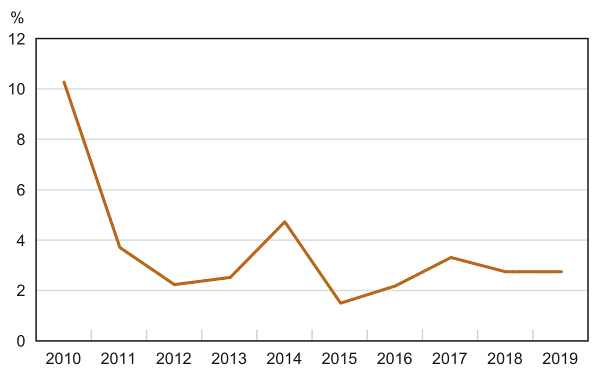
2. National Output and Income

In 2019, Taiwan's economy expanded at an annual rate of 2.71%, slightly lower than the 2.75% of the previous year. Domestic demand continued to serve as the leading force for economic expansion and contributed 2.33 percentage points to real GDP growth. This was in part due to a steady increase in private consumption as well as a remarkable expansion in fixed capital formation. In terms of external demand, despite weak global demand and escalating trade tensions, net exports grew mildly and contributed 0.39 percentage points to real GDP growth. In the meantime, nominal GNI (gross national income, in US dollars) rose by 0.63% and per capita GNI increased from US$26,376 to US$26,528 over the year 2019.

In the first quarter, real GDP experienced the lowest level of growth over the year at 1.84%. Private consumption grew moderately and private investment expanded at a solid pace because of higher demand for machinery and equipment investment. Government consumption, on the contrary, contracted owing to a higher base effect resulting from the public sector wage increase in the previous year. Meanwhile, a gradual global economic slowdown weighed on export growth, thereby posing a headwind to domestic economic growth. In the second quarter, real GDP growth picked up from its lowest point and reached 2.60%. Although government consumption remained constricted, private investment continued to gain growth momentum from machinery and equipment investment. Growth in private consumption and exports provided additional support to real GDP growth.

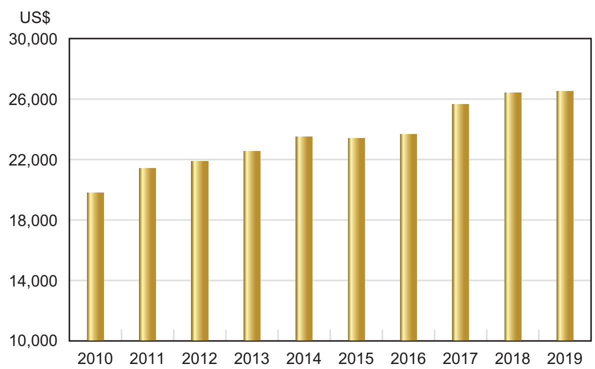
In the third quarter, real GDP expanded at an annual rate of 3.03%. Of note, government consumption exhibited positive growth after two consecutive quarters of contractions. Private consumption growth was buoyed by an increase in vehicle sales and higher demand for overseas

Real Growth Rate of GDP



Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2020.

Per Capita GNI



Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2020.

travel. Growth in private investment was relatively soft, reflecting slower build-ups of construction investment and machinery and equipment investment. Exports suffered from weak global demand and fell slightly from the previous year. In the fourth quarter, a number of positive factors emerged, pushing real GDP growth to the highest level over the year at 3.31%. Higher vehicle sales and stock trading volumes bolstered private consumption growth; an expansion in machinery and equipment investment resulted in another quarter of strong growth for private investment; the enhancement of production capacity in the IT sector helped prop up export growth.

Expenditure Components of GDP

All expenditure components of GDP recorded positive growth in 2019. Among all the components, gross fixed capital formation was the primary source of economic growth and contributed 1.99 percentage points to real GDP growth for the year. Private consumption, on the other hand, contributed 1.12 percentage points to real GDP growth. Meanwhile, exports of goods and services and government consumption contributed to real GDP growth by 0.83 and 0.02 percentage points, respectively. With respect to shares of GDP, exports of goods and services accounted for the largest share of GDP at 64.10%, followed by private consumption at 52.22% and gross fixed capital formation at 23.44%.

GDP by Expenditure

Unit: %

	2019			2018		
	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*
Private Consumption	52.22	2.13	1.12	52.39	2.04	1.06
Government Consumption	13.99	0.11	0.02	14.30	4.03	0.56
Gross Fixed Capital Formation	23.44	9.13	1.99	21.76	2.95	0.62
Change in Inventory	-0.14	-	-0.80	0.46	-	0.78
Exports of Goods and Services	64.10	1.24	0.83	66.62	0.69	0.46
(Less : Imports of Goods and Services)	53.61	0.79	0.44	55.52	1.37	0.74
Expenditure-based GDP	100.00	2.71	2.71	100.00	2.75	2.75

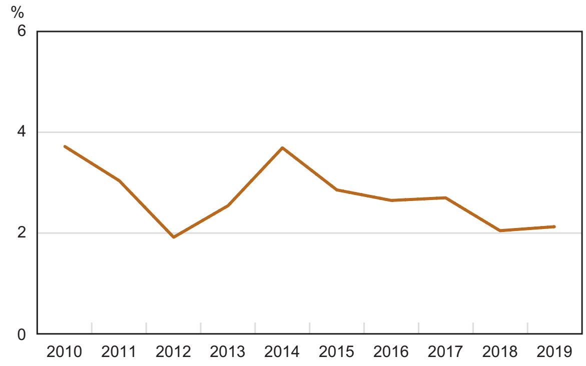
Note: * Percentage point.
Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2020.

(1) Steady Growth in Private Consumption

In general, growth in private consumption was weak in the beginning of the year, but improved significantly in the second half of 2019. For the year as a whole, private consumption posted an annual growth rate of 2.13%, slightly higher than the 2.04% of 2018, and contributed 1.12 percentage points to real GDP growth.

In the first half of the year, the US-China trade dispute led to high volatility in global financial markets, thereby adversely affecting consumer confidence. Private consumption growth was further restrained by a subpar performance in vehicle sales and a downturn in stock trading value. Yet, the employment condition remained stable and wages continued to rise steadily. Against this conflicting backdrop, private consumption grew at 1.75% and 1.61% in the first two quarters, respectively. In the second half of the year, the US-China trade dispute eased and the Taiwan stock market reached a 29-year high, thereby helping private consumption regain its growth momentum. Furthermore, vehicle sales improved over the second half of 2019, leading to stronger retail sales, and the number of outbound travelers also experienced notable growth, both providing an additional boost to private consumption. As a result, private consumption grew robustly at 2.52% and 2.63% in the third and fourth quarters, respectively.

Real Growth Rate of Private Consumption Expenditure



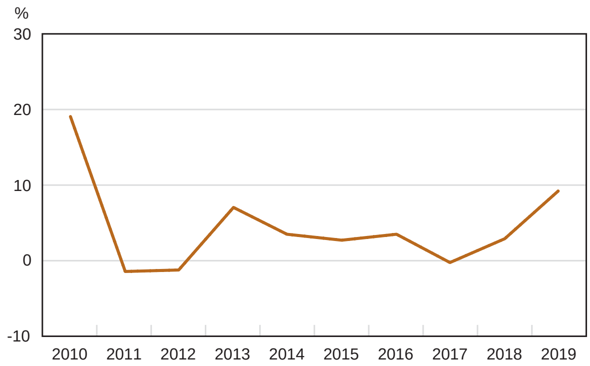
Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2020.

(2) Robust Expansion in Fixed Capital Formation

Fixed capital formation grew at a solid rate of 9.13% for the entire year and contributed 1.99 percentage points to real GDP growth, the highest level of contribution since 2010. This marked expansion was attributed to a growing trend in manufacturing reshoring, the active development in offshore wind power, and an accelerating rate of investment growth in advanced process technologies in the semiconductor industry.

In the first and second quarters of 2019, fixed capital formation expanded by 6.55% and 11.44%, respectively, supported by an increase in machinery and equipment investment and a rise in transportation investment. However, as machinery and equipment investment cooled off in the third quarter, the growth rate of fixed capital formation slipped to 3.71%, the lowest level over the year. In the fourth quarter, imports of semiconductor equipment surged and construction and transportation investments both grew steadily; growth in fixed capital formation thus rebounded from the weak patch and reached 14.97%, the highest level over the year.

Real Growth Rate of Fixed Capital Formation



Source: *Statistical Abstract of National Income,* DGBAS, Executive Yuan, February 2020.

In terms of the type of capital formation, construction investment grew at a steady pace, with an annual growth rate of 1.93% in 2019. On the other hand, transportation investment shrank by 1.80% for the entire year owing to a higher base effect. A substantial expansion appeared in investment in machinery and equipment throughout the year, with each quarter growing at above 20%, except for the third quarter. As a result, machinery and equipment investment expanded by 23.80% for the entire year. Lastly, investment in intellectual property remained relatively stable and increased by 3.53% in 2019.

(3) Mild Upturn in Real Exports and Imports

In 2019, Taiwan's exports confronted some crosscurrents such as weak global demand and the US-China trade dispute, yet also benefitted from the resulting trade diversion effects. Overall, exports of goods and services increased at a mild pace of 1.24% and contributed 0.83 percentage points to real GDP growth.

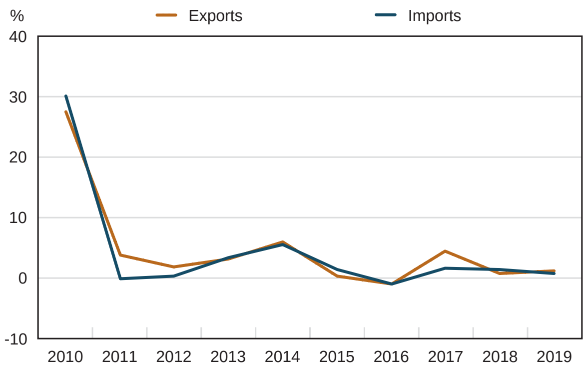
In the first quarter, influenced by a slowdown in global economic growth and a higher base effect, exports grew softly by 0.88%. In the second quarter, growth in exports increased to 1.42%, which was supported by the effects of production relocation and trade diversion. Export growth continued to be dampened by the US-China trade dispute in the third quarter and fell sharply to -0.03%. In the fourth quarter, benefiting from a number of favorable conditions, such as an easing of trade tensions, rising demand for 5G applications, and an improvement in production capacity, exports advanced by 2.64%, the highest growth over the year.

Turning to the imports of goods and services, a significant increase in imports of capital equipment mitigated the decline in export-derived demand and caused real imports to rise slightly by 0.79% for the entire year.

Moderate Decline in Excess Saving Ratio

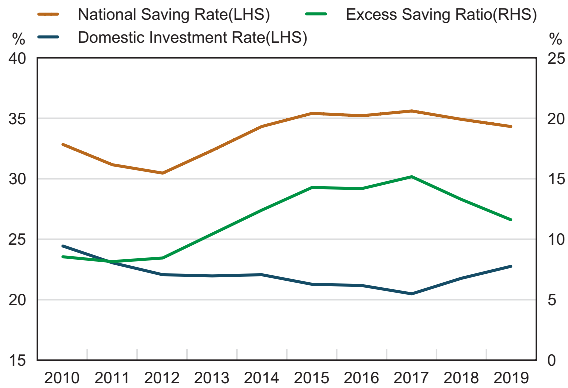
Domestic investment expanded on the back of a growing trend in manufacturing reshoring,

Real Growth Rates of Exports and Imports



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2020.

National Saving Rate, Domestic Investment Rate, and Excess Saving Ratio



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2020.

the active development in offshore wind power, and an accelerating rate of investment growth in advanced process technologies in the semiconductor industry. As a consequence, domestic investment as a share of GNI moved upward by a small margin, from 21.73% in 2018 to 22.75% in 2019. Meanwhile, the national saving rate (the ratio of national saving to GNI measured at current prices) fell slightly from 34.96% in 2018 to 34.37% in 2019. Overall, the excess saving ratio, defined as the excess of gross national saving over gross domestic investment to GNI, slid from 13.23% in 2018 to 11.62% in 2019.

Box 1 Implications of US-China Trade Relations for Taiwan

1. Trade Diversion Effects Helped Temper the Impact of Soft External Demand

In 2019, most major Asian economies suffered negative export growth as the US-China trade conflict continued to flare and the global economy faltered. By contrast, Taiwan was able to benefit from companies' tariff mitigation strategies such as production relocations and order transfers, which cushioned the blow to external demand. As a result, Taiwan's exports, though contracting by 1.4% compared to 2018, did not decline as sharply as those in Singapore, South Korea, Japan, Malaysia, and Thailand.

Over the course of the trade war, new tariffs imposed by the Trump administration were added to an increasingly longer list of Chinese goods and drove up average import tariffs. One of the most drastic hikes took effect on May 10, 2019, raising the additional tariffs from 10% to 25% on approximately US$200 billion worth Chinese goods that included information, communication, and audio-video products ranging from servers and routers, to memory modules. Given this escalation, Taiwanese information and communication product firms, who had manufactured 89.7% of their export orders in China and shipped more than 30% of them directly to the US, began to expedite production relocations to other countries.

In addition to the battle front of tariffs, the US and China also fought for technological supremacy and, around the world, information security was given greater priority. As a result, multinationals became keener on moving advanced technologies, products, and related supply chains out of China. This presented an opportunity for Taiwan, which boasts an integrated, comprehensive semiconductor industrial cluster with high-end product capabilities, to be the nexus of the reconfigured supply chains.

In 2019, the proportion of overseas production in total export orders increased modestly by 0.2 percentage points over the previous year. However, the fact that the share of information and communication products manufactured overseas dropped 2.2 percentage points showed that domestic production was gaining ground. While Taiwan's total exports shrank by 1.4% in 2019, exports of information, communication, and audio-video products recorded a positive growth rate of 20.8%, with those bound for the US soaring by 59.5%, easing the shock from sluggish external demand.

2. Taiwanese Investment in China Fell and US Corporate Direct Investment in Taiwan Rose

In recent years, China's lure as a cost-effective production base has faded as its labor costs and tax burdens surged and environmental laws strengthened. Combined with the trade war effects, these considerations added to the catalysts for production relocation out of China. Investment in China by Taiwanese firms slid from US$8.5 billion a year earlier to US$4.17 billion in 2019, declining markedly by 50.9%. The manufacturing sector alone scaled down its China-bound investment by 59.7% year on year to US$2.41 billion, with the largest cutback, of US$1.22 billion, coming from the manufacturers of electronic parts and components.

Meanwhile, multinationals, especially US-headquartered corporations, stepped up their investment in Taiwan for emerging technologies such as 5G network, artificial intelligence, Internet of Things, and cloud computing and data storage. In 2019, US businesses invested US$0.36 billion in Taiwan, a new high since 2014. If investment through establishments in third countries (e.g., Micron, through its Dutch subsidiary, and Google, via fund flows from British Virgin Islands) is included, Taiwan-bound investment by the US high-tech industry would exceed US$3.0 billion in 2019, bolstering Taiwan's further involvement in the integration of software and hardware supply chains.

3. Despite the US-China "Phase One" Trade Deal, COVID-19 Impact on Trade Should Be Closely Monitored

While US-China trade tensions continued to heighten uncertainties over global investment and trade in 2019 with adverse implications for Taiwan's economy and trade, they also spurred high-tech corporate investment flows into Taiwan. Increased development of high-end processes and production, if carrying on, would strengthen the inter-industry linkage effects in Taiwan, thereby promoting exports and consumption, creating jobs, and boosting economic growth.

After the US and China signed a "phase one" trade deal on January 15, 2020, which took effect on February 14, it removed some of the uncertainties over the global economy and trade. Before breathing a reprieve, the world took another hit with the coronavirus (COVID-19) pandemic breaking out in China in January and spreading to the world, wreaking havoc on economic growth where it struck. In this view, it would be crucial to remain watchful of China's follow-up efforts in keeping its trade deal promises and to monitor the potential implications for Taiwan.

Finally, it is worth noting that the trade war could add to the challenge of trade-related talks between Taiwan and the US. For one thing, Taiwan's current account surplus to GDP ratio exceeded the 2% threshold set by the US Treasury in determining currency manipulation of its trading partners, which was because of a chronically large excess of saving. For another, trade diversion as a result of the US-China trade spat also caused an increase in Taiwan's exports to the US. According to US Customs statistics, the US ran a trade deficit of US$23.04 billion with Taiwan in 2019, also above the US Treasury's threshold of US$20 billion. These developments alongside the trade war could in turn lead pressures to mount for Taiwan in its trade-related talks with the US.