Samoa Bureau of Statistics

Gross Domestic Product

September 2020 Quarter

Overview

11th Dec 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 - -16.3%*
- *GDP at Constant 2013 Prices (real) - **WST $446.9 million***
- *GDP at Current Prices (nominal) - **WST $491.8 million***

Inside this issue:

*Economic activity, as measured by Gross Domestic Product (GDP) fell 16.3% in the **September 2020 quarter**. GDP continues to plummet making this reviewed quarter the largest quarterly decline since the National Accounts quarterly series began in 1998. The notable decline this quarter follows revised growth rates of -10.7% and -3.3% in the June and March 2020 quarters respectively. Total GDP at constant prices stood at $446.9 million, making it the lowest quarterly outturn since June 2014. The unprecedented nature of this rapid economic deterioration caused by the Covid-19 pandemic significantly affected economic activity in the September 2020 quarter through travel restrictions, reduced trade, global control measures and national lockdown. It has directly affected all sector of the economy with retailing and wholesaling activities, accommodation and restaurant, air and sea transport, construction, communication and financial services being the hardest hit.*

GDP Growth:

Gross Domestic Product for the **September 2020 Quarter** at constant 2013 prices amounted to $446.9 million, decreasing by 16.3% compared to the September 2019 quarter. This follows a revised growth of -10.7% from –11.6% published in June 2020.

Chart 1: Total GDP at constant prices & growth rates, September 2016 - September 2020

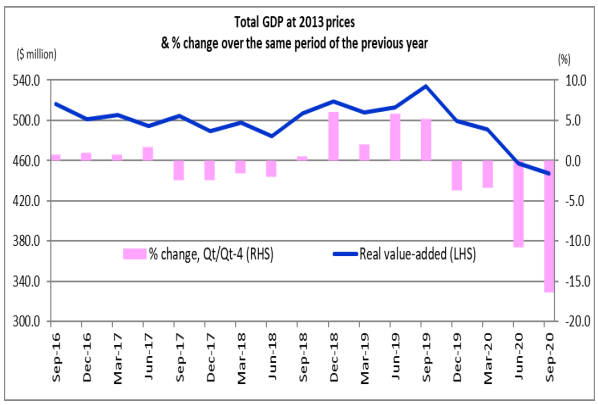
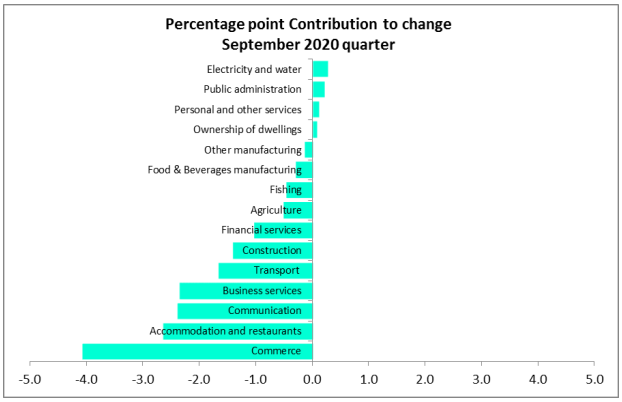


Chart 1 shows GDP at constant prices from September 2016 to September 2020 and the year-on-year (y-o-y) growth rates as measured by the percentage change on the same quarter of the previous year. The economy continues to decline since December 2019 as a result of the measles epidemic and the onset of Covid-19 pandemic. As a result, services industries which make up more than two thirds of the economy fell 18.0 percent. Goods-producing industries declined 11.0 percent with three of the four industries recording decreases, while primary industries fell 10.6 percent in the September 2020 quarter.

Chart 2: Percentage-point contributions to GDP growth by industry; September 2020 Quarter



As depicted by Chart 2 above, most of the industries recorded negative growth in the period. The major contributors to the downturn in September 2020 were Commerce, Accommodation & Restaurants, Communication, Business services, Transport and Construction with contributions of -4.1 pp, -2.6 pp, -2.4 pp, -2.3 pp, -1.7 pp and -1.4 pp respectively to overall growth of –16.3%.

Commerce, the biggest industry in the economy has yet again recorded another decline trending four consecutive quarters of negative growth. Retailing activities related to food, beverages, construction materials and gase-

ous products decreased in September 2020. Accommodation & Restaurants was the second biggest contributor to the overall decline this quarter, it went down by 83.8% compared to September 2019 due to the closure of borders to incoming international flights throughout the reviewed quarter. Communication also recorded a -29.8% growth on a year on year basis. Business services also suffered in the quarter under review as lockdown has directly affected tour operators and travel oriented businesses; demand on real estate services also declined during this period. Although legal and consultancy services increased during the quarter, it was not high enough to offset the negative effect its other services have experienced.

Conversely, the only industries that increased in September 2020 were Electricity and Water, Public Administration, Personal & other services and Ownership of Dwellings with contributions of 0.3 pp, 0.2 pp, 0.1 pp and 0.1 pp respectively to overall growth.

GDP Levels (Nominal):

Gross Domestic Product at current prices or nominal GDP for the **September 2020 quarter** amounted to $491.8 million. It decreased by 15.5% compared to the corresponding quarter of 2019. GDP per capita fell 16.2% compared to September 2019.

Chart 3: Composition of Nominal GDP, September 2020

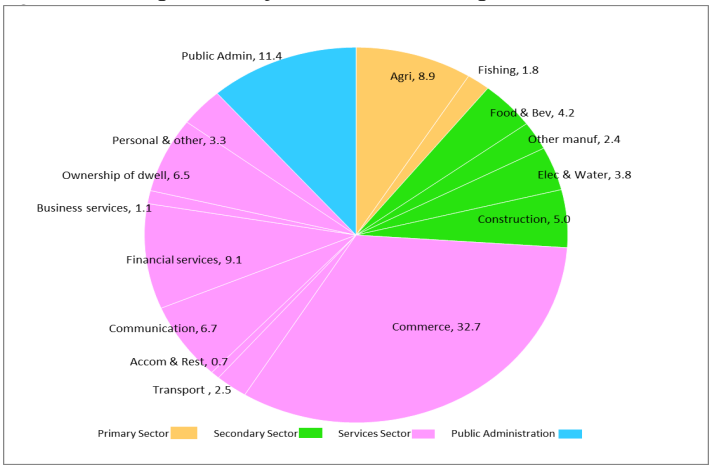


Chart 3 shows the industry composition of GDP at current market prices in the September 2020 quarter. Tertiary sector (services industries) comprising 62.5% of total nominal GDP, went down by 5.3 pp compared to September 2019. On the other hand, the Secondary sector (good-producing industries) which is the second largest sector went up by 1.4 pp on a y-o-y basis due to the positive growth in three of the four industries except for Construction.

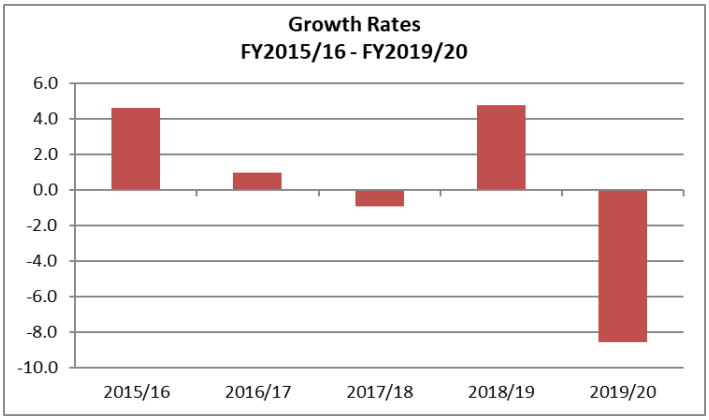
The Primary sector which accounts for 10.7% of GDP increased its shares by 0.5 pp as a result of the increase in Agriculture industry's share compared to the same quarter of 2019. Public Administrations' share which accounts for 11.4% of GDP increased by 3.4 pp compared to September 2019.

Twelve Months Review for the year ended Sep 2020:

GDP for the **year ended September 2020** (October 2019 - September 2020) at current market prices was $2,077.9 million, decreasing by 8.3% compared to the $2,266.3 million recorded in the year ended September 2019. At this level, GDP per capita was $10,282 decreasing by 9.1% over the Fiscal Year (FY)18/19.

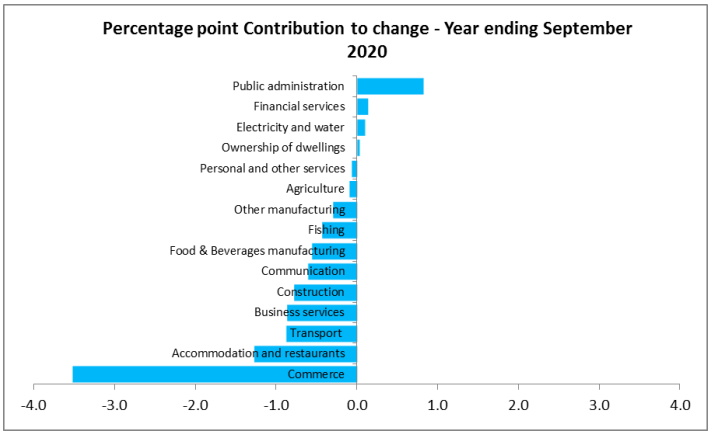
In constant 2013 prices, GDP stood at $1,895.3 million in the year ended September 2020, decreasing by 8.6% over the $2,073.5 million recorded in the year ended September 2019. This makes it the lowest GDP recorded for the year ended September since FY2014/15.

Chart 4: Percentage change in Constant Prices for the FYs ending September (2015/16 - 2019/20)



Depicted in Chart 4 are the real growth rates in the last five years ending September. The economy reversed its growth to record a decrease of 8.6% in FY19/20. This was mainly driven by the downturn in economic activity in Commerce, Accommodation & Restaurants, Transport, Business services, Construction, Communication, Food & Beverages manufacturing with contributions of –3.5 pp, -1.3 pp, -0.9 pp, -0.9 pp, -0.8 pp, -0.6 pp and -0.6 pp each to overall growth of -8.6% as shown in Chart 5 below.

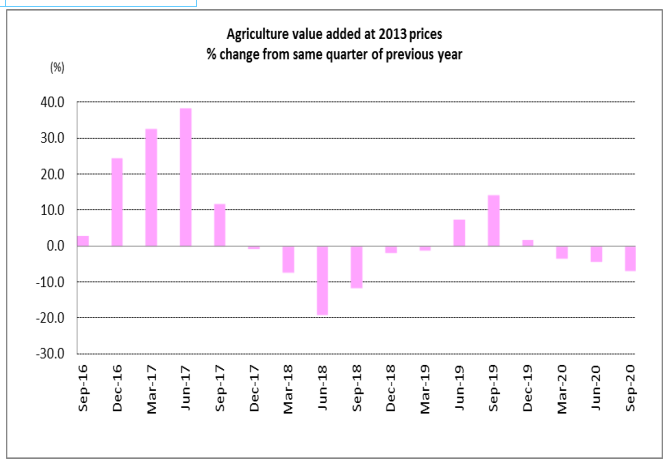
Chart 5: Percentage-point contributions to GDP growth for FY19/20



Individual Industry Quarterly Performance

AGRICULTURE	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	47.7	43.4	43.9	1.2	-8.0
Value added (constant 2013 prices) WST (millions)	40.6	36.9	37.9	2.6	-6.8
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	1.0	-0.3	-0.5		
Contribution to aggregate nominal GDP: *percent*	8.2	8.8	8.9		

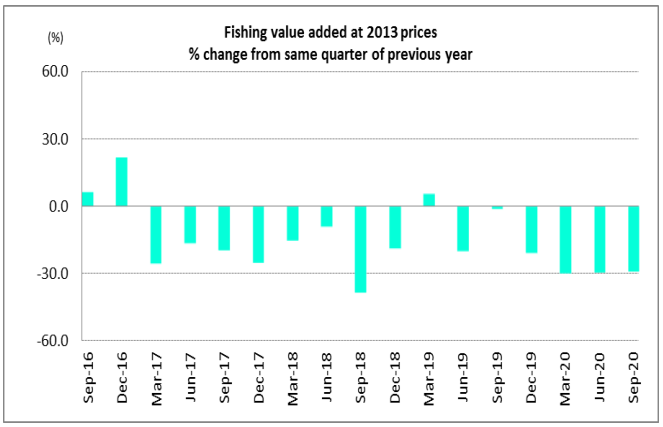
Chart 6: Percentage change in Agriculture real value added; Sep 2016 - Sep 2020



Agriculture recorded a total value added of $37.9 million at constant 2013 prices for September 2020, down by 6.8% compared to the September 2019 quarter. This outcome reflects the decline in domestic consumption of crops by 27.8%, livestock by 5.3% and horticulture by 0.8%. Major crops supplied to the markets such as Banana, Taamu, Yam, Breadfruit, Coconut, Head cabbage, Tomatoes, Chinese cabbages, Cucumber and Pumpkin all recorded respective declines of 32.0%, 84.9%, 36.7%, 51.7%, 43.6%, 39.9%, 70.9%, 37.4%, 7.5% and 50.6%. Exported Agricultural produce declined by 0.1% compared to the same quarter of 2019. However, the industry's share to total Nominal GDP increased by 0.7 percentage-points to 8.9% in September 2020.

FISHING	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	11.4	9.4	8.7	-7.0	-23.4
Value added (constant 2013 prices) WST (millions)	8.5	6.1	6.0	-0.1	-29.1
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.0	-0.5	-0.5		
Contribution to aggregate nominal GDP: *percent*	2.0	1.9	1.8		

Chart 7: Percentage change in Fishing real value added; Sep 2016 - Sep 2020



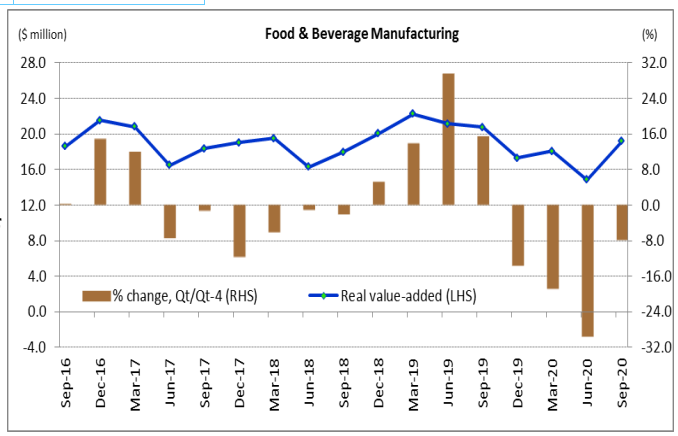
Fishing value added in real terms decreased by 29.1% compared to the September 2019 quarter and also declined by 0.1% compared to the June 2020 quarter. The industry has now recorded six consecutive quarters of negative growth as indicated in Chart 7. This strongly reflects the decline of Monetary fishing (Inshore & Offshore fishing) by 28.9%. Subsistence fishing also went down by 30.1% in the period under review.

The industry contributed -0.5 percentage-point to GDP growth in the September 2020 quarter.

Individual Industry Quarterly Performance

FOOD & BEVERAGE MANUFACTURING	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	21.4	15.9	20.7	29.9	-3.3
Value added (constant 2013 prices) WST (millions)	20.8	14.9	19.2	28.9	-7.7
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.5	-1.2	-0.3		
Contribution to aggregate nominal GDP: *percent*	3.7	3.2	4.2		

Chart 8: Food & Beverage Manufacturing quarterly value added at constant prices & % change over the same period of the previous year; Sep 2016 - Sep 2020



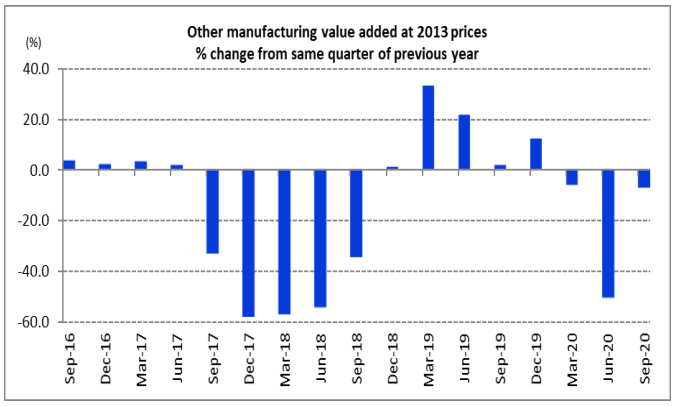
Food and Beverage industry produced a total value added in real terms of $19.2 million in September 2020, decreasing by 7.7% on a year-on-year basis. The industry contributed –0.3 percentage-points to the overall real growth in the period.

Local production of food and beverages went down by 10.0% and 6.9% respectively making it the fourth consecutive quarter of negative growth for the industry. Food export recorded a 67.8% decline compared to September 2019.

However, when compared to the previous quarter (June 2020), the industry went up by 28.9%

OTHER MANUFACTURING	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	12.3	6.9	12.0	74.0	-2.4
Value added (constant 2013 prices) WST (millions)	10.2	5.8	9.5	64.0	-7.2
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.0	-1.1	-0.1		
Contribution to aggregate nominal GDP: *percent*	2.1	1.4	2.4		

Chart 9: Percentage change in Other Manufacturing real value added; Sep 2016 - Sep 2020



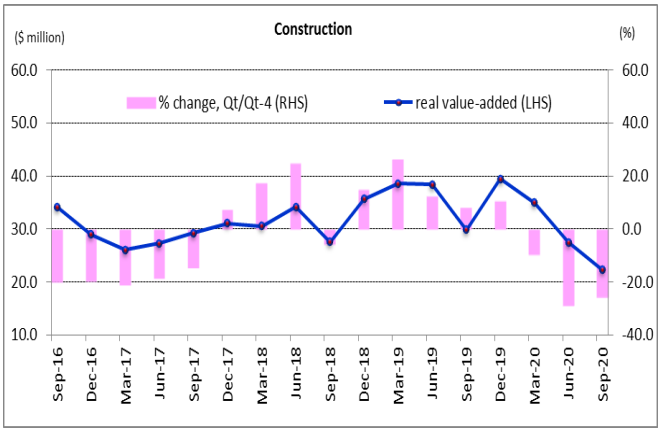
In real terms, the industry recorded a total value added of $9.5 million in the period under review dropping by 7.2% in comparison to the September 2019 quarter. It contributed -0.1 percentage-points to GDP growth in the period under review. However, when compared to the previous quarter, the industry went up by 64.0%.

In nominal terms, Other Manufacturing industry recorded a total value added of $12.0 million in the September 2020 quarter. It also decreased by 2.4% compared to the corresponding quarter of the previous year.

Individual Industry Quarterly Performance

CONSTRUCTION	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	30.9	28.7	24.4	-14.9	-21.0
Value added (constant 2013 prices) WST (millions)	29.8	27.4	22.3	-18.7	-25.2
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.4	-2.1	-1.4		
Contribution to aggregate nominal GDP: *percent*	5.3	5.8	5.0		

Chart 10: Construction quarterly value added at constant prices & % change over the same period of the previous year; Sep 2016 - Sep 2020

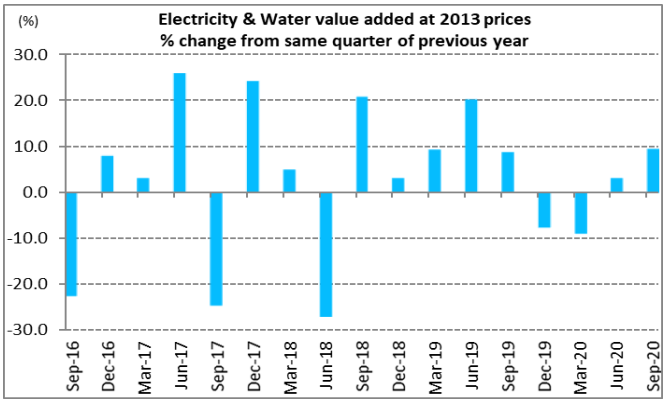


Construction produced a total value added of $22.3 million at constant prices making it the lowest quarterly outturn by the industry since December 2009. It decreased by 25.2% when compared to September 2019 quarter. It also declined by 18.7% compared to the previous quarter. This reflects the decline in imported construction materials by 25.1%. Acquisition of fixed assets as reported by the Government Finance Statistics September 2020 report also went down by 76.9%.

Heavy civil construction work and major residential building declined in the period. The industry continues on in its third quarter of negative growth as shown by Chart 10.

ELECTRICITY AND WATER	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	16.5	18.7	18.5	-1.0	12.1
Value added (constant 2013 prices) WST (millions)	15.3	16.7	16.7	0.2	9.5
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.2	0.1	0.3		
Contribution to aggregate nominal GDP: *percent*	2.8	3.8	3.8		

Chart 11: Percentage change in Electricity & Water real value added; Sep 2016 - Sep 2020



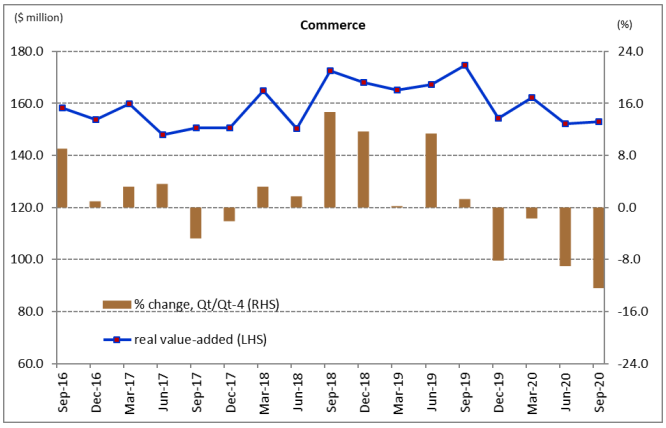
Electricity & Water generated a total value added of $16.7 million at constant prices in the September 2020 quarter, increasing by 9.5% on a year-on-year basis. The favorable performance reflects the increase in water production by 28.0%. On the other hand, Electricity production decreased by 4.4%.

The industry's total nominal value added recorded a 12.1% increase compared to the corresponding quarter of 2019. Its share to total nominal GDP increased by 1.0 percentage-points from 2.8 percent in September 2019 to 3.8 percent in the period under review.

Individual Industry Quarterly Performance

COMMERCE	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	189.5	157.1	161.0	2.5	-15.1
Value added (constant 2013 prices) WST (millions)	174.8	152.2	153.0	0.6	-12.4
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.4	-2.9	-4.1		
Contribution to aggregate nominal GDP: *percent*	32.6	31.8	32.7		

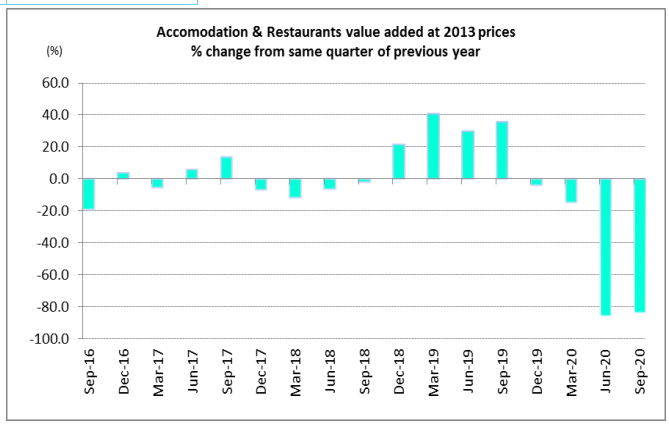
Chart 12: Commerce quarterly real value added & % change over the same period of the previous year; Sep 2016 - Sep 2020



Commerce remains the largest industry in the economy holding a share of 32.7% of total nominal GDP. Its real value added amounted to $153.0 million in the period under review registering a decline of 12.4% in comparison to September 2019. The unfavorable result reflects the overall decline in wholesaling and retailing by 12.6% and 15.2% respectively. Tourism earnings went on a standstill as a result of restrictions put in place and lockdown of the country's international border as preventative measures for the Covid-19 pandemic under the Government's State of Emergency which continued on throughout the September 2020 quarter.

ACCOMMODATION AND RESTAURANTS	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	18.7	2.0	3.3	64.1	-82.3
Value added (constant 2013 prices) WST (millions)	16.8	1.8	2.7	52.6	-83.8
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.9	-2.1	-2.6		
Contribution to aggregate nominal	3.2	0.4	0.7		

Chart 13: Accommodation & Restaurants, percentage change in real value added over the same period of the previous year; Sep 2016 - Sep 2020



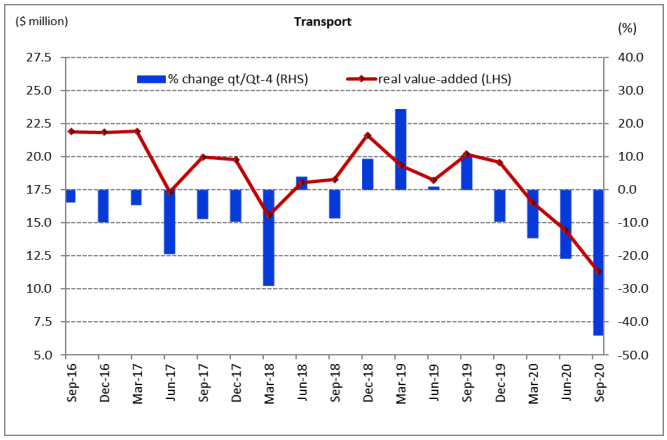
Accommodation and Restaurant continued to dwindle in real terms recording a total value added of $2.7 million from a value added of $16.8 million recorded in September 2019 quarter. It declined by 83.8% on a year-on-year basis. This further emphasizes the fact that this is one of the hardest hit industries as a result of restrictions made by the Government in its determination to keep our country Covid-19 free.

The industry continues to plummet for the fourth quarter in a row since the December 2019 quarter. Its contribution to GDP growth was -2.6 percentage-points for the period under review.

Individual Industry Quarterly Performance

TRANSPORT	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	21.5	15.0	12.0	-19.5	-44.0
Value added (constant 2013 prices) WST (millions)	20.2	14.4	11.3	-21.6	-44.0
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.4	-0.7	-1.7		
Contribution to aggregate nominal GDP: *percent*	3.7	3.0	2.5		

Chart 14: Transport quarterly growth rates with total value added at constant 2013 prices, Sep 2016 - Sep 2020

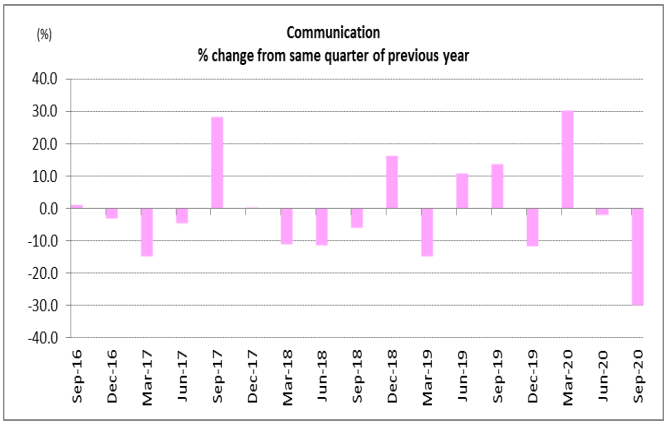


Transport declined by 44.0% on a year-on-year basis.; the industry's total value added at constant prices amounted to $11.3 million in the September 2020 quarter. This was translated into a contribution of -1.7 percentage points to the overall GDP growth. Air transport declined by 82.1%, sea transport went down by 31.6% and land transport also decreased by 31.9%.

Passenger air transport, service activities incidental to land transportation and activities related to warehousing, storage and cargo handling declined within the reviewed period.

COMMUNICATION	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	48.9	34.7	32.9	-5.0	-32.7
Value added (constant 2013 prices) WST (millions)	42.8	31.8	30.0	-5.4	-29.8
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	1.0	-0.1	-2.4		
Contribution to aggregate nominal GDP: *percent*	8.4	7.0	6.7		

Chart 15: Communication percentage change in real GDP from the same quarter of the previous year, Sep 2016 - Sep 2020

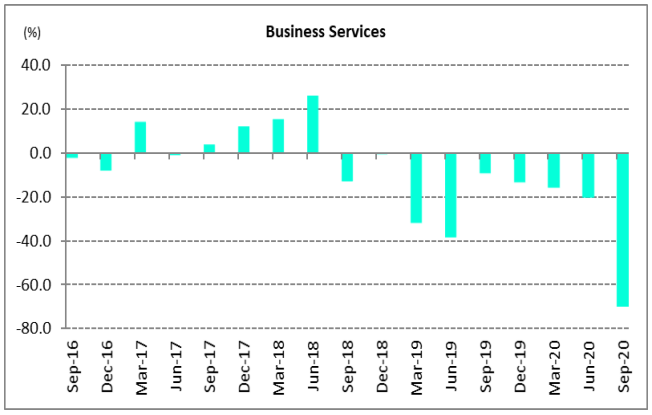


Communication generated a real value added of $30.0 million in the September 2020 quarter, decreasing by 29.8% over the September 2019 quarter. The industry contributed -2.4 percentage points to the overall real growth. This follows another negative growth from the previous quarter as a result of the re-prioritization of funds and thus the reduction of demand as the country continues to face strains caused by the Covid-19 pandemic. Communications' nominal value added recorded stood at $32.9 million in September 2020 quarter; its share to total GDP (in current prices) went down by 1.7 percentage-points to 6.7 percent in the period under review.

Individual Industry Quarterly Performance

BUSINESS SERVICES	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	17.2	11.3	5.5	-51.4	-68.0
Value added (constant 2013 prices) WST (millions)	18.0	11.5	5.4	-53.0	-69.8
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	-0.4	-0.6	-2.3		
Contribution to aggregate nominal GDP: *percent*	3.0	2.3	1.1		

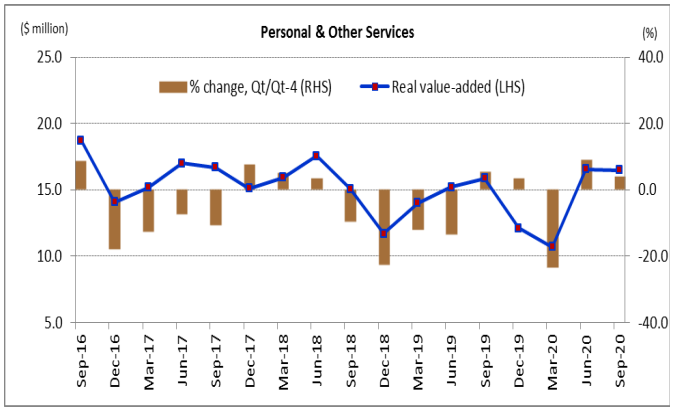
Chart 16: Business Services, % change in value-added at constant 2013 prices from Sep 2016 - Sep 2020



Business services produced a total value added of $5.4 million at constant 2013 prices in September 2020; a decline of 69.8% was experienced by the industry on a year-on-year basis. This makes it the ninth consecutive quarter of negative growth by the industry which was mainly driven by the decline in value added by travel related businesses such as travel agencies and tour operators. The industry was the third biggest negative contributor to overall growth with a recorded contribution of -2.3 percentage-points. Its share to total nominal GDP was 1.1% in the September 2020 quarter which decreased by 1.9 percentage-points from 3.0% in the September 2019 quarter.

PERSONAL & OTHER SERVICES	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	16.5	17.3	16.4	-5.2	-0.1
Value added (constant 2013 prices) WST (millions)	15.9	16.6	16.5	-0.5	3.9
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.2	0.3	0.1		
Contribution to aggregate nominal GDP: *percent*	2.8	3.5	3.3		

Chart 17: Personal & Other Services quarterly value added at constant prices & % change over the same period of the previous year; Sep 2016 - Sep 2020

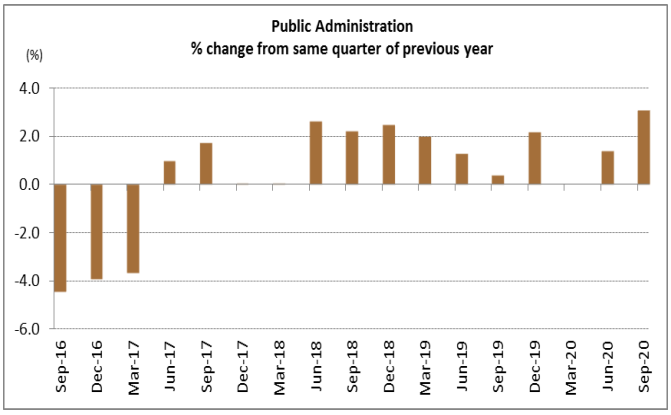


Personal and other services recorded an increase in real terms by 3.9 percent compared to September 2019; this is the second quarter of positive growth after a recorded negative performance by the industry in March 2020. It produced a real value added of $16.5 million, registering a positive contribution of 0.1 percentage-points to overall growth. Activities pertaining to religious organizations, computer maintenance, communication equipment servicing and funeral related activities contributed to the growth experienced by the industry within the period under review. In nominal terms, the industry recorded a decline of 0.1% compared the September 2019 quarter.

Individual Industry Quarterly Performance

PUBLIC ADMINISTRATION	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	46.7	51.6	56.0	8.5	19.8
Value added (constant 2013 prices) WST (millions)	36.5	36.9	37.6	1.8	3.1
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.0	0.1	0.2		
Contribution to aggregate nominal GDP: *percent*	8.0	10.4	11.4		

Chart 18: Public Administration, % change in value-added at constant 2013 prices from Sep 2016 - Sep 2020

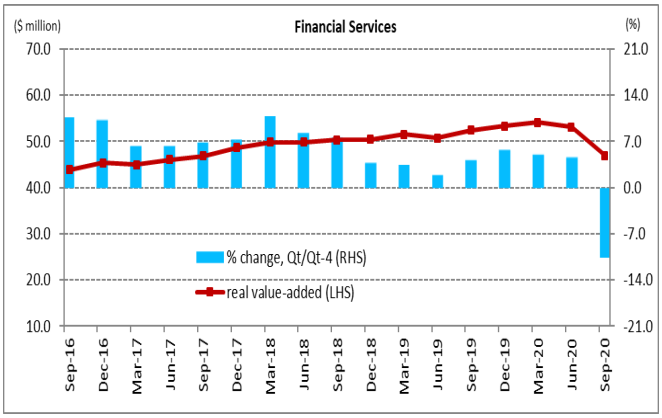


Public administration produced a total value added in constant prices of $37.6 million increasing by 3.1% on a year-on-year basis. The performance in September 2020 reflects the increase in regulation of the activities of providing health care, education, cultural services, public order and safety activities.

In nominal terms, the industry recorded an increase of 19.8% on a year-on-year basis. Public administration is the second largest industry in the economy with a share of 11.4% in nominal terms, its contribution to total nominal GDP increased by 3.4 percentage-points compared to September 2019 quarter.

FINANCIAL SERVICES	GDP Sep 2019 Quarter	GDP Jun 2020 Quarter	GDP Sep 2020 Quarter	% change from Jun 2020 quarter (q-o-q)	% change from Sep 2019 quarter (y-o-y)
Value Added (current prices) WST (millions)	50.0	48.8	44.5	-8.7	-10.9
Value added (constant 2013 prices) WST (millions)	52.4	53.1	46.9	-11.6	-10.5
Contribution to aggregate (y-o-y) real growth rate: *percentage points*	0.4	0.5	-1.0		
Contribution to aggregate nominal GDP: *percent*	8.6	9.9	9.1		

Chart 19: Financial Services value added at constant prices & % change over the same period of the previous year; Sep 2016 - Sep 2020



Financial services real value added decreased by 10.5 percent on a year-on-year basis. This makes it the first quarter of negative growth by the industry within the four year period as indicated in Chart 19. Its real value added in September 2020 amounted to $46.9 million; the lowest value added ever recorded by the industry since the December 2017 quarter. Its performance reflects the decreasing demand for financial intermediation such as central banking, insurance and other activities auxiliary to financial intermediation for the period under review. The industry contributed 9.1 percent to aggregate nominal GDP.

Overview

This publication is the fourth 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.*

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*

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)*

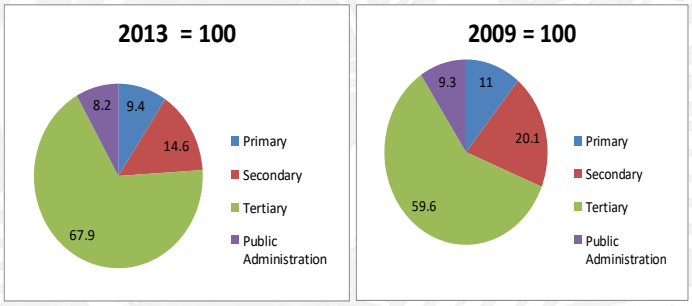
Apart from these VAGST based industries, The Finance Industry main data source is now primarily from the Profit and Loss Statement summary provided by the Central Bank of Samoa. This not only enables the calculation of the FISIM, but also the breakdown of other components of the Finance Sector like Insurance, 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 loosing 5.5, 1.6 and 1.1 percentage points respectively.

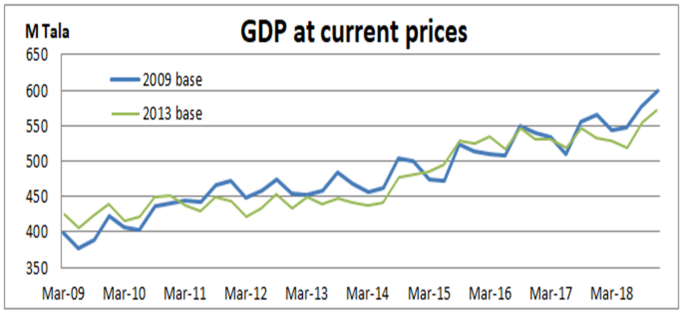
Underpinning the change was the Finance sector becoming the second largest industry after Commerce, with Construction moving to sixth and Other Manufacturing to be the smallest in 2018 with 1.8 percent share. The trend is indicative of the changes occurred in the period from 2009 to current with the 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 .

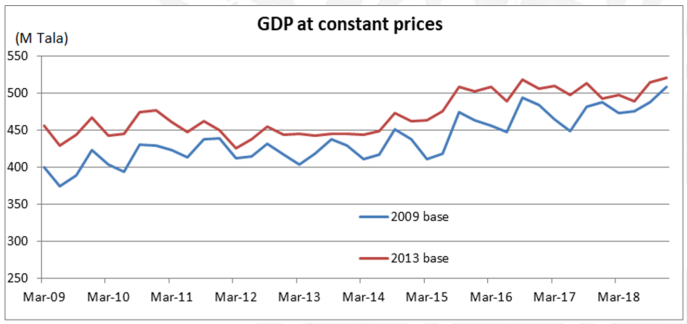
Comparison of GDP shares 2018, by broad sectors in 2013 and 2009 prices,

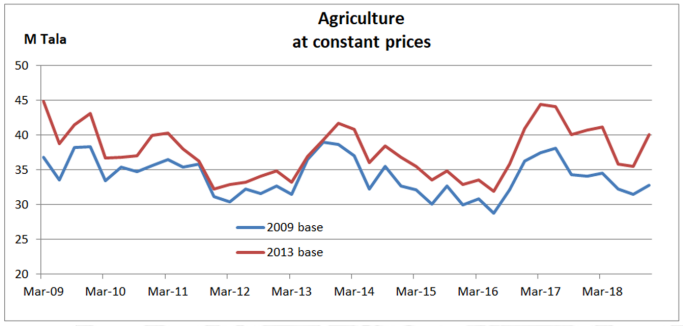


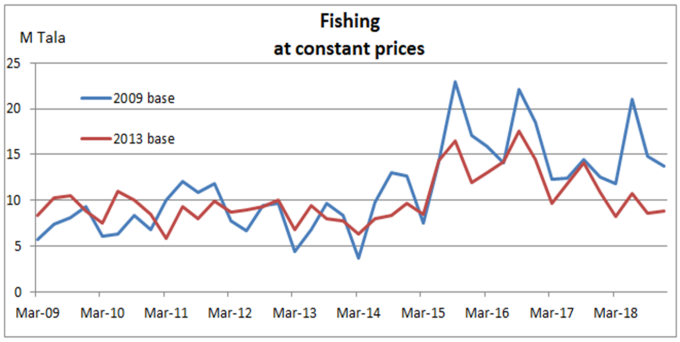
Indicated in the following charts are the industries showing significant change as part of the rebasing exercise:

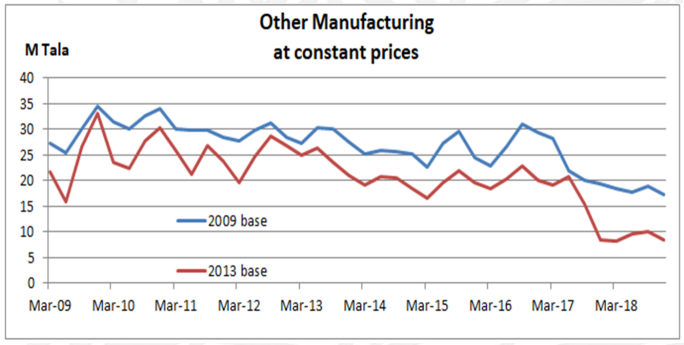
Some of the key results for GDP at current and constant 2013 prices compared to 2009 prices;

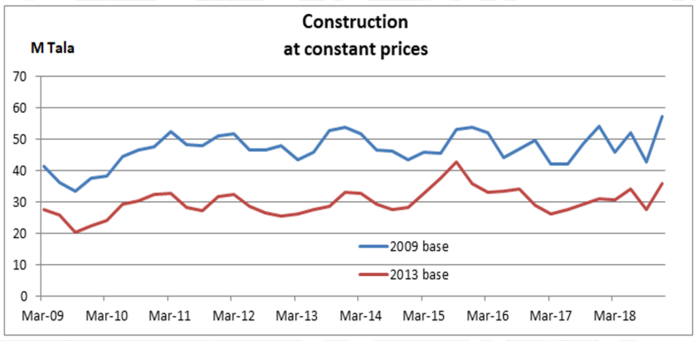




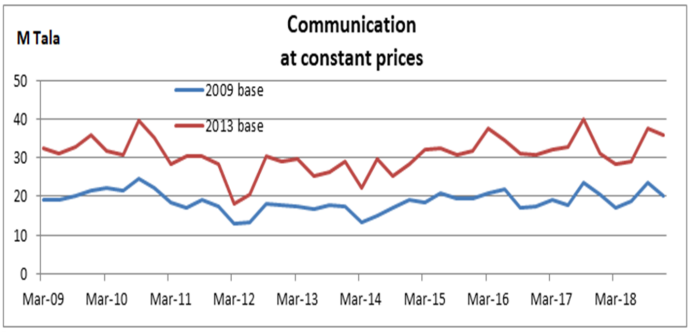


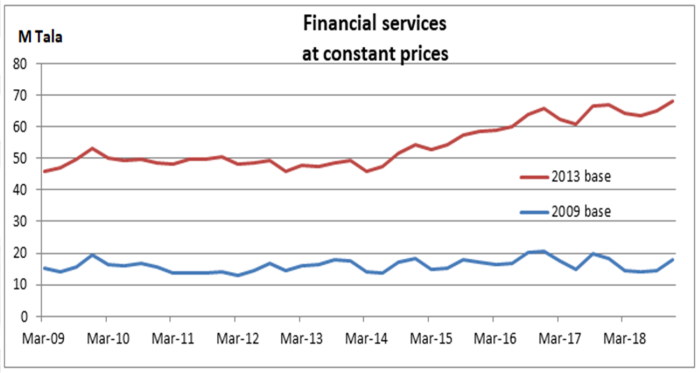






The gap between the two base periods for the Construction and Other Manufacturing reflects the change in the level of activities in the two periods, with 2013 having a lower end compared to 2009. On the other hand Communication indicated that there have been more activities in the 2013 period compared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

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.

ABOUT GROSS DOEMSTIC 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 de-ducting 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 incorporates revision to estimates of value added for Accommodation & Restaurant and Public administration in the June 2020 quarter and Construction in the March and June quarters of 2020 due to the availability of the latest available data from data providers; revised data are highlighted on attached tables.

The GDP numbers for the recent quarters are subject to revisions in the next publication pending the availability of revised numbers from the sources.

Samoa Bureau of Statistics

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"To strengthen Statistical services for the development of Samoa"

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