). In PNG the general government sector includes national, provincial and local government.

## **Goods and Services Tax**

Papua New Guinea introduced a general Goods and Services Tax (GST) of 10% in 2004. The Goods and Services Tax Act specifies activities that are subject to GST, which is paid to the Internal Revenue Commission (IRC) on the sales of goods and services subject to the tax. The Act also specifies activities that are exempt, such as financial services, Public Motor Vehicle (PVM) and Taxi fares. Activities such as exported goods, aid projects and certain export services are also subject to GST but at a zero rate.

## **Gross Domestic Product (GDP)**

Is the total market value of goods and services produced in Papua New Guinea within a given period after deducting the cost of goods and services used up in the process of production but before deducting allowances for the consumption of fixed capital. Thus gross domestic product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services. Farm product is that part of gross domestic product which arises from production in agriculture and services to agriculture. It is equivalent to the value added of PNGSIC Agriculture sector plus taxes less subsidies on products primary to this subdivision. Non-farm product arises from production in all other industries.

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## **GDP Per Capita**

The ratio of the chain volume estimate of GDP to an estimate of the resident Papua New Guinean population

## **Gross Value Added**

The value of output at basic prices minus the value of intermediate consumption at purchasers' prices. The term is used to describe gross product by industry and by sector. Basic prices valuation of output removes the distortion caused by variations in the incidence of commodity taxes and subsidies across the output of individual industries.

## **Imports of Goods And Services**

The value of goods imported and amounts payable to non-residents for the provision of services to residents.

## **Informal Sector**

The SNA 2008 recognises the importance of measuring part of the economy that reflects the efforts of people without formal jobs engaging in some form of monetary economic activity (2008 SNA 25.3). This part of the economy is known as the informal sector and its measurement is important for assessing how the benefits of economic development extent to a country's entire population (compare with Formal sector).

## **Households (Institutional Units)**

Households are primarily consumer units, however, they also engage in production. This production activity is often relatively small scale and includes informal and subsistence activities. When the production units of households are not legal entities they are described as unincorporated enterprises. They remain part of the same institutional unit as the household to which they belong (2008 SNA 4.21). Conceptually the contribution of the household sector to GDP is estimated in the same way as for other sectors, by deducting intermediate consumption from the value of output.

## **Household Production**

In PNG a large proportion of economic activity is undertaken in the household sector. This includes most agricultural production and a significant proportion of retail activity. That production includes production for own consumption and production for sale through informal outlets such as local markets and street vendors.

## **Household Income and Expenditure Survey (HIES)**

The Household Income and Expenditure Survey (HIES), is a survey that collects information on the income, expenditure and production of households. In addition it collects information on household wealth and health outcomes. The recent HIES was conducted between July 2009 and January 2011.

## **Implicit Price Deflator (IPD)**

The IPD is obtained by dividing a current price value by its real counterpart (constant price value). When calculated from the major national accounting aggregates, such as gross domestic product, implicit price deflators relate to a broader range of goods and services in the economy rather than that represented

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by any other published price indexes. Movements in an IPD reflects both changes in price and changes in composition of the aggregate for which the deflator is calculated.

### **Institutional Unit**

An institutional unit is an economic entity that is capable, in its own right, of owning assets, incurring liabilities, engaging in economic activities and engaging in transactions with other entities (2008 SNA 4.2). In preparing the production measure of GDP estimates for 2009 to 2016, data has been collected and compiled for the following institutional units:

- Non-Financial Corporations
- Financial Corporations
- General Government
- Households

### **Intermediate Consumption**

Consists of the value of the goods and services used as inputs by a process of production, excluding compensation of employees and the consumption of fixed capital.

### **Market Output**

Output that is sold at prices that are economically significant or otherwise disposed of on the market, or intended for sale or disposal on the market.

### **Non-Financial Corporations (Institutional Units)**

Non-financial corporations are corporations whose principal activity is the production of market goods or non-financial services (2008 SNA 4.94). As such, they are a major driver of economic activity and growth.

### **Non-Market Output**

Goods and services produced by any institutional unit that are supplied free or at prices that are not economically significant.

### **Other Subsidies on Production**

Consist of all subsidies, except subsidies on products, which resident enterprises may receive as a consequence of engaging in production. Other subsidies on production include: subsidies related to the payroll or workforce numbers, including subsidies payable on the total wage or salary bill, on numbers employed, or on the employment of particular types of persons, e.g. persons with disabilities or persons who have been unemployed for a long period. The subsidies may also be intended to cover some or all of the costs of training schemes organised or financed by enterprises. Subsidies aimed at reducing pollution are also included.

### **Other Taxes on Production**

Consist of all taxes that enterprises incur as a result of engaging in production, except taxes on products. Other taxes on production include: taxes related to the payroll or workforce numbers excluding compulsory social security contributions paid by employers and any taxes paid by the employees themselves out of their wages or salaries; recurrent taxes on land, buildings or other structures; some business and

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professional licenses where no service is provided by the Government in return; taxes on the use of fixed assets or other activities; stamp duties; taxes on pollution; and taxes on international transactions.

## **Output**

This consists of those goods and services that are produced within an establishment that become available for use outside that establishment, plus any goods and services produced for own final use.

## **Papua New Guinea Standard Industry Classification**

The Papuan New Guinea Standard Industry Classification (PNGSIC) has been derived from the United Nations (UN) International Standard Industrial Classification (ISIC) Revision 4 of all economic activities, modified in order to better reflect the forms of economic activity which exist in PNG. The PNGSIC 2014 replaces PNGSIC 2000 which was developed using ISIC Rev. 3 which was used in the last published national accounts in respect of 2006. The structure of PNGSIC 2014 is more detailed than PNGSIC 2000 and identifies new industries separately. This is especially so in respect of services, where a new section entitled “Information and communication” has been introduced to better reflect current economic phenomena. The introduction of the revised classification means that the estimates in respect of some kinds of activity, particularly services, are not directly comparable with earlier published estimates.

An institutional unit is an economic entity that is capable, in its own right, of owning assets, incurring liabilities, engaging in economic activities and engaging in transactions with other entities.

## **Purchasers' Price**

The amount paid by the purchaser, excluding any deductible tax, in order to take delivery of a unit of a good or service at the time and place required by the purchaser. The purchaser's price of a good includes any transport charges paid separately by the purchaser to take delivery at the required time and place.

## **Survey of Business Activity (SBA)**

The Survey of Business Activity is an annual economic survey which collects business income, expenses including wages, capital expenditure information on inventories.

## **Wages and Salaries**

Consist of amounts payable in cash including the value of any social contributions, income taxes, fringe benefits tax, etc., payable by the employee even if they are actually withheld by the employer for administrative convenience or other reasons and paid directly to social insurance schemes, tax authorities, etc., on behalf of the employee. Wages and salaries may be paid as remuneration in kind instead of, or in addition to, remuneration in cash. Separation, termination and redundancy payments are also included in wages and salaries. Wages and salaries are also measured as far as possible on an accrual rather than a strict cash basis.





