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Monitoring the Philippine Economy First Quarter Report for 2020

Project of Angelo King Institute

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Covid19 outbreak takes its toll on the economy as first quarter 2020 growth performance plunged to -0.2 percent from 5.7 percent the previous year.

The Philippine economy contracts for the first time in 22 years. First quarter growth hit negative 0.2 percent, the lowest mark since the combined El Niño episode and Asian Financial Crisis in 1998. Weaker performances in both demand- and supply-side contributed to the Q1 2020 contraction. With an uptick in inflation this quarter, negative effects caused by the Taal Volcano eruption, and the unprecedented COVID-19 outbreak remarkably contributed to the economic downgrade. Moreover, uncertainties surrounding the ongoing pandemic remains as a major challenge the government has to face. Nevertheless, with key reforms and pro-active government initiatives, effects of the crisis are anticipated to moderate.

- **Major components of aggregate demand**
 - **Private consumption recorded the lowest growth since Q1 1986.** Household Final Consumption Expenditure (HFCE) in the first quarter exhibited a growth of 0.2 percent year-on-year (y-o-y), which was substantially weaker than 6.2 percent and 5.7 percent the previous year and quarter, respectively. According to the Philippine Statistics Authority (PSA)², HFCE components that suffered significant contractions were Alcoholic beverages and Tobacco (-16.4 percent from -3.7 percent, y-o-y), Furnishings, household equipment and routine household maintenance (-7.4 percent from 3.9 percent, y-o-y), Transport (-8.9 percent from 5.6 percent, y-o-y), Recreation and culture (-1.9 percent from 7.5 percent, y-o-y), and Restaurants and hotels (-15.4 percent from 6.2 percent, y-o-y). On the other hand, slower but positive growth rates were experienced by Food and non-alcoholic beverages (4.7 percent from 5.9 percent, y-o-y), Clothing and footwear (0.1 percent from 4.1 percent, y-o-y), Housing, water, electricity, gas and other fuels (2.9 percent from 6.6 percent, y-o-y), Communication (5.7 percent from 8.4 percent, y-o-y), Education (0.4 percent from 12.0 percent, y-o-y), and Miscellaneous goods and services (7.4 percent from 7.5 percent, y-o-y). Remarkably, only Health grew (11.5 percent from 5.0 percent, y-o-y) among all HFCE components. Lockdowns, travel restrictions, cancelled vacations, and disrupted supply chains caused by the COVID-19 pandemic adversely affected household consumption. Consequently, the crisis heavily crippled consumption patterns.

¹ Report is based on latest available data as of July 3, 2020. For comments and questions, please email mitzie.conchada@dlsu.edu.ph

² <https://psa.gov.ph/sites/default/files/Q1%202020%20NAP%20publication.pdf>

- **Gross domestic capital formation registered slowest since Q3 2006.** Domestic investment plummeted to 18.3 percent from 9.8 percent growth the previous year. Investments in fixed capital contracted by 4.3 percent. According to PSA³, the downtrend was caused by the negative growth rates in Construction (-3.4 percent from 9.6 percent, y-o-y), Durable Equipment (-7.7 percent from 5.5 percent, y-o-y), and Breeding Stocks and Orchard Development (-1.2 percent from 2.1 percent, y-o-y). While Intellectual Property Products (6.6 percent from 15.2 percent, y-o-y) was the only component that posted a positive but much slower growth rate.
- **Government spending accelerated amidst global pandemic.** Government final consumption expenditure strengthened with a growth of 7.1 percent from 6.4 percent the previous year. According to National Economic Development Authority (NEDA)⁴, the growth in government expenditure *reflected the national government's commitment to implement its programs*. However, government spending as of end-March still fell short by 14.5 percent of the 993 billion program for the period due to the delays in program implementation with the ongoing quarantine measures and lower-than-programmed interest payments and net lending⁵.
- **Trade deficit narrowed amid sharp declines in both exports and imports.** In Q1 2020⁶, exports of goods and services recorded the lowest since Q1 2013, with an unfavorable growth of -3.0 percent from 4.2 percent the previous year. Additionally, imports of goods and services recorded the lowest since Q1 1999, with a sharp drop of -9.0 percent from 8.9 percent the previous year. At the end of March⁷, exports and imports were recorded at 4.53 billion USD (-24.9 percent growth y-o-y) and 6.91 billion USD (-26.2 percent growth y-o-y), respectively. First quarter displayed a trade deficit of 2.38 billion USD, narrower than the 3.33 billion USD deficit in March 2019. Nine of the top ten major export commodities had decreases in sales, namely, metal components (-40.9 percent), machinery and transport equipment (-33.1 percent), electronic products (-24.0 percent), ignition wiring set and other wiring sets used in vehicles, aircrafts and ships (-22.9 percent), coconut oil (-22.0 percent), gold (-14.8 percent), bananas (-14.3 percent), other mineral products (-14.2 percent), and other manufactured goods (-11.7 percent). Only cathodes and sections of cathodes of refined copper (1.2 percent) posted positive growth. On the other hand, all ten of the top ten major import commodities dropped, namely, industrial machinery and equipment (-39.4 percent), telecommunication equipment and electrical machinery (-37.1 percent), miscellaneous manufactured articles (-32.9 percent), mineral fuels, lubricants and related materials (-32.2 percent), plastics in primary and non-primary forms (-24.9 percent), other food and live animals (-20.5 percent), electronic products (-19.3 percent), cereals and cereal preparations (-19.1 percent), transport equipment (-17.3 percent), and iron and steel (-14.2 percent). Decreases in both imports and exports are attributable to the significant reduction in production, operations, and sales of many manufacturers and other businesses, caused by the COVID-19 restrictions. The narrowing of the trade gap in Q1 2020 may be partly explained by the sharp decline in global oil prices, which reduced the country's import bill⁸.

³ <https://psa.gov.ph/sites/default/files/Q1%202020%20NAP%20publication.pdf>

⁴ <http://www.neda.gov.ph/statement-of-acting-secretary-karl-kendrick-chua-on-the-first-quarter-2020-national-accounts-press-conference/>

⁵ <https://businessmirror.com.ph/2020/05/12/ng-budget-deficit-in-q1-down-18-as-spending-dips/>

⁶ <https://psa.gov.ph/sites/default/files/Q1%202020%20NAP%20publication.pdf>

⁷ <http://www.psa.gov.ph/content/highlights-philippine-export-and-import-statistics-march-2020-preliminary>

⁸ <https://www.bworldonline.com/philippines-current-account-swings-to-a-surplus-in-q1/#:~:text=The%20Philippines%20current%20account%20swung,pandemic%20and%20falling%20oil%20prices.&text=In%202019%2C%20the%20current%20account,%248.773%20billion%20gap%20in%202018.>

⁸ <https://www.bworldonline.com/philippines-current-account-swings-to-a-surplus-in-q1/#:~:text=The%20Philippines%20current%20account%20swung,pandemic%20and%20falling%20oil%20prices.&text=In%202019%2C%20the%20current%20account,%248.773%20billion%20gap%20in%202018.>

- **Major components of aggregate supply**

In this report, we present results from an alternative to the “traditional” (TRAD) method of decomposing growth of GDP in constant prices into sector contributions. This alternative method is a “generalized” (GEN) growth decomposition that applies to GDP in constant prices (e.g., in the Philippines) and to GDP in chained prices (e.g., in Canada and the US). While TRAD recognizes only “quantity” growth as the source of a sector’s contribution to GDP growth, GEN posits that a sector’s contribution comes from “quantity” growth and from “real price” growth where this price is, by definition, the ratio of a sector’s deflator to the overall GDP deflator. The GDP deflator as the common denominator of the above ratio makes real GDP the numeraire and, thus, this ratio is the relative price or exchange value of the GDP of a sector in “GDP units,” i.e., the “real price” of a sector’s GDP. Therefore, a sector’s positive “quantity” growth contribution will be diminished if accompanied by a negative “real price” growth of the same sector that may even result in a negative net contribution by the sector to GDP growth. On the other hand, a sector’s positive “quantity” growth contribution will be enhanced if accompanied by a positive “real price” growth (see Table 3).⁹

- **Services sector continued to lead supply-side performance despite the decelerated growth.** Services sector posted the lowest growth since Q4 1998. Growth slowed to 1.4 percent, a sharp downtrend relative to the previous quarter’s 7.9 percent and previous year’s 7.0 percent growth. Nevertheless, the sector had the highest contribution to growth, with 0.81 percentage points from positive quantity and real price growth (see Table 3), maintaining its major share of 60.3 percent in GDP. All sub-components except Human Health and Social Work Activities (9.2 percent from 3.0 percent, y-o-y) posted negative growth rates in the sector, namely, Transportation and Storage (-10.7 percent from 6.8 percent, y-o-y), Accommodation and Food Service Activities (-15.3 percent from 6.0 percent, y-o-y), and Other Services (-7.6 percent from 6.7 percent, y-o-y). However, slower but positive growths were posted by Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles (1.1 percent from 7.0 percent, y-o-y), Information and Communication (5.7 percent from 9.9 percent, y-o-y), Financial and Insurance Activities (9.6 percent from 12.1 percent, y-o-y), Real Estate and Ownership of Dwellings (2.2 percent from 5.1 percent, y-o-y), Professional and Business Services (0.7 percent from 1.1 percent, y-o-y), Public Administration and Defense, Compulsory Social Activities (5.2 percent from 11.7 percent, y-o-y), and Education (0.9 percent from 5.1 percent, y-o-y).
- **Industry sector dropped, sharpest decline since Q3 2009.** The industry sector contracted 3.0 percent, a drop from the 6.0 and 4.9 percent growth rates registered the previous quarter and year, respectively. The sector contributed -0.93 percentage points to GDP (see Table 3). The poor performance of the sector was due to contractions in the following sub-components of the sector: Mining and Quarrying (-22.3 percent from 3.4 percent, y-o-y), Manufacturing (-3.6 percent from 5.2 percent, y-o-y), and Construction (-1.8 percent from 5.0 percent, y-o-y). On the other hand, only Electricity, steam, water and waste management (3.4 percent from 5.3 percent, y-o-y) posted a positive growth rate.

⁹ See the footnote to Table 3 for the source of the GDP growth contributions.

- Agriculture sector recorded the first contraction since Q4 2016¹⁰.** The agriculture sector contracted by 0.4 percent, in contrast to the 0.8 percent and 0.4 percent growth in the previous quarter and year, respectively. The sector contributed -0.04 percentage points (see Table 3) to GDP. The weak performance of the sector was mainly due to lower production in the following sub-industries: fishing and aquaculture (-5.2 percent), palay (-1.9 percent), coconut including copra (-4.9 percent), banana (-3.5 percent), and corn (-2.5 percent). Meanwhile, expansions in the following sub-industries cushioned the decline: support activities (5.9 percent), poultry and egg production (3.5 percent), sugarcane (8.2 percent), livestock (1.5 percent), and other animal production (2.4 percent). The quarter reflected loss and damages from the Taal Volcano eruption that affected crops, livestock, poultry and fisheries. Agricultural damage from the eruption was estimated at P3.06 billion.

Figure 1. Contributions to GDP growth (y-o-y, %) from Aggregate Supply



Source: Author's calculations based on data in Table 3 below.

¹⁰ <https://psa.gov.ph/sites/default/files/Q1%202020%20NAP%20publication.pdf>

Challenges facing the economy

- **Unfavorable economic factors may serve as adversities to the Philippine economy.** Factors such as (a) natural disasters, (b) virus outbreaks, (c) increasing unemployment rate, (d) uncertainties of the unprecedented pandemic, (e) prolonged travel restrictions, and (f) security risks serve as hindrances to the Philippine economy.
- **The COVID-19 outbreak adversely affects the economy on a global scale¹¹.** In early January 2020, a novel coronavirus disease, named COVID-19, was first identified in Wuhan, People's Republic of China (PRC). While the fatality rate of COVID-19 is within the range of 1.0 percent to 3.4 percent, significantly lower than fatality rates of other coronaviruses such as SARS (10.0 percent) and MERS (34.4 percent), its transmission has been exponential. In February 2020, COVID-19 had infected 85,403 people in 55 countries and caused 2,924 deaths. However, by the end of June 2020, these figures surged to 10,185,374 confirmed cases affecting around 200 countries, and 503,862 deaths¹². As COVID-19 progressed from an outbreak to epidemic and to pandemic, numerous countries have declared states of calamity to prevent further spreading of the disease. Consequently, economic activities have been strained or disrupted in various sectors. These include a sharp but temporary decrease in domestic consumption, contraction in investments, adverse health effects, decline in tourism and business travel, and supply-side disruptions to production and trade. Given that the Philippines has strong trade and production linkages with the PRC, the Philippine economy is forecasted to experience significant losses. The Philippines may experience up to -1.7 percent growth contraction in GDP. Nonetheless, the magnitude of the impact will depend on how the outbreak would progress, which remains highly uncertain.
- **Taal Volcano eruption strains the Agriculture Sector for Q1 2020¹³.** Taal Volcano erupted last January 12, 2020, the first eruption since 1977. According to the Department of Agriculture (DA), damage and losses caused by the eruption have reached P3.06 billion, affecting 15,790 hectares and 1,923 animal head. Additionally, around P1.6 billion losses for tilapia and bangus species were accounted, as there have been 6,000 fish cages installed around Taal Lake. This fortuitous event has significantly contributed to the lower production of crops, livestock, poultry, and fisheries, which caused the Agriculture Sector to decline during the quarter. Nonetheless, the DA remains hopeful of a rebound given that strategic interventions under the Rice Competitiveness Enhancement Fund are foreseen to bear fruit and closed fishing season is lifted on rich fishing grounds. In addition, to mitigate the negative impact brought by natural disasters and the ongoing COVID-19 pandemic, the national government has started the nationwide implementation of *Plant, Plant, Plant* Program or *Ahon Lahat, Pagkaing Sapat (ALPAS) Laban sa COVID-19* Program to benefit farmers, fishers, and consumers¹⁴.
- **Upsurge in unemployment rate reflects the effects of COVID-19¹⁵.** In April 2020, unemployment rate in the Philippines shot up to a record-high of 17.7 percent, accounting to 7.3 million Filipinos with no jobs. The rate is substantially higher than 5.3 percent in January 2020 and 5.1 percent in April 2019. The spike is attributable to the COVID-19 economic disruption of the Philippine labor market. With the ongoing and prolonged pandemic, unemployment is expected to rise further in the coming months.

¹¹ <http://dx.doi.org/10.22617/BRF200096>

¹² https://www.who.int/docs/default-source/coronaviruse/20200630-covid-19-sitrep-162.pdf?sfvrsn=e00a5466_2

¹³ <https://www.da.gov.ph/agri-damage-from-taal-eruption-reaches-php3b/>

¹⁴ <https://www.da.gov.ph/agri-fishery-can-rebound-da-chief/>

¹⁵ <https://psa.gov.ph/statistics/survey/labor-and-employment/labor-force-survey/title/Employment%20Situation%20in%20April%202020>

Other economic news

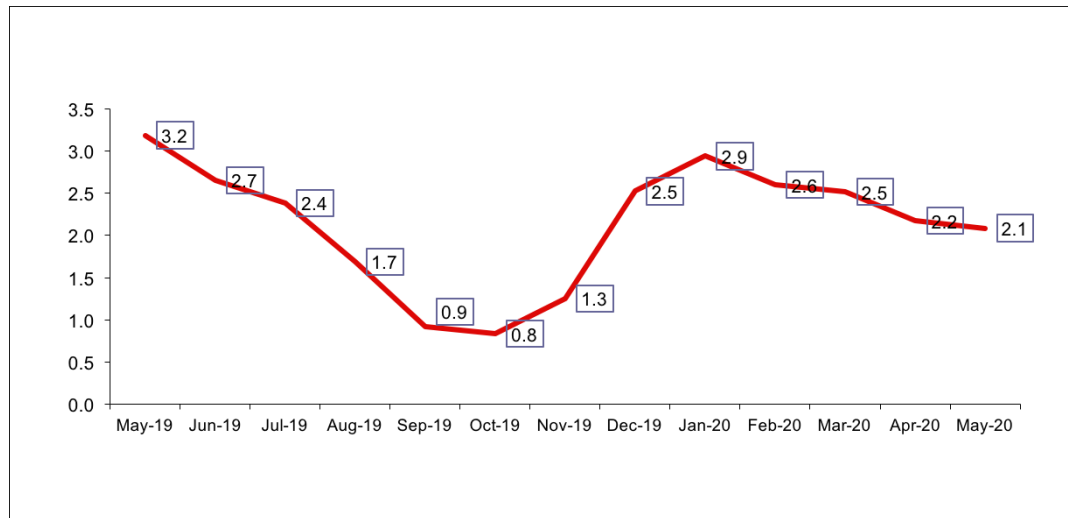
- **Peso-dollar exchange rate appreciates**¹⁶. The peso strengthened by 0.39 percent to average ₱50.83/US\$1, on a quarter-on-quarter basis, from the previous average of ₱51.03/US\$1. Despite the challenges brought by COVID-19, the appreciation of the peso was mainly caused by the decline in global oil prices and positive market sentiment with the credit rating outlook upgrade by Fitch Ratings for the Philippines in February 2020. On a year-on-year basis, the peso likewise appreciated by 3.02 percent from the previous average of ₱52.37/US\$1 in Q1 2019. Nonetheless, the sustained inflows of foreign exchange from remittances, foreign direct investments, BPO receipts, and ample level of the country's GIR are foreseen to provide support to the peso.
- **Stock market decreases in PSEi**¹⁷. At the close of the first quarter, PSEi reported a quarter-on-quarter fall of 12.4 percent with an average index points of 6,876.72. The index hit lowest on March 31 at 5,321.23 index points. The dampening of the stock market was as a result of the economic impact of Taal Volcano's eruption, the spread of COVID-19, the imposition of the enhanced community quarantine (ECQ), and uncertainty surrounding the renewal of the legislative franchise of a television network. Furthermore, brewing tensions between Libya and Iraq, the mounting conflict between the US and Iran, and Moody's downgrading of Hong Kong's credit rating contributed to the downward pressures. On the other hand, the decreases in PSEi were moderated by the market's positive reaction to the signing of the phase-one trade deal between the US and China on January 15, the faster Q4 2019 Philippine GDP growth, the Bangko Sentral ng Pilipinas (BSP)'s decision to inject liquidity into the economy, and R&I's upgrade of the Philippines' credit rating.
- **Inflation remains within government target**¹⁸. First quarter headline inflation rose to 2.7 percent, which is within the National Government's inflation target of 3.0 percent \pm 1.0 percentage point. This is higher than the 1.6 percent inflation in the previous quarter due to higher price increases of selected food and non-food items. Mean inflation forecast of 2020 remained unchanged at 2.9 percent, while forecast for 2021 declined to 3.0 percent from 3.1 percent. For the months ahead, inflation is expected to ease but remain within the target range. Downside risk to inflation outlook include gloomy demand due to the COVID-19 pandemic, while upside risks include supply disruptions due to lower factory output and slower global trade.

¹⁶ http://www.bsp.gov.ph/downloads/Publications/2020/IR1qtr_2020.pdf

¹⁷ http://www.bsp.gov.ph/downloads/Publications/2020/IR1qtr_2020.pdf

¹⁸ http://www.bsp.gov.ph/downloads/Publications/2020/IR1qtr_2020.pdf

Figure 2. Consumer price index (y-o-y, %)



Source: Graph prepared by author based on Philippine Statistics Authority data.

- Consumer outlook remained positive for the quarter but less optimistic for the next 12 months¹⁹.** Overall confidence index (CI) moderated to 1.26 percent from 1.31 percent the previous quarter. According to the nationwide survey, the sustained optimistic sentiment was due to (a) availability of more jobs, (b) effective government policies and programs, particularly the anti-drug campaign and the Senior Citizens Act, and (c) good governance. However, the positive CI was mitigated by concerns on (a) faster increase in the prices of goods, (b) low income, (c) occurrence of typhoon, volcanic eruption, and the COVID-19 outbreak, and (d) higher household expenses. Less upbeat outlook is expected for Q2 2020 and succeeding months.
- Business outlook weakened for the quarter²⁰.** Overall confidence index (CI) decreased to 22.3 percent from 40.2 percent the previous quarter. The less optimistic sentiment was due to (a) negative effects of COVID-19 pandemic, Asian swine fever, and Taal volcano eruption, (b) concerns on government policies, such as termination of Visiting Forces Agreement, non-renewal of mining rights, and travel ban, (c) decrease in orders and lower volume of business activity and production, (d) seasonal slack in demand after the holiday season, and (e) low supply of raw materials and products. The outlook is expected to follow a downward trend in the forthcoming months.
- Amid global crisis, the Philippines is still well-positioned to recover²¹.** For Q1 2020, the Philippines registered a negative growth of -0.2 percent, which was *the first time GDP growth fell into a negative territory since 1998 during the combined El Niño and Asian Financial Crisis*. The global economy is foreseen to contract by 3.0 percent this year, breaking the -1.7 percent GDP drop recorded a year after the 2008 Global Financial Crisis. Despite the numerous challenges brought by the COVID-19 outbreak, the National Economic and Development Authority (NEDA)'s Acting

¹⁹ http://www.bsp.gov.ph/downloads/Publications/2020/CES_1qtr2020.pdf

²⁰ http://www.bsp.gov.ph/downloads/Publications/2020/BES_1qtr2020.pdf

²¹ <http://www.neda.gov.ph/statement-of-acting-secretary-karl-kendrick-chua-on-the-first-quarter-2020-national-accounts-press-conference/>

Secretary Karl Kendrick Chua claims that *the Philippines is still well-positioned to recover strongly because of the country's solid macroeconomic and fiscal management.* The legislation of key economic and tax reforms such as the Tax Reform for Acceleration and Inclusion (TRAIN) Law, the Sin Tax Laws of 2019 and 2020, the Rice Tariffication Law, the Universal Health Care Law, and the Ease of Doing Business Law have equipped the country to combat any crisis. Moreover, the government commits to continuing the *Build Build Build* Program with strict health and safety measures to stimulate the domestic economy.



Table 1. Philippine Economic Indicators

Monthly Leading Indicators	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
Industrial Production (y-o-y, %)	-8.7	-12.5	-6.4	-5.0	-7.9	-7.2	0.9	4.0	-6.3 ...	...	...
Consumer Price Index (y-o-y, %)	2.4	1.7	0.9	0.8	1.3	2.5	2.9	2.6	2.5	2.2	2.1
Retail Sales (y-o-y, %)	-3.1	-6.7	-3.4	-1.5	-5.8	-2.5	9.2	7.5	-9.2 ...	...	...
Exports (y-o-y, %)	4.8	1.4	0.4	0.5	-0.2	21.6	9.4	2.8	-24.9 ...	...	...
Imports (y-o-y, %)	-0.9	-5.2	-5.8	-7.6	-4.5	-2.1	-2.8	-11.6	-26.2 ...	...	...
Trade Balance, US\$ million	-3,641	-3,005	-3,409	-3,573	-3,652	-2,962	-3,504	-1,656	-2,380 ...	...	...
Total Reserves (less gold), US\$ billion	77	78	78	78	78	80	79	80	81 ...	...	...
Policy Rate	4.5	4.25	4	4	4	4	4	3.75	3.25	2.75	2.75
Fiscal Balance (million pesos)	-75,296	-2,488	-178,557	-49,262	-60,883	-251,103	23,045	-37,595	-59,479 ...	...	...
Quarterly/Annual Economic Indicators	2016	2017	1Q2018	2Q2018	3Q2018	4Q2018	1Q2019	2Q2019	3Q2019	4Q2019	1Q2020
Real GDP (y-o-y, %)	6.9	6.7	6.5	6.4	6.1	6.4	5.7	5.4	6.3	6.7	-0.2
- Private Consumption	7.1	5.9	5.8	6.2	5.5	5.5	6.2	5.6	6.0	5.7	0.2
- Government Consumption	9.0	6.2	13.9	12.3	14.4	13.2	6.4	6.8	8.8	17.0	7.1
- Gross Capital Fixed Formation	24.6	9.4	9.7	17.7	14.5	9.7	7.8	-2.9	5.9	5.8	-4.3
Current Account (% of GDP)	-0.4	-0.7	-0.4	-4.0	-2.1	-2.9	-2.1	0.2	0.4	0.7	...
Financial Account (US\$ million)	175	-2,798	-816	-1,627	-1,793	-5,044	-4,584	572	121	-2,374	...
- Net Direct Investments, US\$ million	-5,883	-6,952	-1,025	-2,672	-1,374	-837	-1,053	-692	-769	-1,824	...
- Net Portfolio Investments, US\$ million	1,480	2,454	1,612	1,021	-224	1,492	1,257	481	2,074	36	...
Overall BOP position (US\$, million)	-1,038	-863	-1,227	-2,030	-1,879	2,830	3,797	991	778	2,277	...
Unemployment rate	5.1	5.7	5.3	5.4	5.1	5.1	5.2	5.1	5.1	5.1	17.7
Others	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20
Overseas Filipinos' Remittances (US\$, million)	2,441	2,609	2,290	2,581	2,589	2,379	2,671	2,372	2,902	2,648	2,358
... = not available											

Source: Bangko Sentral ng Pilipinas, Philippine Statistics Authority, Asian Development Bank.



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Table 2. Level of Philippine GDP, 2019Q1 – 2020Q1

	Nominal GDP		Real GDP	
	(million current pesos)		(million constant 2018 pesos)	
	2019Q1	2020Q1	2019Q1	2020Q1
Agriculture	421,152	450,802	440,880	439,220
Industry	1,373,465	1,298,842	1,370,256	1,328,950
Mining and quarrying	42,484	32,865	45,392	35,249
Manufacturing	878,958	802,890	910,586	877,544
Electricity, steam, water and waste management	148,193	155,332	129,544	136,407
Construction	303,830	307,756	284,734	279,750
Services	2,628,334	2,723,606	2,646,495	2,682,772
Wholesale and retail trade; repair of motor vehicles and motorcycles	718,307	727,194	713,571	721,617
Transportation and storage	185,214	166,085	189,669	169,418
Accommodation and food service activities	109,945	100,329	106,499	90,164
Information and communication	129,930	137,814	131,511	139,001
Financial and insurance activities	406,790	459,451	409,050	448,480
Real estate and ownership of dwellings	301,072	318,142	297,690	304,341
Professional and business services	265,373	274,354	242,378	244,045
Public administration and defense; compulsory social activities	158,400	172,929	181,348	190,729
Education	167,700	177,762	182,895	184,632
Human health and social work activities	69,894	79,458	77,720	84,833
Other services	115,710	110,089	114,163	105,512
Sum = GDP	4,422,951	4,473,250	4,457,631	4,450,941

Source: Philippine Statistics Authority



Table 3. Industry Contributions to Philippine GDP Growth, 2019Q1 – 2020Q1

	TRAD	GEAD		GEAD
	GDP Growth			GDP Growth
	PGE*	PGE*	PCE*	PGE* + PCE*
	(percent)	(percent)	(percent)	(percent)
		(1)	(2)	(1)+(2)
GDP Growth	-0.15	-0.15	0.00	-0.15
Industry Growth Contribution				
Agriculture	-0.04	-0.04	-0.35	-0.38
Industry	-0.93	-0.93	1.19	0.27
Mining and quarrying	-0.23	-0.23	0.17	-0.06
Manufacturing	-0.74	-0.74	0.16	-0.58
Electricity, steam, water and waste management	0.15	0.15	0.29	0.44
Construction	-0.11	-0.11	0.58	0.47
Services	0.81	0.81	-0.85	-0.03
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.18	0.18	0.03	0.21
Transportation and storage	-0.45	-0.45	0.38	-0.07
Accommodation and food service activities	-0.37	-0.37	0.46	0.09
Information and communication	0.17	0.17	-0.19	-0.02
Financial and insurance activities	0.88	0.88	-0.88	0.01
Real estate and ownership of dwellings	0.15	0.15	-0.03	0.12
Professional and business services	0.04	0.04	0.52	0.55
Public administration and defense; compulsory social activities	0.21	0.21	-0.70	-0.49
Education	0.04	0.04	-0.36	-0.32
Human health and social work activities	0.16	0.16	-0.33	-0.17
Other services	-0.19	-0.19	0.25	0.05

Source: DLSU-AKI Philippine Economic Monitor calculations by applying the data in Table 2 to a "generalized exactly additive decomposition" (GEAD) of GDP growth into pure growth effect (PGE*) and price change effect (PCE*) as an alternative to the "traditional" (TRAD) GDP growth decomposition that recognizes PGE* but not PCE*. PGE* is the result of real GDP or "quantity" growth holding relative price (real price) constant and PCE* is the result of "real price" growth holding quantity constant. PCE* measures the change in value of an industry's output when outputs of all industries are converted to the same unit of measure, in terms of the economy's "GDP basket." The GEAD formulas for PGE* and PCE* and the TRAD formula (which equals PGE*) are given, respectively, by equations (39), (40), and (46) in Dumagan, Jesus C. (2018), "Modifying the 'Generalized Exactly Additive Decomposition' of Growth of GDP and Aggregate Labor Productivity in Practice for Consistency with Theory," Working Paper Series No. 2018-07-053, Angelo King Institute for Economic and Business Studies, De La Salle University, Manila. The paper by Dumagan, Jesus C. (2013), "A Generalized Exactly Additive Decomposition of Aggregate Labor Productivity Growth," Review of Income and Wealth, 59 (Issue 1): 157-168 decomposed growth of aggregate labor productivity (ALP), which is the ratio of GDP to total labor employment. Thus, by removing the labor variable, the decomposition of ALP growth becomes a decomposition of GDP growth into the modified PGE* and PCE* formulas which were implemented in this Table 3.