



# Samoa Bureau of Statistics

## Gross Domestic Product

March 2019 Quarter

### Overview

27<sup>th</sup> June 2019



**New base year for computing GDP at constant prices is now 2013 replacing the old base year of 2009.**

**2013 = 100**

#### Special points of interest:

- GDP Growth - 1.8%
- GDP at Constant 2013 Prices (real) - WST \$505.9 million
- GDP at Current Prices (nominal) - WST \$555.8 million

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Economic Activity, as measured by gross domestic product (GDP) went up by **1.8% in the March 2019 quarter**. Aggregate GDP in real terms amounted to \$505.9 million making it the fifth highest quarterly level to be achieved since the start of the series. The increase in the period was mainly driven by the good performance by the goods-producing industries (secondary sector). Activity in the goods-producing industries rose 19.3 percent, with all four industries recording increases in the March 2019 quarter. The growth was fueled by increased activity in the construction industry (up 26.2%), its largest since the 27.2% increase in the December 2015 quarter.

#### GDP Growth:

Gross Domestic Product for the **March 2019 Quarter** at constant prices (real GDP) was \$505.9 million, increasing by 1.8% compared to the March 2018 quarter. This follows an increase of 6.0% in the December 2018 quarter.

**Chart 1: Total GDP at constant prices & growth rates, Mar 2015—Mar 2019**

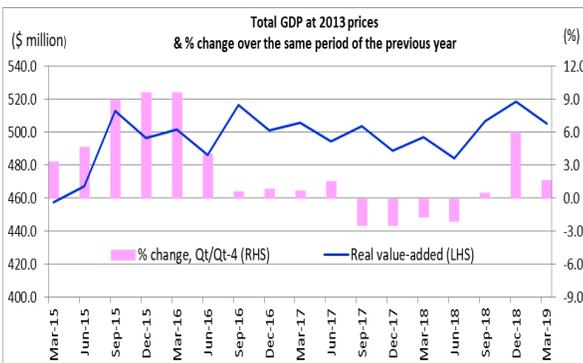


Chart 1 shows the GDP at constant prices from March 2015 to March 2019 as well as the year-on-year (y-o-y) growth rates as measured by the percentage change in GDP at constant prices on the same quarter of the previous year. As shown, the outturn in the period was the fifth highest quarterly

level to be achieved in the last 4 years. The performance in the March 2019 quarter was consistent with the increase in heavy and civil construction work such as the Malilolo Bridge, the Waterfront project as well as major residential buildings being constructed in the period. Activity in storage, warehousing and cargo handling also contributed to the increase as well as increased activity in the manufacturing of food, tobacco and construction materials. Moreover, wholesaling and retailing activities predominantly of food and beverages, gaseous products and hardware products also increased in the quarter under review. This was consistent with the 11.2% increase in remittances and the 6.0% increase in tourism earnings in March 2019 in comparison to March 2018. As a result, revenue collected from taxes such as the Value added on goods and services tax (VAGST), excises etc went up by 15.8% on a y-o-y basis.

**Chart 2: Percentage-point contributions to GDP growth by industry; March 2019 Quarter**

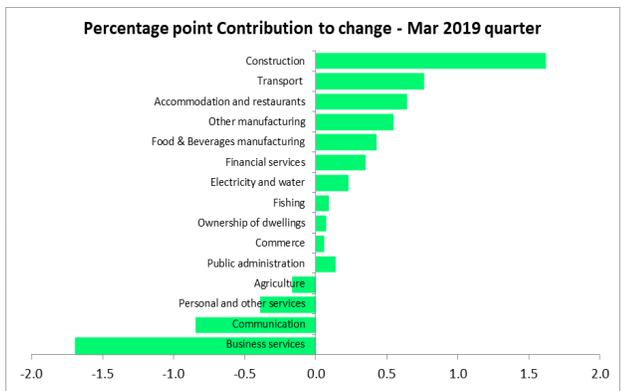


Chart 2 shows the percentage-point (pp) contribution of each industry to the overall growth in the period under review. The increase was mainly influenced by the favorable performances by Construction (1.6 pp),

# Overview cont'd

Transport (0.8 pp), Accommodation and Restaurants (0.6 pp), Other manufacturing (0.5 pp), Food and Beverage (0.4 pp), Financial services (0.4 pp) and Electricity and Water (0.2 pp). Other positive contributors were Public administration, Fishing, Ownership of dwellings and Commerce with contributions of 0.1 pp each.

On the other hand, industries that contributed negatively to overall growth were Business services, Communication, Personal & other services and Agriculture with respective contributions of -1.7, -0.8, -0.4 and -0.2 percentage-point each.

### GDP Levels (Nominal):

GDP at current prices (Nominal GDP) for the March 2019 quarter amounted to \$555.8 million. It increased by 5.3% compared to the corresponding quarter of 2018. Major contributors to the increase in nominal GDP were Construction, Food & Beverage, Agriculture and Commerce with respective increases of 29.2%, 23.0%, 16.5%, and 2.7% over the March 2018 quarter. GDP per capital in the March 2019 quarter amounted to \$2,767; increasing by 4.5% over March 2018.

### GDP Composition (Nominal):

**Chart 3: Composition of Nominal GDP, March 2019 Quarter**

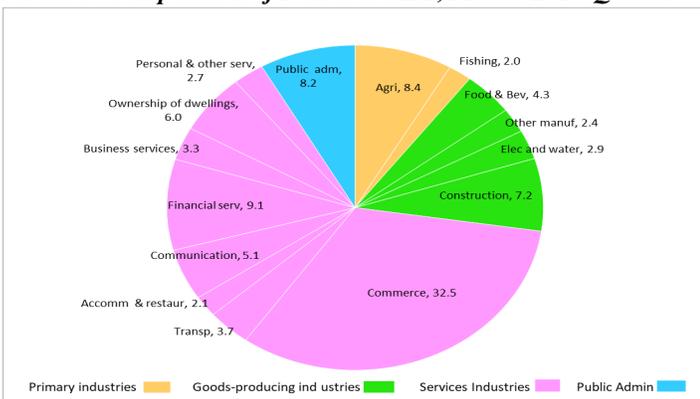


Chart 3 shows each industry's share in terms of GDP at current prices for the March 2019 quarter. The Tertiary sector or the services industries (about 64.4% of total nominal GDP) remains the largest sector in the economy. It declined by 3.1 percentage points (pp) with Communication, Business services and Commerce being the main drivers behind this decrease.

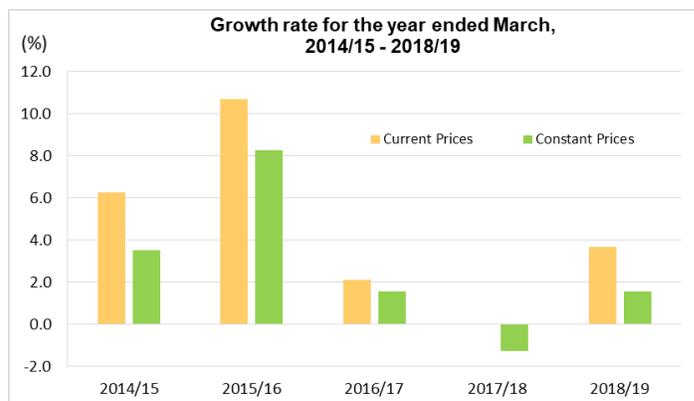
Activity in the secondary sector or goods producing industries (about 16.9% of nominal GDP) increased by 2.2 percentage point due to the increases in all the industries in the sector. The Primary sector which has a share of 10.4% of total GDP went up by 0.9 percentage point on a y-o-y basis. Public Administration share fell 0.01 percentage points compared to March 2018.

### Twelve Months Review: (Apr 2018—Mar 2019)

GDP for the year ended March 2019 at current market prices stood at \$2,184.5 million, an increase of 3.7% over the year ended March 2018. At this level, GDP per capita stood at \$10,942; increasing by 2.8% over the year ended March 2018.

At constant prices, value added was \$2,014.6 million, it also increased by 1.6% over the year ended March 2018.

**Chart 4: Percentage change in Current and Constant Prices for the year ended March (2014/15—2018/19)**



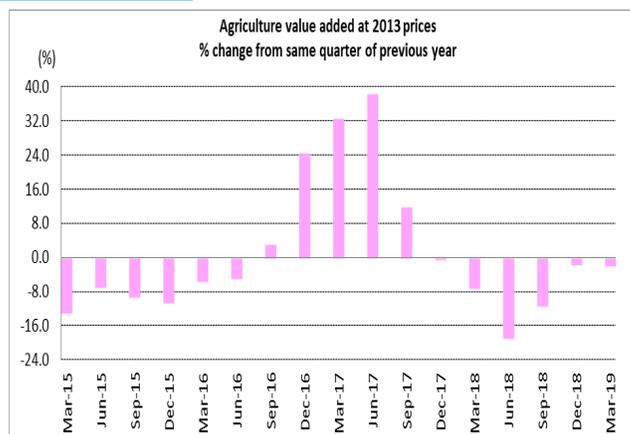
According to Chart 4, the economy has just recorded an increase in the year ended March 2019 following a negative growth of 1.3% in the year ended March 2018.

Underpinning the increase in the 12 months period ending March 2019 were favorable performances from industries such as Commerce, Construction, Transport, Accommodation and restaurants, Public administration and Food & Beverages registering contributions of 2.1, 0.9, 0.2, 0.2, 0.2 and 0.1 percentage points each to overall growth in the year ended March 2019.

# Individual Industry Quarterly Performance

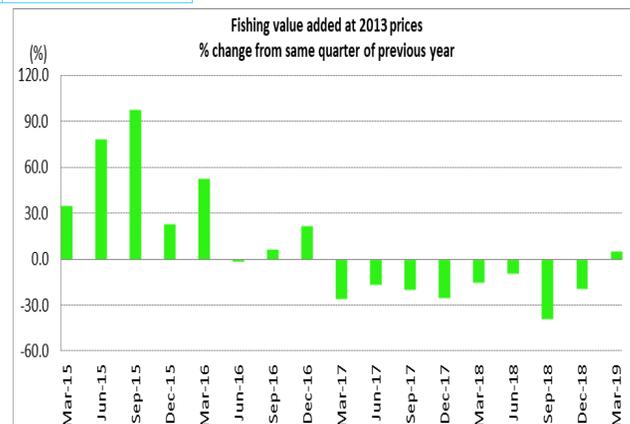
AGRICULTURE	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	40.1	44.2	46.7	5.7	16.5
Value added (constant 2013 prices) WST (millions)	41.2	40.1	40.4	0.7	-2.0
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-0.6	-0.1	-0.2	<b>Chart 5: Percentage change in Agriculture real value added; Mar 2015—Mar 2019</b>	
Contribution to aggregate nominal GDP: <i>percent</i>	7.6	7.8	8.4		

Agriculture recorded a total value added of \$40.4 million in constant 2013 prices, declining by 2.0% compared to the March 2018 quarter. This makes it the sixth consecutive quarter of negative growth for the industry. The sector has not recorded a positive growth since September 2017. The result reflects the overall decline in the domestic consumption of crops by 5.0%. Major crops made available for consumption such as Taro, Taamu and Chinese cabbages all recorded respective decreases of 27.2%, 37.6% and 53.8% over the corresponding quarter of 2018. Exported produce also recorded a decrease of 9.9% on a y-o-y basis. The weak performance by the sector was consequent of the continuous poor weather conditions as well as the demand from overseas markets.



FISHING	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	10.1	11.7	11.2	-4.9	10.9
Value added (constant 2013 prices) WST (millions)	8.2	8.8	8.6	-1.5	5.5
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-0.3	-0.4	0.1	<b>Chart 6: Percentage change in Fishing real value added; Mar 2015—Mar 2019</b>	
Contribution to aggregate nominal GDP: <i>percent</i>	1.9	2.1	2.0		

Fishing's total value added in constant prices stood at \$8.6 million in the period under review. The industry recorded an increase of 5.5% in comparison to the same quarter of the previous year. This makes it the first increase for the industry since the December 2016 quarter. The performance by the industry was consistent with the 7.9% increase in the volume of exported fish and the 7.7% rise in the volume of fish being consumed during the period. The industry contributed a 0.1 percentage points to overall growth. Its share to total nominal GDP increased from 1.9 percent in March 2018 to 2.0 percent in March 2019.



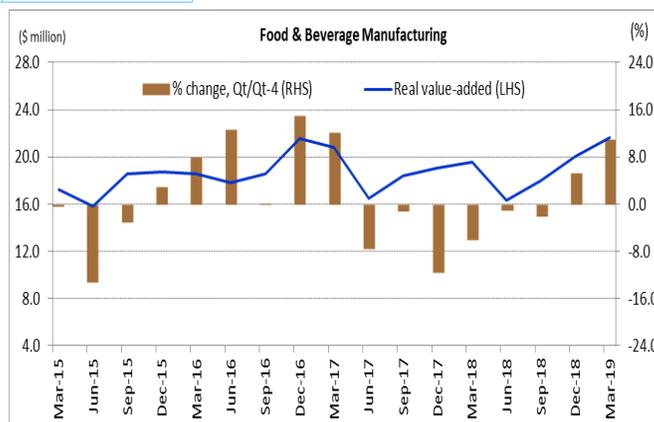
# Individual Industry Quarterly Performance

FOOD & BEVERAGE MANUFACTURING	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	19.6	20.6	24.2	17.1	23.0
Value added (constant 2013 prices) WST (millions)	19.5	20.0	21.7	8.2	10.9
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-0.3	0.2	0.4		
Contribution to aggregate nominal GDP: <i>percent</i>	3.7	3.6	4.3		

**Chart 7: Food & Beverage Manufacturing quarterly value added at constant prices & % change over the same period of the previous year; Mar 2015—Mar 2019**

Food and Beverage manufacturing registered a total real value added of \$21.7 million for the March 2019 quarter. It increased by 10.9% compared to the same quarter of the previous year. This makes it the second quarter of positive growth for the industry following six consecutive quarters of declining performances. It contributed a 0.4 percentage points to overall growth in the period.

In nominal terms, value added for the industry amounted to \$24.2 million. It increased by 23.0% when compared to the March 2018 quarter.

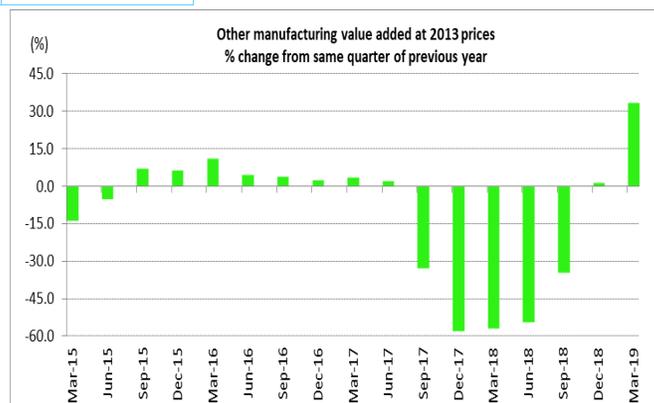


OTHER MANUFACTURING	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	11.9	10.2	13.6	32.7	13.8
Value added (constant 2013 prices) WST (millions)	8.2	8.5	10.9	28.3	33.0
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-2.1	0.0	0.5		
Contribution to aggregate nominal GDP: <i>percent</i>	2.3	1.8	2.4		

**Chart 8: Percentage change in Other Manufacturing real value added; Mar 2015—Mar 2019**

In real terms, Other manufacturing recorded a total value added of \$10.9 million in the period under review. It increased significantly by 33.0% when compared to the March 2018 quarter. This makes it the second increase for the industry following 5 consecutive quarters of negative performances due to the closure of one of the biggest manufacturer in the country.

In nominal terms, the industry recorded a total value added of \$13.6 million. It grew by 13.8% compared to the March 2018 quarter.

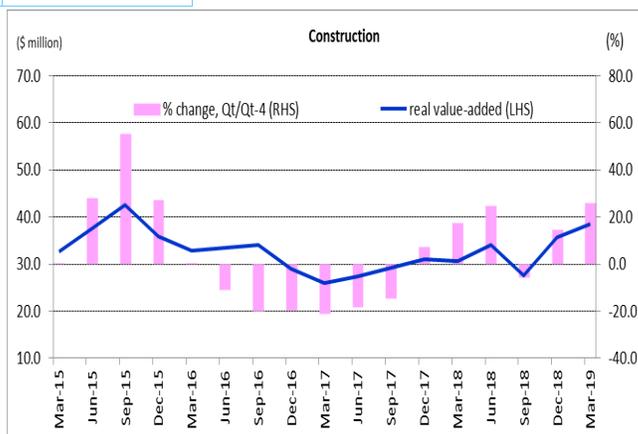


# Individual Industry Quarterly Performance

CONSTRUCTION	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	31.1	38.2	40.1	5.0	29.2
Value added (constant 2013 prices) WST (millions)	30.6	35.6	38.6	8.3	26.2
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.9	0.9	1.6	<b>Chart 9: Construction quarterly value added at constant prices &amp; % change over the same period of the previous year; Mar 2015—Mar 2019</b>	
Contribution to aggregate nominal GDP: <i>percent</i>	5.9	6.7	7.2		

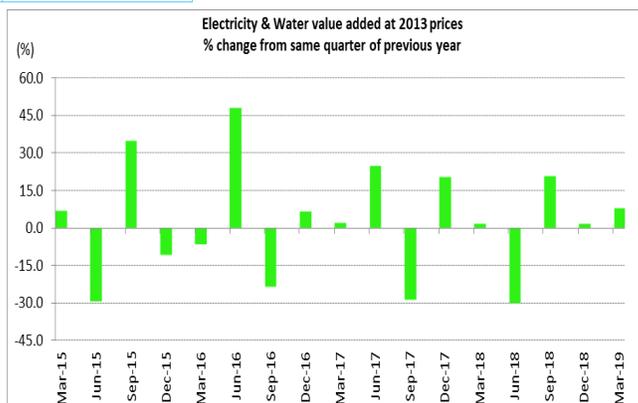
The Construction industry total value added for the period under review amounted to \$38.6 million at constant 2013 prices. It increased by 26.2% when compared to the March 2018 quarter.

This is the second highest quarterly level ever reached by the industry since the series began. Heavy and civil construction work such as the new access road and bridge crossing of Mali'oli'o River, the Apia Waterfront Development Project, the Tanumalala Prison and so forth as well as major residential building being constructed in the period contributed to the industry's good performance. Its share increased from 5.9% in March 2018 to 7.2% in March 2019. As a result, construction activity contributed 1.6 percentage points to the overall growth.



ELECTRICITY AND WATER	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	14.9	15.6	16.1	3.2	7.9
Value added (constant 2013 prices) WST (millions)	14.2	14.9	15.3	2.6	8.0
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.1	0.1	0.2	<b>Chart 10: Percentage change in Electricity &amp; Water real value added; Mar 2015—Mar 2019</b>	
Contribution to aggregate nominal GDP: <i>percent</i>	2.8	2.7	2.9		

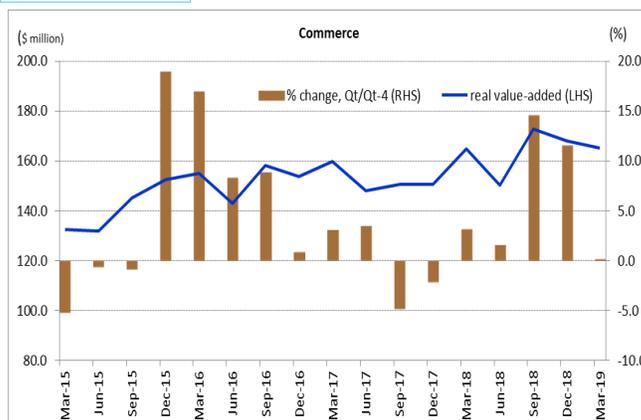
Electricity & Water generated a real value added of \$15.3 million, increasing by 8.0% on a year-on-year basis. This was translated into a contribution of 0.2 percentage points to the overall GDP growth. The industry's performance reflected the 17.2% increase in electricity produced in the period which more than offset the 0.6% decline in water production in the March 2019 quarter.



# Individual Industry Quarterly Performance

COMMERCE	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	176.0	185.5	180.9	-2.5	2.7
Value added (constant 2013 prices) WST (millions)	164.9	168.2	165.2	-1.8	0.2
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	1.0	3.6	0.1	<b>Chart 11: Commerce quarterly real value added &amp; % change over the same period of the previous year; Mar 2015—Mar 2019</b>	
Contribution to aggregate nominal GDP: <i>percent</i>	33.4	32.6	32.5		

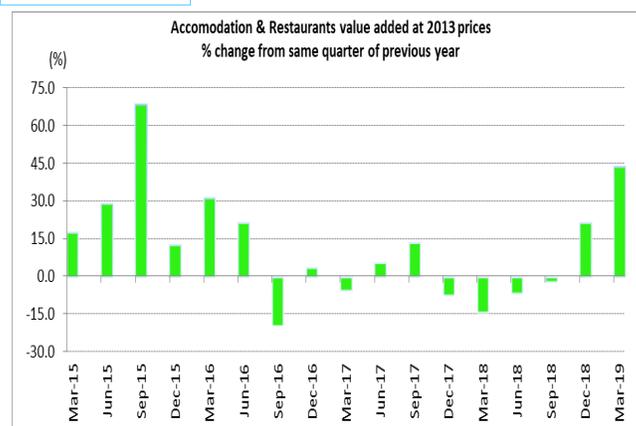
Commerce remains the largest industry in the economy holding a share of 32.5% of total nominal GDP. Its value added of \$165.2 million recorded in March 2019 makes it the third highest ever generated by the industry. As can be seen on the chart, the highest ever recorded by the industry was in the September 2018 quarter. The industry continues to be the leading contributor to total GDP with a share of 32.5%. The growth in the industry was fueled by the increase in retailing and wholesaling activities related to food, beverages, tobacco, construction materials, petroleum, gaseous products and durable goods. The performance by the industry was consistent with the increases in remittances and tourism earnings by 11.15% and 6.0% respectively.



ACCOMMODATION AND RESTAURANTS	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	8.1	13.5	11.6	-13.8	43.9
Value added (constant 2013 prices) WST (millions)	7.3	12.3	10.5	-15.0	43.6
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-0.2	0.4	0.6	<b>Chart 12: Accommodation &amp; Restaurants, percentage change in real value added over the same period of the previous year; Mar 2015—Mar 2019</b>	
Contribution to aggregate nominal GDP: <i>percent</i>	1.5	2.4	2.1		

Accommodation and Restaurants produced a total real value added of \$10.5 million, increasing by 43.6% compared to the corresponding period of the previous year. The industry was amongst the number of industries that contributed positively to overall growth, with a contribution of 0.6 percentage point for the period under review.

The upturn in the sector reflects the 30.3% and 9.2% increases in the number of visitors travelling to the country for holiday and on business matters compared to the March 2018 quarter.



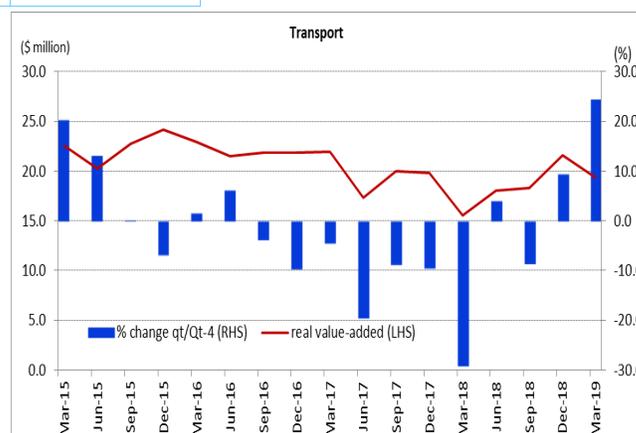
# Individual Industry Quarterly Performance

TRANSPORT	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	16.8	23.2	20.7	-10.7	23.4
Value added (constant 2013 prices) WST (millions)	15.6	21.6	19.3	-10.6	24.4
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-1.3	0.4	0.8		
Contribution to aggregate nominal GDP: <i>percent</i>	3.2	4.1	3.7		

**Chart 13: Transport quarterly growth rates with total value added at constant 2013 prices, Mar 2015—Mar 2019**

Transport value added at constant 2013 prices for March 2019 stood at \$19.3 million. Transport registered an increase in real value-added of 24.4% for the period under review when compared to March 2018. It contributed a positive 0.8 percentage points to overall GDP growth. The positive outturn was driven by the growth in storage, warehousing and cargo handling activities.

When compared to the December 2018 quarter, the industry's real value added went down by 10.6%.

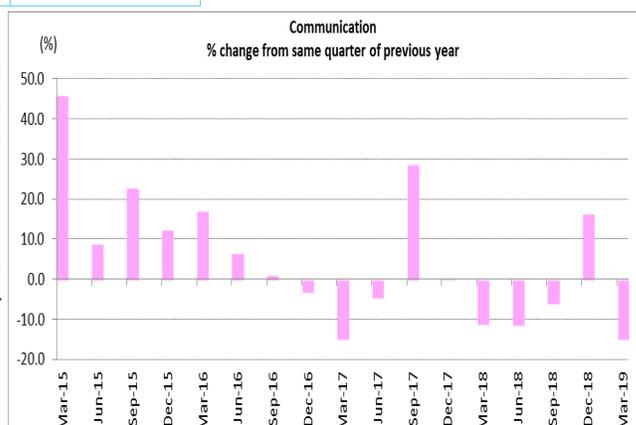


COMMUNICATION	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	32.9	42.5	28.3	-33.4	-13.8
Value added (constant 2013 prices) WST (millions)	28.4	36.0	24.2	-32.7	-14.8
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-0.7	1.0	-0.8		
Contribution to aggregate nominal GDP: <i>percent</i>	6.2	7.5	5.1		

**Chart 14: Communication percentage change in real GDP from the same quarter of the previous year, Mar 2015—Mar 2019**

Communication generated a real value added of \$24.2 million in the March 2019 quarter decreasing by 14.8% over the March 2018 quarter. The industry contributed -0.8 percentage points to overall real growth. Its share to total nominal GDP also decreased from 6.2% in March 2018 to 5.1% in March 2019.

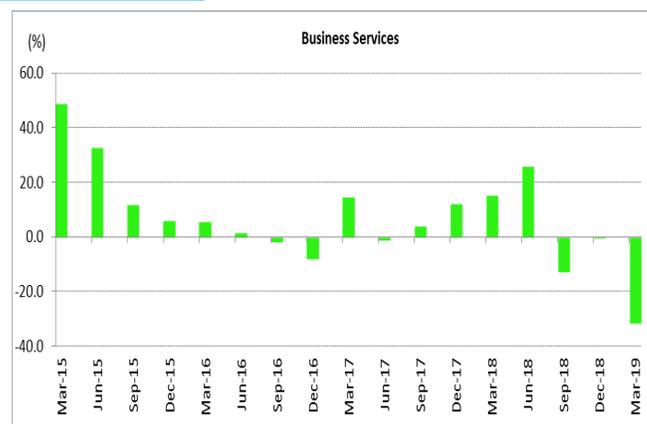
In nominal terms, the industry recorded a value added of \$28.3 million also experiencing a decrease of 13.8% on a year-on-year basis. This coincides with the 0.9% decrease in the number of people employed in the formal sector in the quarter under review.



# Individual Industry Quarterly Performance

BUSINESS SERVICES	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	25.8	22.3	18.3	-18.3	-29.1
Value added (constant 2013 prices) WST (millions)	26.8	22.7	18.4	-19.1	-31.4
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.7	0.0	-1.7		
Contribution to aggregate nominal GDP: <i>percent</i>	4.9	3.9	3.3		

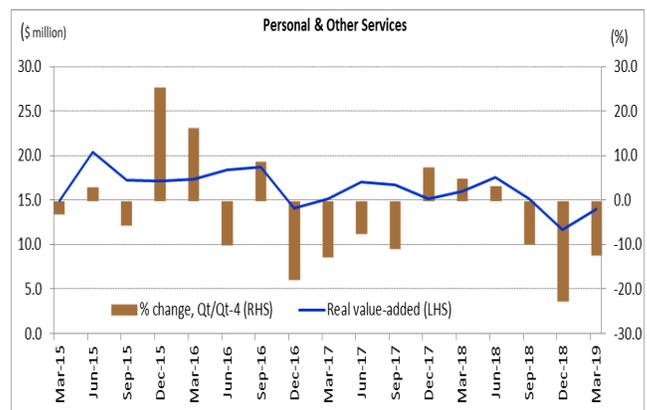
**Chart 15: Business Services, % change in value-added at constant 2009 prices from Mar 2015—Mar 2019**



Business services produced a total value added of \$18.4 million at constant 2013 prices in March 2019; a decline of 31.4% was experienced by the industry on a year-on-year basis. This makes it the third consecutive quarter of negative growth by the industry. This was due to the decrease in activity pertaining to management, consultancy as well as other administrative and support services. The industry was the biggest negative contributor to overall growth with a contribution of -1.7 percentage points. Its share to total nominal GDP was 3.3% in the March 2019 quarter which decreased by 1.6 percentage points from 4.9% in March 2018 quarter.

PERSONAL & OTHER SERVICES	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	16.6	12.5	14.9	18.9	-10.5
Value added (constant 2013 prices) WST (millions)	15.9	11.7	14.0	19.5	-12.2
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.2	-0.7	-0.4		
Contribution to aggregate nominal GDP: <i>percent</i>	3.1	2.2	2.7		

**Chart 16: Personal & Other Services quarterly value added at constant prices & % change over the same period of the previous year; Mar 2015—Mar 2019**



Personal and other services recorded a decline in real terms by 12.2 percent compared to March 2018, making it the third consecutive quarter of negative performances by the industry. Personal & other services recorded a real value added of \$14.0 million making it the second lowest quarterly level ever produced by the industry since the March 2014 quarter. It registered a contribution of negative 0.4% percentage points to overall growth.

In nominal terms, the industry recorded a decline of 10.5% compared to the corresponding quarter of the previous year.

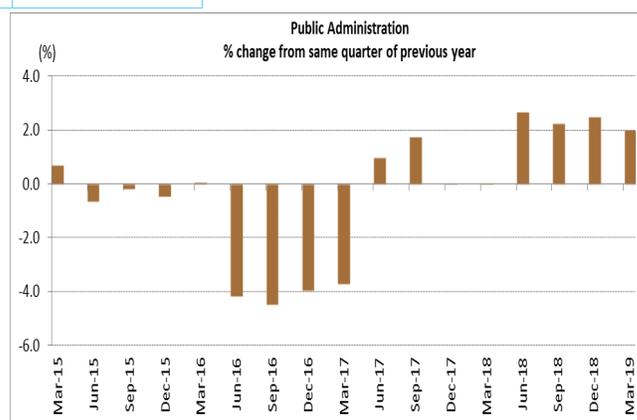
# Individual Industry Quarterly Performance

PUBLIC ADMINISTRATION	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	43.6	46.0	45.9	-0.4	5.2
Value added (constant 2013 prices) WST (millions)	35.4	36.2	36.1	-0.3	2.0
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.0	0.2	0.1	<b>Chart 17: Public Administration, % change in value-added at constant 2009 prices from Mar 2015—Mar 2019</b>	
Contribution to aggregate nominal GDP: <i>percent</i>	8.3	8.1	8.2		

Public administration increased by 2.0% on a year-on-year basis. The industry's total value added at constant prices amounted to \$36.1 million in the March 2019 quarter. It contributed 0.1 percentage point to overall growth.

In nominal terms, the industry recorded an increase of 5.2%. Public Administration has shifted down to become the fourth largest industry in the economy with a share of 8.2% in nominal terms.

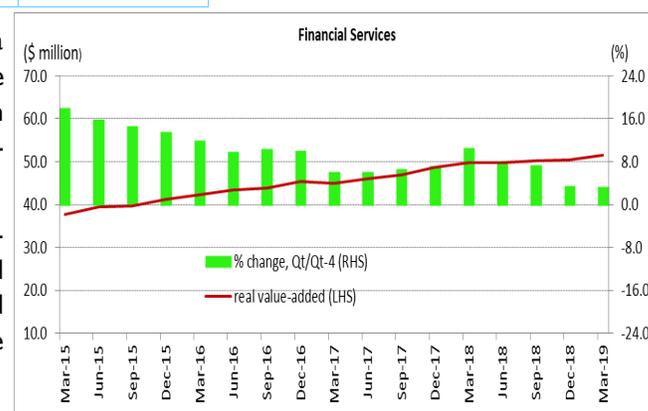
The performance in March 2019 reflects the increase in general administration activities such as executive, legislative, financial administration etc. at all levels of government as well as supervision in the field of social and economic life.



FINANCIAL SERVICES	GDP Mar 2018 Quarter	GDP Dec 2018 Quarter	GDP Mar 2019 Quarter	% change from Dec 2018 quarter (q-o-q)	% change from Mar 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	48.0	50.3	50.3	0.1	4.8
Value added (constant 2013 prices) WST (millions)	49.8	50.4	51.5	2.3	3.5
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	1.0	0.4	0.4	<b>Chart 18: Financial Services value added at constant prices &amp; % change over the same period of the previous year; Mar 2015—Mar 2019</b>	
Contribution to aggregate nominal GDP: <i>percent</i>	9.1	8.8	9.1		

Financial services real value added increased by 3.5 percent on a year-on-year basis. This makes it the twenty-second consecutive quarter of positive growth by the industry. Its real value added in March 2019 amounted to \$51.5 million, the highest ever recorded by the industry in the last 11 years.

Its performance reflects the increasing demand for financial intermediation such as central banking, financial leasing, insurance and other activities auxiliary to financial intermediation for the period under review. The industry contributed a positive 0.4 percentage points to overall GDP growth.



## Background Information

### Overview

This publication is the second release for estimates of GDP at constant (2013) prices. In the process of updating the base year from 2009 to 2013 the overall estimation system has been exhaustively reviewed, leading to improved methodologies and the adoption of a range of new data sources and revised benchmarks wherever available. The revised overall estimates have not resulted in significant changes to the picture of the Samoan economy presented by the earlier 2009-based estimates, but it is believed that the revised system is more robust, and will be better able to quickly reflect future disturbances to economic growth. The section below on “General reasons for rebasing estimates at constant prices” sets out the purpose of rebasing estimates, and the nature of the processes involved.

The key features of the overall system review and associated rebase are as follow:

- base year for constant price estimates was updated from 2009 to 2013
- ISIC classification have been upgraded from the ISIC Revision 3.1 to Revision 4 as recommended in the SNA 2008
- an increased reliance on summary data from the VAGST system
- the incorporation of latest benchmarks, including
  - ⇒ Household Income and Expenditure Survey, 2013
  - ⇒ Business Activity Survey, 2013
  - ⇒ Population Census, 2016
  - ⇒ Financial data on the Financial Sector operations
  - ⇒ information from other sources, particularly for Government Finance Statistics, Merchandise trade, Employment and Wage data; SNPF, Commodity prices from CPI, Agriculture volume data, visitor arrivals by purpose, livestock production, and landings of in-shore and off-shore fishing catch.
- more detailed data on industry level have been incorporated hence provide benefits for the detailed analysis, with results only at the aggregated industry level

### General reasons for rebasing estimates

When interpreting movements over time in broadly-based indicators such as GDP, the effects of changing prices make it difficult to see the “real” changes i.e. what would the changes have been if there had been no change in the component prices? If dealing with a single commodity e.g. sales of taro, it is possible to simply look at the quantities sold, and say with some confidence that “real” sales of taro are going up, down, or are flat.

But with an aggregate as complex as GDP, commodities such as taro,

long-line tuna catch, road building, haircuts and financial services are all intermingled, and it is not possible to immediately see the changes in the overall “quantity” of production. In order to aggregate such diverse commodities, it is necessary to express the underlying flows in terms of the prices of a single period (the “base year”). By expressing the detailed flows in monetary terms and at the price of a single period, they can then be aggregated, and the resulting aggregate values of diverse items can then be analysed for the direction and extent of their change “at constant prices”.

This process of valuing the production of detailed commodities at constant prices and then aggregating them is – in principle - directly analogous to the way in which the Consumer Price Index (CPI) is compiled. Whereas the CPI measures **prices** of detailed commodities over time and then weights those prices together by their base-period values to derive an aggregate measure of price, the derivation of constant price estimates measures detailed **quantities** over time and then weights those quantities together by their base-period values to derive an aggregate “quantum” measure.

Just as the CPI is rebased regularly, there is a further analogy between the compilation of the CPI and the necessity to rebase measures at constant prices. As noted in international recommendations:

*“...over time the pattern of relative prices in the base period tends to become progressively less relevant to the economic situations of later periods to the point where it becomes unacceptable to continue using them to measure volume changes from one period to the next. It is then necessary to update the weights.”*

### **Methodological changes associated with the review of the system for estimating GDP at current and constant prices**

As an integral part of the rebasing to 2013 prices, all benchmarks, assumptions and data sources were evaluated to see if they could be improved. In addition to changes due to the adoption of a more recent base year, the estimates of GDP and its components have been affected by improvements throughout the estimation system.

### Revised benchmarks

It is not practicable to undertake all major data collections in every period eg. the work required to conduct and process a national HIES, Business Activity Survey means that conducting these surveys every 5 years as Samoa has been doing is a major achievement. As a result it is often necessary to use **partial indicators** for extrapolating benchmarks, and the quality of the resulting estimates depends on the assumption that the relationship between the indicator and the benchmark remains constant over time.

## Background Information

When benchmarks are then derived for subsequent periods it is often the case that the relationship between indicator and benchmark has changed, and this leads to revisions between the benchmark periods and into the period before the next benchmark revision. As a specific example of how this can impact on the estimates, when the recent rebasing was conducted in 2013 (2009 base) there was insufficient information on the financial services available to the Bureau to actually reflect the financial services contribution to the economy. This leads to this component of GDP remaining low until the detailed information was made available from the CBS during the 2013 rebase estimates. The more detailed information at a subsector level in financial service as well as insurance revealed that there had been strong growth in the sector over the years with its level substantially increased compared to the 2009 series.

Fortunately, the major strengthening of the national statistical system during the last decade has led to a breadth of experience in the use of administrative data sources that are available to supplement censuses and surveys, and more effort is put into strengthening cooperation and coordination amongst the data users and data providers. Furthermore, resources are being allocated to permit more regular data collections than was the case a decade or more ago. As a result, 2018 HIES enumeration is completed, Agriculture Census will be conducted in early 2020 with more developments into the integration of businesses administrative data to facilitate timely and less costly collection on the Business Activities. It is anticipated that future rebases and systems reviews will be far less subject to revision due to benchmarks becoming very much out of date.

### Improved national statistical system:

Any system for estimating GDP is basically a framework for bringing together a wider range of economic and social statistics. The quality of the resulting estimates will be directly dependent on (a) the quality of the component systems, and (b) the extent to which the components are integrated eg. common definitions and classifications. In reviewing the latest system for estimating GDP it was evident that the national statistical system is far more robust and better integrated than it was a decade ago despite challenges

A key example of better integration is that businesses paying VAGST and NPF contributions are now classified to the same industry in both systems – as a result the average earnings measures by industry from NPF data can now be confidently related to the estimates of output by industry from VAGST data, and so provide a directly relevant measure of labour costs associated with that industry output. Other activities to improve this integration further is continuing; with the development of an Integrated Business Information System developed and housed in the Bureau, with data sharing amongst Government Ministries and Corporations like Ministry for Revenue, Ministry of Commerce Industry and Labour as well as National Provident Fund.

Ministry of Agriculture and Fisheries have been supportive during this rebase exercise with the electronic transfer of fishing data especially the

inshore and off-shore data, a great example of a statistical system with strong cooperation.

With the general improvements in the quality of the national statistical system (which includes agencies other than SBS) the need to adjust source data for obvious outliers has been significantly reduced. When the first system was established there were many series which regularly showed unrealistic fluctuations: some were monitored manually, others were so consistently unreliable that automatic checks were built in to keep them within set limits. While the latest system still features some moving averages to allow for known timing problems (eg. 7 paydays in one quarter, 6 in the next) the source data now stand on their own merits. Not only is the revised system now drawing on better quality component data, but it will also be able to more quickly reflect turning points and the effect of shocks such as cyclones.

### New classification— ISIC Revision 3.1 to Revision 4

In compliance with international best practice, one of the major developments was the re-classification of business by the nature of business activities using the ISIC Rev.4 from Rev.3.1 previously used. This is a significant activity in assuring that Samoa's data is comparable to other countries economy, as well in its relation to other systems like Balance of Payments and Government Finance Statistics. This has impacted on the value added levels of some industries like Construction and Business Services; with some establishments that were involved in architectural consultancy more on the services being previously classified under construction but are now in the business services—under architectural and engineering consultancy services.

### Methodological changes:

The general methods remain largely unchanged between 2009 and 2013 except for the opportunity to refine and improve the system as well as incorporation of the new benchmark data from the major surveys.

**Agriculture:** The general methods remain largely unchanged between 2009 and 2013 except for the opportunity to refine and improve the factors that were used in the estimation of the marketed commodities. This was related to the change in coverage of the market survey which previously covers the Fugalei market only, and now expanded to cover other markets and stalls around the islands including the main market in Savaii. The single biggest influence on the change in movements

## Background Information

between the two systems was the introduction of the 2013 HIES benchmarks, and this resulted on 2013-based estimates being lower in 2013 compare to the (2009) previous series.

**Fishing:** Fishing like Agriculture methods remain largely unchanged except for the introduction of the HIES 2013 data as well as the use of the in-shore and off-shore survey data from the Fisheries Division of the Ministry of Agriculture and Fisheries in the system.

### Industries which rely on VAGST data:

Benchmarks from the Business Activity Survey 2013 were considered and adjusted accordingly, in light of the coverage in the BAS for some industries and in comparison with VAGST data.

In many ways the VAGST system is a nearly ideal indicator for measuring value added in many industries:

- its scope is “value added”, the same concept as underlies GDP;
- it is a sub-annual system, with timely reporting;
- returns are monitored closely to ensure compliance;
- good working relation with MfR mean that SBS industry coding is being applied;
- its coverage spans the non-agricultural monetary side of the domestic economy.

As such the VAGST system provides regular, reliable aggregate data for the key items: sales, and purchases. If VAGST did not exist it would require a major (to the point of being impracticable) on-going business survey, at huge cost to both SBS and the reporting business community. Inevitably the results from the VAGST system have been adopted as the primary data source for many industries.

The industries which use only VAGST results in estimating the current price values (CPVs) of monetary value added for that industry are:

- OTHM Manufacturing other than food and beverages
- ELEW – but only the water component, and this will change if we can get good data directly from SWA (water is in VAGST, electricity is not)
- TRAD Commerce
- COMM Communication
- BUSS Business Services
- PERS Personal services
- OTHR Other services

Industries which use VAGST as the primary data source for monetary CPVs but supplement these with data from other sources are:

- FOOD Food and beverage manufacturing (+ exports)
- CONS Construction (+ building material imports as additional indicator);
- TSPT Transport (+ estimates for buses and taxis outside VAGST)

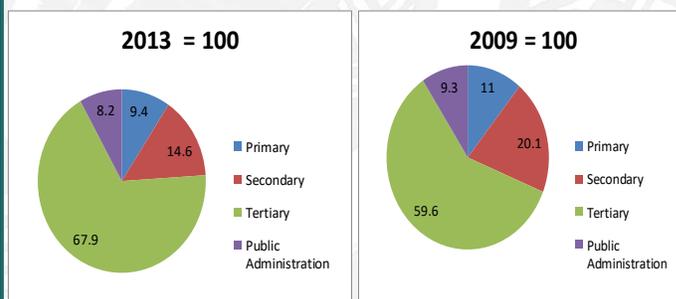
Apart from these VAGST based industries, The Finance Industry main data source is now primarily from the Profit and Loss Statement summary provided by the Central Bank of Samoa. This not only enables the calculation of the FISIM, but also the breakdown of other components of the Finance Sector like Insurance, Central Bank and Other financial institutions.

### Impact of the revised estimates on the economic structure and growth

The combined effect of the rebasing to 2013 prices, revising methodologies and data sources remained unchanged at the aggregated level. However the revised benchmarks as expected led to changes in the value added composition of industries, as well as year on year growth rates. The change saw the Tertiary sector share increased by 8.3 percentage point with Secondary, Primary and the Public Admin sector losing 5.5, 1.6 and 1.1 percentage points respectively.

Underpinning the change was the Finance sector becoming the second largest industry after Commerce, with Construction moving to sixth and Other Manufacturing to be the smallest in 2018 with 1.8 percent share. The trend is indicative of the changes occurred in the period from 2009 to current with the completion of some major infrastructural projects as well as the effect of the closure of Yazaki in August 2017. Public Administration, Agriculture and Communication sectors were in the 2nd, 3rd and fourth in the ranking .

### Comparison of GDP shares 2018, by broad sectors in 2013 and 2009 prices,

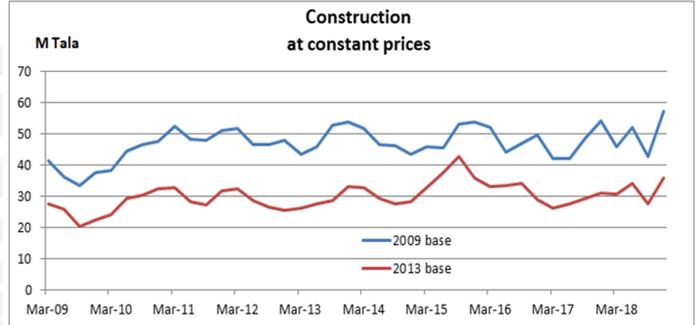
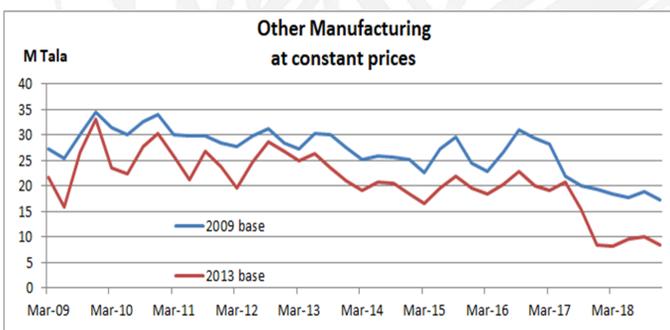
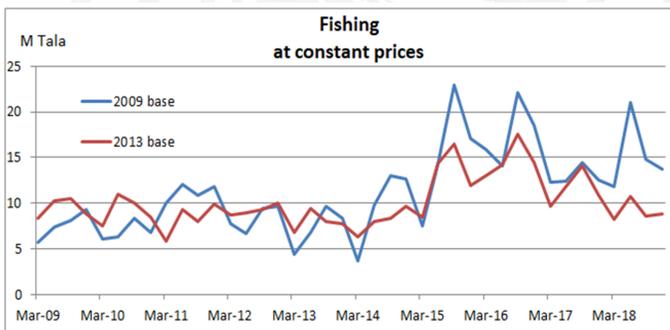
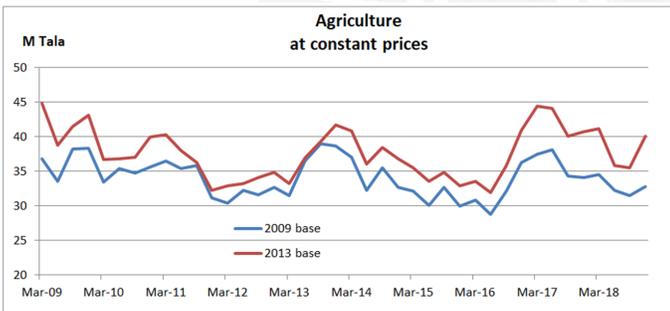
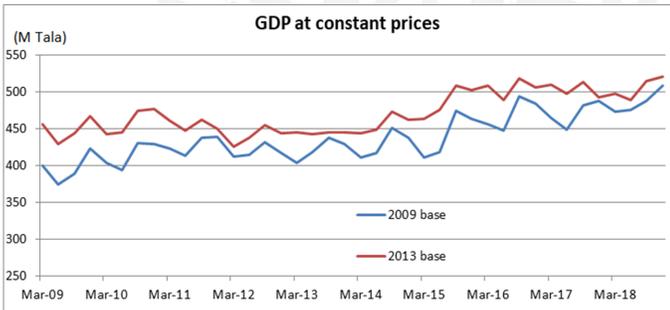
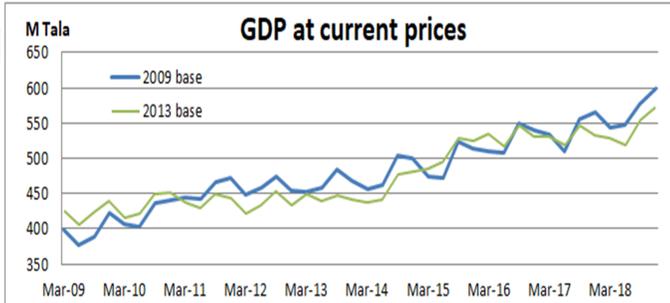


Indicated in the following charts are the industries showing significant change as part of the rebasing exercise:

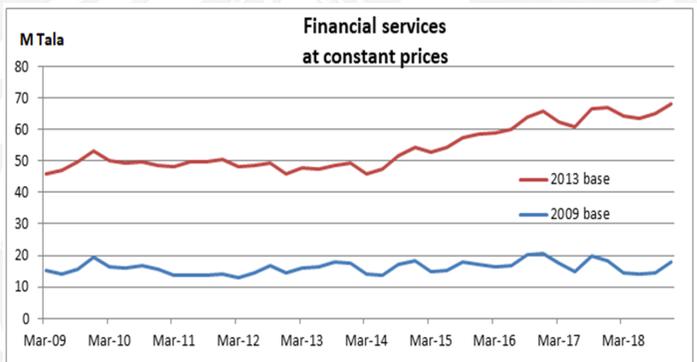
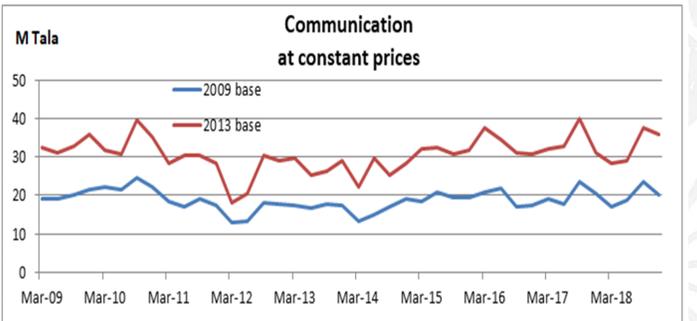
# NATIONAL ACCOUNTS FRAMEWORK REVIEW & GDP 2013 REBASING

## Background Information

Some of the key results for GDP at current and constant 2013 prices compared to 2009 prices;



The gap between the two base periods for the Construction and Other Manufacturing reflects the change in the level of activities in the two periods, with 2013 having a lower end compared to 2009. On the other hand Communication indicated that there have been more activities in the 2013 period compared to 2009.



The gap between the two base periods for the Financial services reflects the change in the level of activities in the two periods, with 2013 having a higher value of activities compared to 2009. This also attributed to improved data sources used for this industry compared to the previous data set.

## Background Information

### INTRODUCTION

The compilation of national accounts statistics is a dynamic process, and therefore needs to adapt to reflect a variety of measures and indicators consistent with developments and structural changes in the economy over a period of time. It is therefore expected that revisions and updates are made to the historical series on a quarterly or annual basis as new data sources are brought into the model and as various benchmarks and assumptions are validated and updated.

This quarterly report is the second of the new quarterly series of GDP estimates at constant 2013 prices. This report is an ongoing publication and can also be downloaded from our website [www.sbs.gov.ws](http://www.sbs.gov.ws).

### ABOUT GROSS DOMESTIC PRODUCT

Gross domestic product (GDP) is Samoa's official measure of economic growth. GDP is compiled and published using the **production approach**, this approach measures the total value of goods and services produced in Samoa, after deducting the cost of goods and services used in the production process. This is also known as the value-added approach.

**Broad industry groups:** The GDP tables attached to this report follows the broad groupings based on the International Standard Industry Classification (ISIC) Revision 4. Classification of economic activity is important in the determination of the extent and nature of the information collected and the quality of the data compiled.

- primary industries (agriculture and fishing)
- secondary sector or the goods-producing industries (manufacturing, construction, electricity & water);
- Tertiary sector or service industries (wholesale trade; retail trade and accommodation; transport, postal, and warehousing; information media and telecommunications; finance and insurance services; rental, hiring, and real estate services; professional, scientific, technical, administrative, and support services; public administration and safety; education and training; health care and social assistance; arts, recreation, and other services).

### REVISIONS

This report incorporates minor revision to estimate of value-added of the Financial service industry for the December 2018 quarter. This was due to the availability of actual numbers from some of the sources such as the employment and the financial data. This publication is subject to revisions in the next publication pending the availability of revised numbers.



#### SBS Vision:

**“To strengthen Statistical services  
for the development of  
Samoa”**

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