



# Samoa Bureau of Statistics

## Gross Domestic Product

December 2019 Quarter

### Overview

20<sup>th</sup> March 2020



**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 - -3.7%
- GDP at Constant 2013 Prices (real) - **WST \$498.9 million**
- GDP at Current Prices (nominal) - **WST \$544.6 million**

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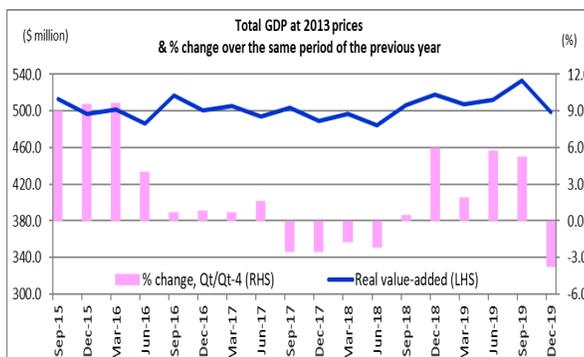
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Economic activity, as measured by Gross Domestic Product (GDP) went down by 3.7% in the **December 2019 quarter**, making it the first negative growth recorded since June 2018. This follows an increase of 5.2% in the September 2019 quarter. Aggregate GDP in real terms amounted to \$498.9 million, the lowest quarterly outturn to be achieved in the last six consecutive quarters. The weak performance by the economy was to be expected considering the decline in economic activities mainly due to the measles outbreak which caused the Government to declare the nation's state of emergency for a period of six weeks. As a result, activity in the tertiary industry, secondary industry and the primary industry fell 4.9%, 5.6% and 2.0% respectively in the December 2019 quarter.

#### GDP Growth:

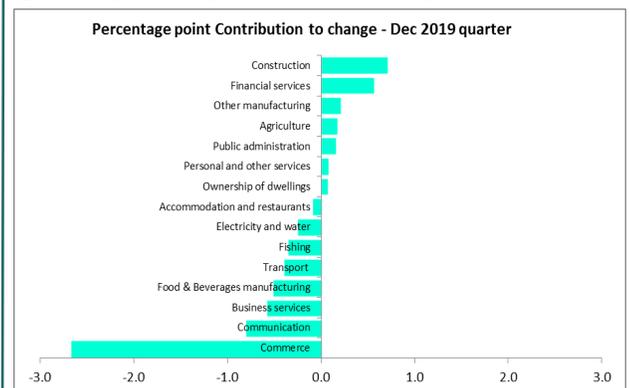
Gross Domestic Product for the December 2019 Quarter at constant 2013 prices was \$498.9 million, decreasing by 3.7% compared to December 2018 quarter. This follows an increase of 5.2% in the September 2019 quarter.

**Chart 1: Total GDP at constant prices & growth rates, December 2015 - December 2019**



This is the first quarter of negative performance following five consecutive quarters of positive growth. Chart 1 shows GDP at constant prices from December 2015 to December 2019 and the year-on-year (y-o-y) growth rates as measured by the percentage change on the same quarter of the previous year. As shown, GDP dropped significantly in the December 2019 quarter reflecting the negative impact of the measles epidemic which affected normal business operations, travel, employment and other services which are usually in high demand at the end of the year.

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



Depicted in Chart 2 above are the percentage-point (pp) contributions of each industry to the overall growth in the December 2019 quarter. The decrease was mainly influenced by the unfavorable performance by Commerce, Communication, Business services, Food & Beverages manufacturing, Transport, Fishing, Electricity & Water and Accommodation & Restaurants with contributions of -2.7 pp, -0.8 pp, -0.6 pp, -0.5 pp, -0.4 pp and -0.4 pp, -0.3 pp and -0.1 pp respectively to overall growth.

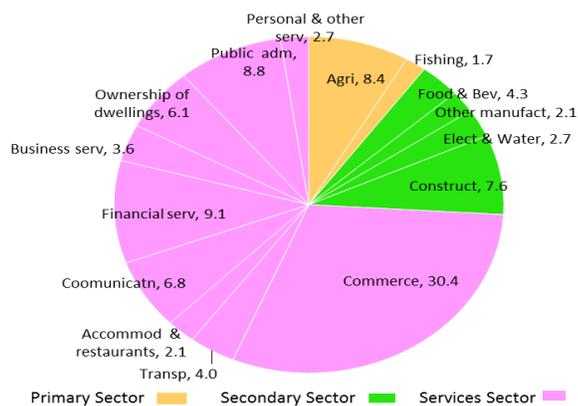
# Overview cont'd

Commerce, the biggest contributor to negative growth in the December 2019 quarter went down by 8.2% on a y-o-y basis. Communication recorded a decrease of 11.6% in the December 2019 quarter. Business services decreased by 13.1% in the period under review. Food & Beverages went down by 13.3% followed by Transport and Fishing with decreases of 9.5% and 21.0% respectively. However, positive growths achieved by other industries were not strong enough to counter the negative impact experienced by industries which contracted in the period.

### GDP Levels (Nominal):

GDP at current prices (Nominal GDP) for the December 2019 quarter amounted to \$544.6 million. It decreased by 4.4% compared to the corresponding quarter of 2018. This was mainly influenced by the performances by Fishing, Business services, Communication, Food & Beverages manufacturing, Commerce and Transport recording respective decreases of 19.9%, 13.3%, 13.3%, 11.2%, 10.7% and 9.8% over its level in the December 2018 quarter.

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

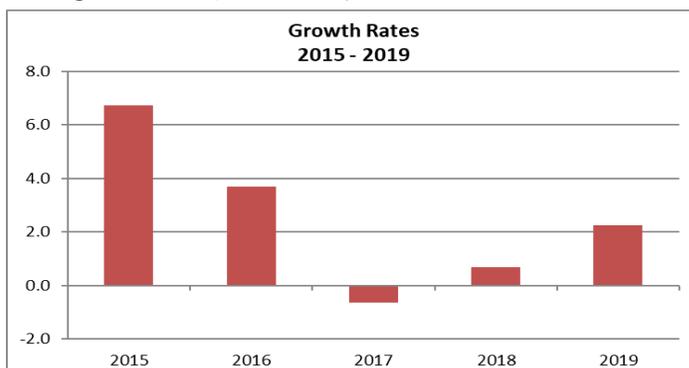


The industry composition of GDP at current market prices in the December 2019 quarter is shown in Chart 3 above. Tertiary sector (services industries) remains the largest sector comprising 74.1% of total nominal GDP. It decreased by 1.2 pp compared to the same quarter of the previous year. The increases in shares for Financial services, Ownership of Dwellings and Personal & other services were not high enough to offset the decline in the sectors overall share. The Secondary sector (goods producing industries) was the second largest sector, it went up by 1.0 pp on a y-o-y basis. This was due to the increases in Electricity & Water and Other manufacturing. The Primary sector which accounts for 10.1% of GDP has increased its share by 0.3 pp as a result of the increase in Agriculture's share compared to the corresponding quarter of 2018.

### Twelve Months Review for the year ended Dec 2019:

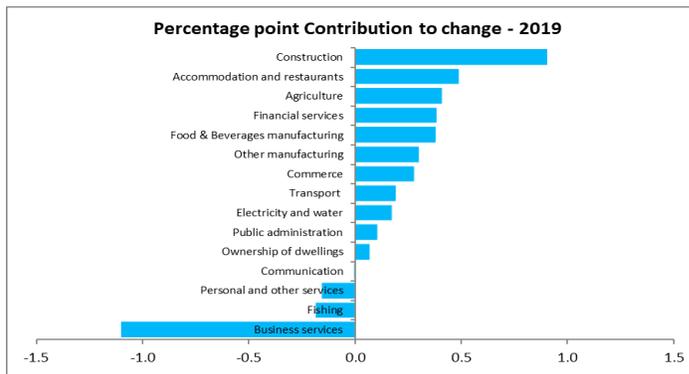
GDP for the year ended December 2019 (Jan 2019 - December 2019) at current market prices was \$2,237.3 million, increasing by 3.7% over the \$2,156.6 million recorded in the year ended December 2018. At this level, GDP per capita was \$11,138 increasing by 2.9% over the year 2018. In constant 2013 prices, GDP stood at \$2,050.8 million in the year ended December 2019, increasing by 2.3% over the \$2,005.7 million recorded in the year ended December 2018.

**Chart 4: Percentage change in Constant Prices for the year ending December (2015 - 2019)**



Depicted in Chart 4 are the real growth rates in the last five years ending December. The economy recorded increases in 2018 and 2019 following a downturn in the 2017 when economic activities were affected by the closing down of the YAZAKI plant which used to be one of the biggest manufacturers in the country. The increase in the year 2019 was a result of the high GDP in the first three quarters of 2019 with Construction, Accommodation & Restaurants, Agriculture, Financial services and Food & Beverages being the main contributors to this increase having contributions of 0.9 pp, 0.5 pp, 0.4 pp, 0.4 pp and 0.4 pp each to overall growth of 2.3% as shown

**Chart 5: Percentage-point contributions to GDP growth for the year 2019**

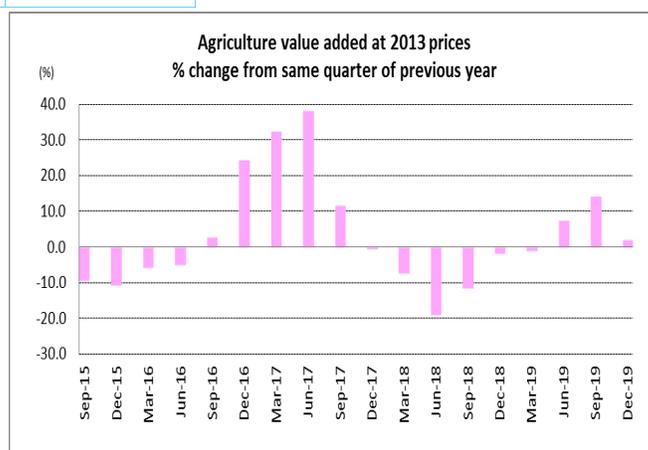


# Individual Industry Quarterly Performance

AGRICULTURE	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	44.2	47.7	45.6	-4.4	3.1
Value added (constant 2013 prices) WST (millions)	40.1	40.6	41.0	0.9	2.2
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-0.1	1.0	0.2		
Industry's share to total nominal GDP: <i>percent</i>	7.8	8.2	8.4		

**Chart 6: Percentage change in Agriculture real value added; Dec 2015 - Dec 2019**

Agriculture's total value added at constant prices for the December 2019 quarter amounted to \$41.0 million. It increased by 2.2% compared to the corresponding quarter of 2018. This result reflects the overall increase in domestic consumption of crops by 14.4% with marketed and non-marketed crops increasing by 31.1% and 1.6% respectively. Volume of major agricultural produce supplied for marketed sales went up such as taro (up by 41.8%), banana (up by 60.9%), yam (up by 41.7%), Chinese cabbage (up by 59.5%) and cucumber (up by 15.6%). Livestock value added increased by 4.5% on a year-on-year basis.

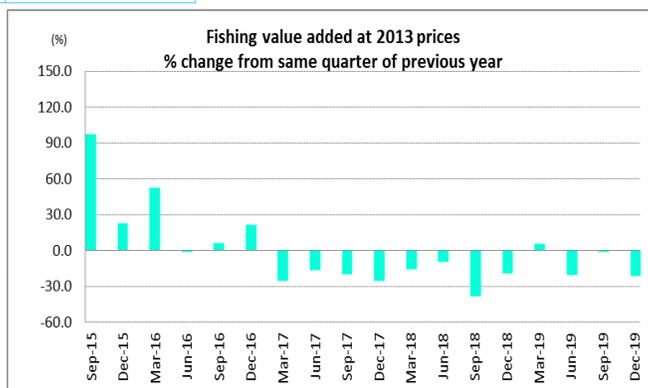


Industry's share to total nominal GDP increased from 7.8% in December 2018 to 8.4% in the December 2019 quarter.

FISHING	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	11.7	11.4	9.4	-17.5	-19.9
Value added (constant 2013 prices) WST (millions)	8.8	8.5	6.9	-18.7	-21.0
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-0.4	0.0	-0.4		
Industry's share to total nominal GDP: <i>percent</i>	2.1	2.0	1.7		

**Chart 7: Percentage change in Fishing real value added; Dec 2015 - Dec 2019**

Fishing value added in real terms decreased by 21.0% compared to the corresponding period in 2018. The industry continues to decline since June 2019 with the March 2019 quarter being the exception within the year 2019.



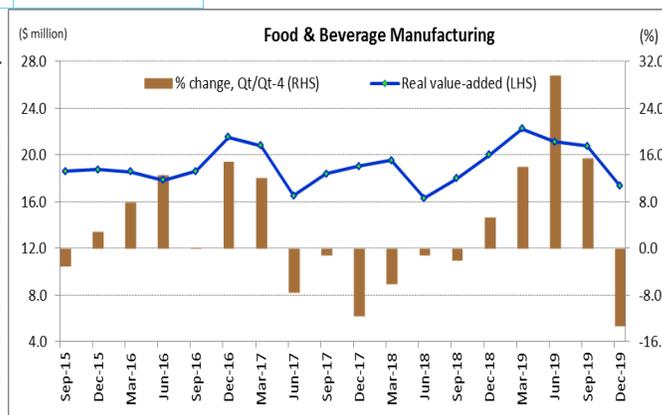
The unfavorable performance reflects the decline of 33.6% in domestic consumption. The volume of inshore landings and offshore landings (bottom fishing) decreased by 21.3% and 34.6% which have been supplied to the markets locally within the country. In nominal terms, the industry went down by 19.9% on a year-on-year basis.

# Individual Industry Quarterly Performance

FOOD & BEVERAGE MANUFACTURING	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	20.6	21.4	18.3	-14.2	-11.2
Value added (constant 2013 prices) WST (millions)	20.0	20.8	17.4	-16.4	-13.3
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.2	0.5	-0.5	<b>Chart 8: Food &amp; Beverage Manufacturing quarterly value added at constant prices &amp; % change over the same period of the previous year; Dec 2015 - Dec 2019</b>	
Industry's share to total nominal GDP: <i>percent</i>	3.6	3.7	3.4		

Food and Beverage industry produced a total value added in real terms of \$17.4 million in December 2019 registering a decline of 13.3% in comparison to December 2018. This is the first quarter of negative growth for the industry following four consecutive quarters of positive growth as can be seen in Chart 8. The industry contributed -0.5 percentage points to the overall growth in the period with a 3.4% share to total nominal GDP.

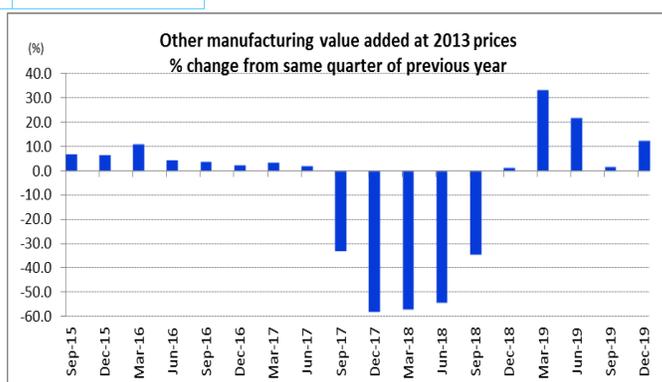
In nominal terms, the industry's value added (\$18.3 million) also went down by 11.2%. Its share to total nominal GDP has decreased by 0.2 percentage points from 3.6 percent to 3.4 percent.



OTHER MANUFACTURING	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	10.2	12.3	11.5	-6.8	12.5
Value added (constant 2013 prices) WST (millions)	8.5	10.2	9.6	-6.1	12.4
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.0	0.0	0.2	<b>Chart 9: Percentage change in Other Manufacturing real value added; Dec 2015 - Dec 2019</b>	
Industry's share to total nominal GDP: <i>percent</i>	1.8	2.1	2.1		

In real terms, Other Manufacturing industry recorded a total value added of \$9.6 million in the period under review. It increased by 12.4% when compared to the December 2018 quarter. This is the fifth consecutive quarter of positive performance by the industry following five quarters of negative growth.

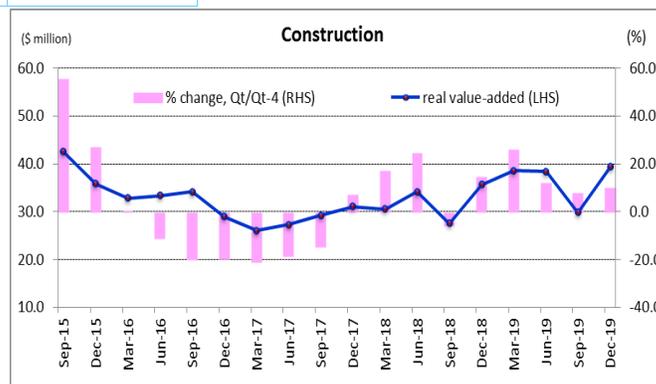
In nominal terms, the industry recorded a total value of \$11.5 million accounting for 2.1% of total nominal GDP. It grew by 12.5% compared to the previous quarter of December 2018.



# Individual Industry Quarterly Performance

CONSTRUCTION	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	38.2	30.9	41.6	34.5	8.9
Value added (constant 2013 prices) WST (millions)	35.6	29.8	39.3	32.0	10.3
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.9	0.4	0.7	<b>Chart 10: Construction quarterly value added at constant prices &amp; % change over the same period of the previous year; Dec 2015 - Dec 2019</b>	
Industry's share to total nominal GDP: <i>percent</i>	6.7	5.3	7.6		

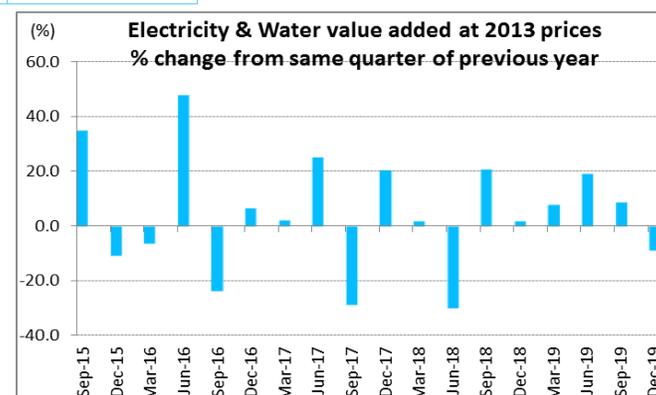
Construction produced a total value added of \$39.3 million in constant 2013 prices, increasing by 10.3% when compared to the December 2018 quarter. This makes it the fifth quarter of consecutive positive growth for the industry. The performance by the industry was driven by ongoing implementation of heavy civil works such as infrastructural developments such as the Apia Waterfront Development Project, the new Vaisigano bridge, several road construction and major residential building being constructed within the period under review. Construction activity contributed 0.7 percentage points to overall real growth rate for the December 2019 quarter.



ELECTRICITY AND WATER	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	15.6	15.4	14.8	-4.0	-5.1
Value added (constant 2013 prices) WST (millions)	14.9	14.3	13.6	-5.2	-8.7
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.1	0.2	-0.3	<b>Chart 11: Percentage change in Electricity &amp; Water real value added; Dec 2015 - Dec 2019</b>	
Industry's share to total nominal GDP: <i>percent</i>	2.7	2.7	2.7		

Electricity and Water generated a total value added of \$13.6 million at constant prices in the December 2019 quarter, decreasing by 8.7% compared to December 2018. The impaired performance reflected the strong decline in water production by 22.9%. Although Electricity experienced an increase in value added (by 4.7%) on a year-on-year basis, it was not strong enough to offset the decline in Water in the period under review.

The industry's performance in the quarter under review translated into a negative contribution of 0.3 percentage points to the overall GDP growth rate.

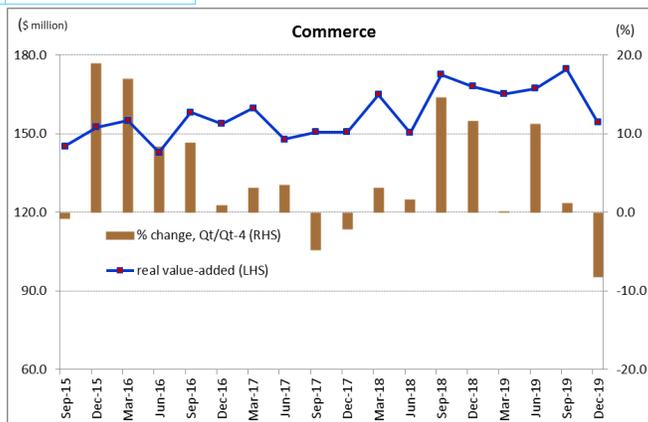


# Individual Industry Quarterly Performance

COMMERCE	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	185.5	189.5	165.7	-12.6	-10.7
Value added (constant 2013 prices) WST (millions)	168.2	174.8	154.3	-11.7	-8.2
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	3.6	0.4	-2.7		
Industry's share to total nominal GDP: <i>percent</i>	32.6	32.6	30.4		

**Chart 12: Commerce quarterly real value added & % change over the same period of the previous year; Dec 2015 - Dec 2019**

Commerce continues to be the leading contributor to total GDP with the industry producing a real value added of \$154.3 million which saw a decline of 8.2% compared to the corresponding quarter of 2018. Its nominal value added of \$165.7million also declined by 10.7%. The decline in the industry was caused by the decrease in retailing and wholesaling activities related to food, beverages, tobacco, petroleum, gaseous products and durable goods. Additionally, the performance by the industry was consistent with the decrease in tourism earnings and remittances by 7.6% and 4.9% respectively. The measles outbreak in the December 2019 quarter has had a strong negative impact on the growth of the industry.

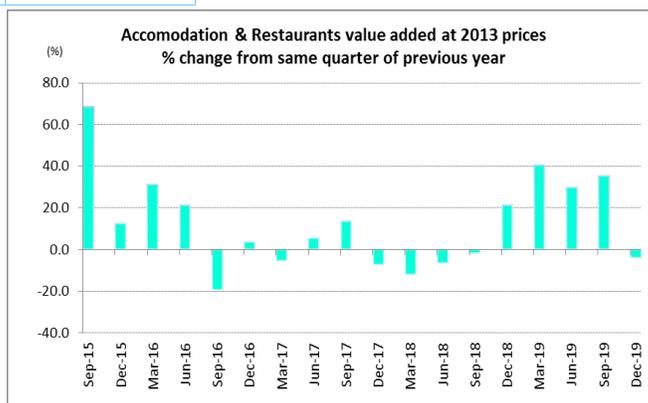


ACCOMMODATION AND RESTAURANTS	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	13.5	18.7	13.1	-29.9	-3.1
Value added (constant 2013 prices) WST (millions)	12.3	16.8	11.8	-29.7	-3.9
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.4	0.9	-0.1		
Industry's share to total nominal	2.4	3.2	2.4		

**Chart 13: Accommodation & Restaurants, percentage change in real value added over the same period of the previous year; Dec 2015 - Dec 2019**

Accommodation produced a total real value added of \$11.8 million (down by 3.9%). Total nominal value added of \$13.1 million also declined by 3.1%. It was amongst the number of industries that were directly affected by the onset of measles with tourism earnings plummeting by 7.6%. The downturn in the sector reflects the 13.8% and 19.0% decreases in the number of visitors travelling to the country for holidays and to visit families and friends.

The industry contributed -0.1% to overall real growth with a share of 2.4 percent to total nominal GDP.



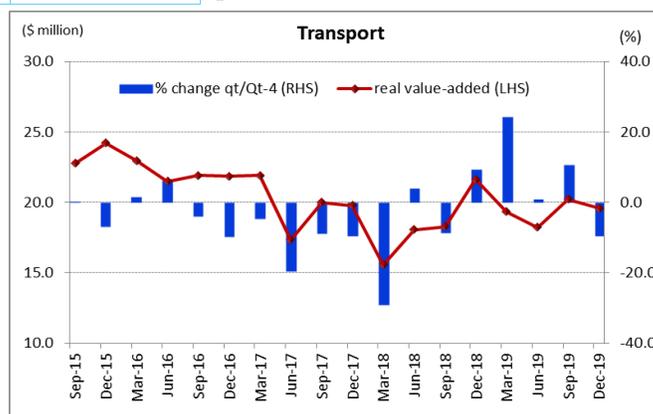
# Individual Industry Quarterly Performance

TRANSPORT	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	23.2	21.5	20.9	-2.8	-9.8
Value added (constant 2013 prices) WST (millions)	21.6	20.2	19.6	-3.2	-9.5
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.4	0.4	-0.4		
Industry's share to total nominal GDP: <i>percent</i>	4.1	3.7	3.8		

**Chart 14: Transport quarterly growth rates with total value added at constant 2013 prices, Dec 2015 - Dec 2019**

Transport value added at constant 2013 prices for December 2019 stood at \$19.6 million. It registered a decrease in real value-added of 9.5% for the period under review when compared to December 2018. This negative performance was mainly due to the decline in storage, warehousing and cargo handling activities. Sea and Land transport both declined in valued added by 15.2%. The industry contributed -0.4 pp to overall growth.

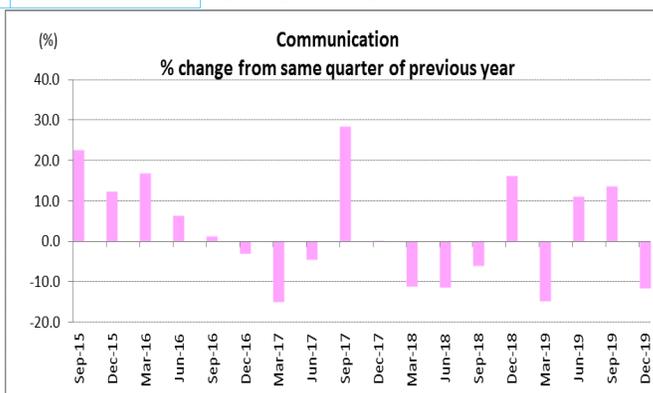
When compared to the September 2019 quarter, the industry was also down by 3.2%.



COMMUNICATION	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	42.5	48.9	36.9	-24.6	-13.3
Value added (constant 2013 prices) WST (millions)	36.0	42.8	31.8	-25.7	-11.6
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	1.0	1.0	-0.8		
Industry's share to total nominal GDP: <i>percent</i>	7.5	8.4	6.8		

**Chart 15: Communication percentage change in real GDP from the same quarter of the previous year, Dec 2015 - Dec 2019**

Communication generated a real value added of \$31.8 million in the December 2019 quarter, decreasing by 11.6% over the December 2018 quarter. The industry contributed -0.8 percentage points to overall growth decreasing its share to total nominal GDP from 7.5% in December 2018 to 6.8% in December 2019. In nominal prices, the industry recorded a value added of \$36.9 million also experiencing decline of 13.3% on a year-on-year basis. The negative performance by Communication was due to the decreasing demand mainly for products that was on the market as the country faced difficulties associated with the measles outbreak causing the public to prioritize necessities.



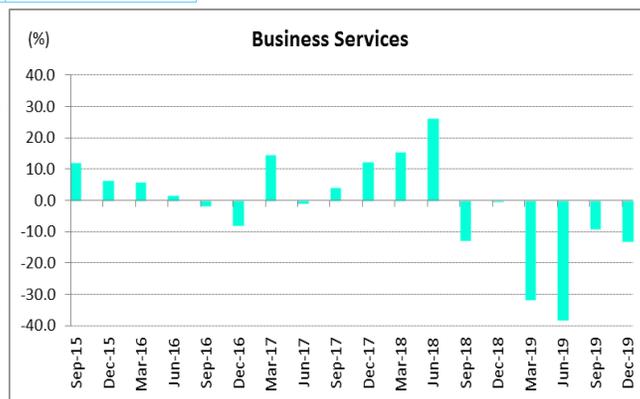
# Individual Industry Quarterly Performance

BUSINESS SERVICES	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	22.3	17.2	19.3	12.3	-13.3
Value added (constant 2013 prices) WST (millions)	22.7	18.0	19.8	10.0	-13.1
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.0	-0.4	-0.6		
Industry's share to total nominal GDP: <i>percent</i>	3.9	3.0	3.6		

**Chart 16: Business Services, % change in value-added at constant 2009 prices from Dec 2015 - Dec 2019**

Business services produced a total value added of \$19.8 million at constant 2013 prices in December 2019; a decline of 13.1% was experienced by the industry on a year-on-year basis. The industry continues on in its sixth consecutive quarter of negative growth mainly due to the decrease in activity pertaining to management, consultancy as well as other administrative and support services.

It's total nominal value added of \$19.3 million decreased by 13.3%. The industry's share to total nominal GDP for the period was 3.6%, down by 0.3 percentage points when compared to the same quarter of the previous year.

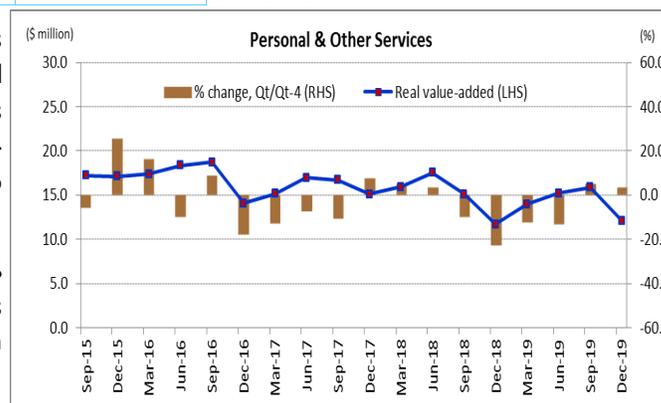


PERSONAL & OTHER SERVICES	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	12.5	16.5	12.8	-22.1	2.6
Value added (constant 2013 prices) WST (millions)	11.7	15.9	12.1	-23.6	3.5
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	-0.7	0.2	0.1		
Industry's share to total nominal GDP: <i>percent</i>	2.2	2.8	2.4		

**Chart 17: Personal & Other Services quarterly value added at constant prices & % change over the same period of the previous year; Dec 2015 - Dec 2019**

Personal and other services recorded an increase in real terms by 3.5 percent compared to December 2018; this is the second quarter of positive growth following four consecutive quarters of negative performances by the industry. It recorded a real value added of \$12.1 million, contributing 0.1 percentage points to overall growth.

In nominal terms, the industry recorded an increase of 2.6% compared to the corresponding quarter of the previous year. Its share to nominal GDP increased by 0.2 percentage points from 2.2% in December 2018 to 2.4% in the December 2019 quarter.



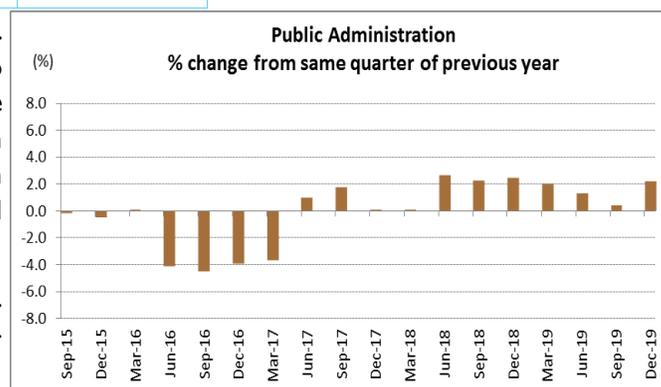
# Individual Industry Quarterly Performance

PUBLIC ADMINISTRATION	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	46.0	46.7	47.6	1.8	3.4
Value added (constant 2013 prices) WST (millions)	36.2	36.5	37.0	1.3	2.2
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.2	0.0	0.2		
Industry's share to total nominal GDP: <i>percent</i>	8.1	8.0	8.7		

**Chart 18: Public Administration, % change in value-added at constant 2013 prices from Dec 2015 - Dec 2019**

Public administration increased by 2.2% on a year-on-year basis. The industry's total value added at constant prices amounted to \$37.0 million in the December 2019 quarter. The performance in December 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.

In nominal terms, the industry recorded an increase of 3.4%. Public Administration is the third largest industry in the economy with a share of 8.7% in nominal terms.

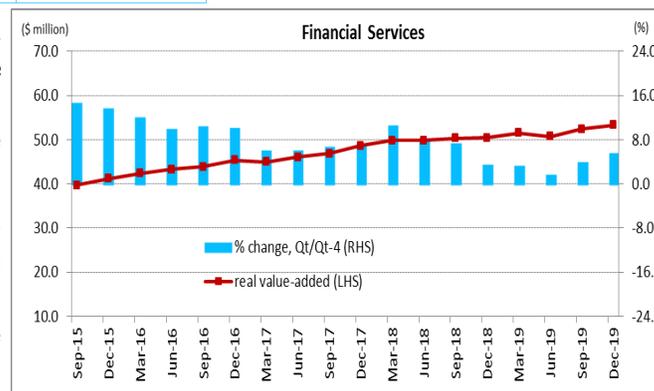


FINANCIAL SERVICES	GDP Dec 2018 Quarter	GDP Sep 2019 Quarter	GDP Dec 2019 Quarter	% change from Sep 2019 quarter (q-o-q)	% change from Dec 2018 quarter (y-o-y)
Value Added (current prices) WST (millions)	50.3	50.0	53.7	7.4	6.8
Value added (constant 2013 prices) WST (millions)	50.4	52.4	53.3	1.7	5.8
Contribution to aggregate (y-o-y) real growth rate: <i>percentage points</i>	0.4	0.4	0.6		
Industry's share to total nominal GDP: <i>percent</i>	8.8	8.6	9.9		

**Chart 19: Financial Services value added at constant prices & % change over the same period of the previous year; Dec 2015 - Dec 2019**

Financial services real value added increased by 5.8 percent on a year-on-year basis. This makes it the twenty-fifth consecutive quarter of positive growth by the industry. Its real value added in December 2019 amounted to \$53.3 million; the highest value added ever recorded by the industry since the series began.

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 0.6 percentage points to overall GDP growth.



## Background Information

### Overview

This publication is the fifth 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.

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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 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 remained 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

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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)

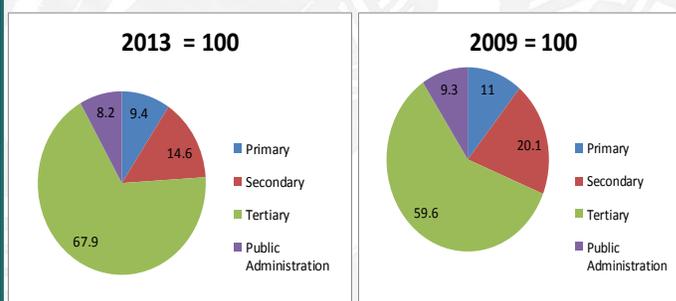
Apart from these VAGST based industries, The Finance Industry main data source is now primarily from the Profit and Loss Statement summary provided by the Central Bank of Samoa. This not only enables the calculation of the FISIM, but also the breakdown of other components of the Finance Sector like Insurance,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

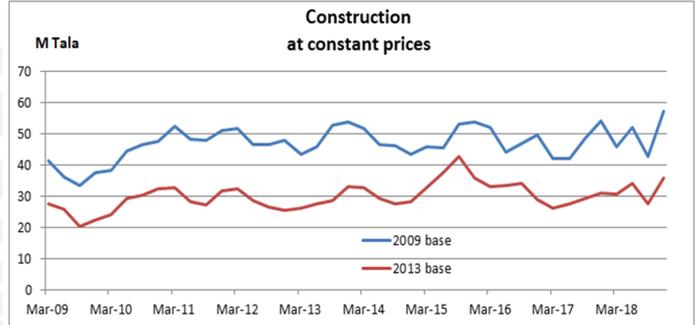
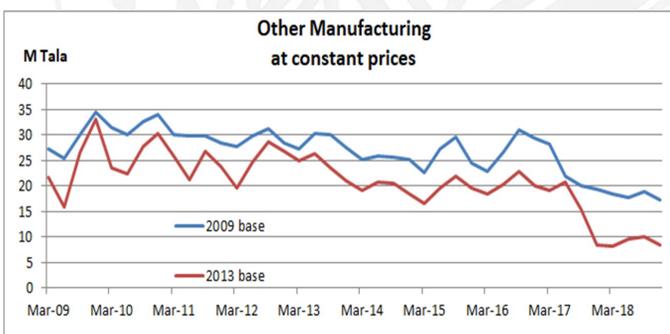
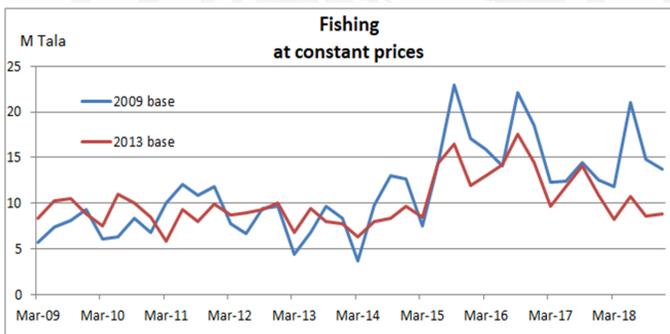
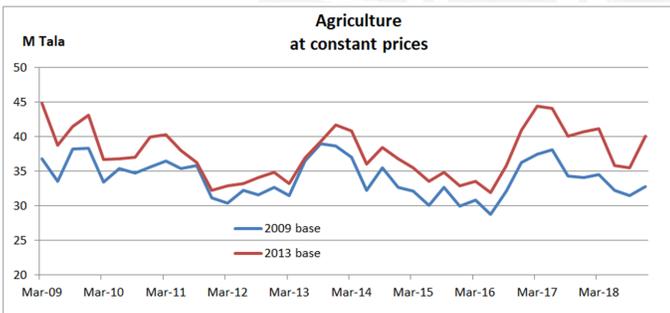
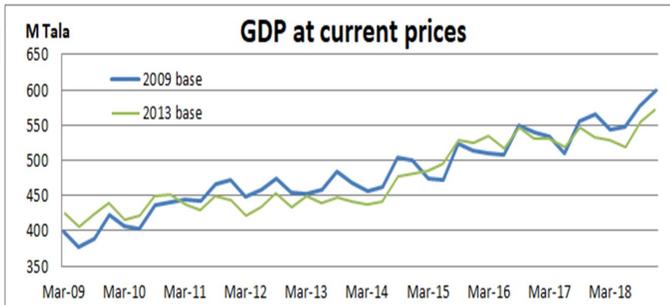


Indicated in the following charts are the industries showing significant change as part of the rebasing exercise:

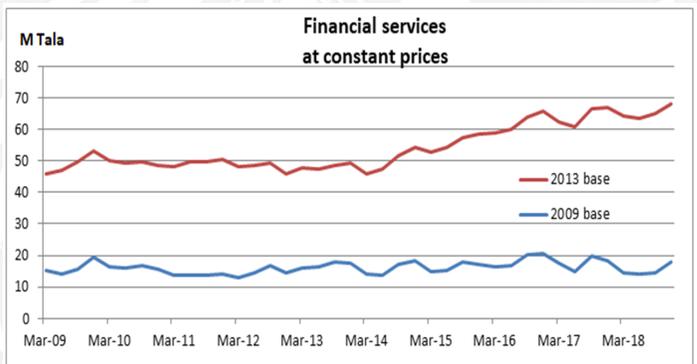
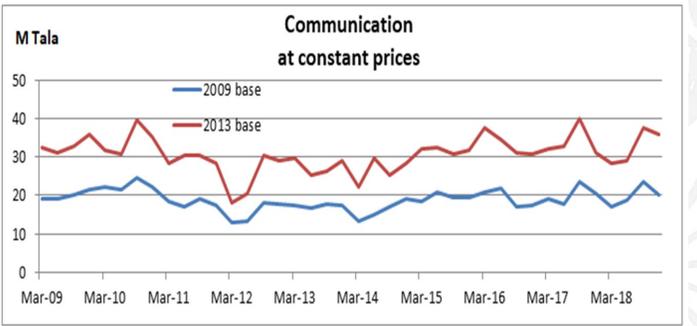
# NATIONAL ACCOUNTS FRAMEWORK REVIEW & GDP 2013 REBASING

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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.

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### 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 third 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 publication is subject to revisions in the next publication pending the availability of revised numbers from the sources.



#### SBS Vision:

**"To strengthen Statistical services  
for the development of  
Samoa"**

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