

Developments in the Real Economy

I. Developments in the Real Economy

1. Overview

As domestic demand enjoyed steady growth in 2016 and external demand was bolstered by a strengthening global economy in the second half of the year, Taiwan's economy expanded from 0.72% in 2015 to 1.50%. The balance of payments (BOP) stayed healthy with a surplus of US\$10,663 million. In terms of inflation, weather-induced rises in food prices were partially offset by lower fuel and gas costs following international energy price declines; the average annual growth rate of the consumer price index (CPI) rose 1.40% over the previous year. Despite record-high tax revenue, a significant increase in social welfare expenditure pushed up the central government deficit to NT\$45.0 billion. Meanwhile, the unemployment rate averaged 3.92% for the year as a whole, the second lowest level since 2008.

Moderate Economic Growth

In the first quarter of 2016, private consumption grew steadily, but private investment was dampened by a tepid housing market and exports also faltered amid a weak global economy, leading the economy to contract by 0.23% year on year. From the second quarter onwards, though, exports regained strength thanks to rising demand for semiconductors in a stabilizing global economy, and private investment was driven by increased capital outlays in the semiconductor and airline industries. Consequently, economic growth began to gather pace and reached an all-year high of 2.88% in the fourth quarter. The annual economic growth rate was 1.50%, higher than the previous year's 0.72%.

In terms of GDP components by expenditure, domestic demand grew steadily by 2.16%, boosted by growth in private consumption, government consumption, and government and public enterprise investment. Domestic demand contributed 1.89 percentage points to GDP growth, while net external demand contributed -0.38 percentage points.

Broken down by type of activity, the industrial sector reversed the previous year's contraction and expanded by 2.04%, with a growth contribution of 0.73 percentage points. The services sector continued to pick up at a pace of 1.33%, contributing 0.83 percentage points to GDP growth.

Continued BOP Surplus

For year 2016 as a whole, Taiwan continued to post a balance of payment surplus¹, with a

¹ Starting from 2016, the CBC adopted the sixth edition of the IMF's Balance of Payments and International Investment Position Manual (BPM6) for BOP compilation. For more information, please see Appendix of the 2016-Q1 press release on Taiwan's balance of payments.

current account surplus of US\$70,938 million and a net asset increase of US\$65,037 million in the financial account. The overall balance of payments showed a surplus of US\$10,663 million, lower than US\$15,011 million in 2015.

In the current account, both internal and external demand strengthened in the latter half of the year, but exports and imports for the full year still declined compared to the previous year. As exports shrank more than imports, the goods trade surplus decreased to US\$69,410 million. The services account ran a larger deficit of US\$10,964 million in 2016, mainly owing to reduced travel and freight receipts as well as increased payments for travel and airline passenger transportation. The primary income surplus narrowed to US\$15,649 million mainly because of higher outward payments to non-residents' portfolio investment income. The secondary income posted a smaller deficit of US\$3,157 million.

In the financial account, portfolio investment recorded a net asset increase of US\$78,419 million. With insurance companies investing more in foreign debt securities, portfolio investment abroad by residents grew by US\$81,062 million; as for local portfolio investment by non-residents, it also increased by US\$2,643 million mainly because foreign investors increased local share holdings. Direct investment reported a net asset increase of US\$9,510 million, with Mainland China remaining the major recipient of Taiwan's direct investment. As a result of cross-border mergers and acquisitions and share swap transactions, direct investment abroad by residents, with an increase of US\$17,843 million, and inbound direct investment by non-residents, with an increase of US\$8,333 million, both registered higher figures than ever before. As for other investment, it showed a net asset decrease of US\$20,664 million, as increases in non-residents' deposits and foreign borrowing led to a greater increment in foreign liabilities.

Mild Inflation

Amid lackluster global growth, languishing international raw material prices resulted in a 3.08% decline in import prices in NT dollar terms. In addition, low quotations for electronics and optical apparatus and a reduction in electricity rates led the wholesale price index to fall by 2.99%, albeit to a lesser degree compared to the previous year's drop.

In terms of CPI growth, prices of vegetables & fruits and food away from home climbed on account of adverse weather conditions, but prices of fuel and gas went down as a result of falling international energy prices. Reflecting these factors, the 2016 CPI annual growth rate stood at 1.40%, the most marked rise in four years. Core inflation (excluding fruits, vegetables, and energy prices) recorded a mild increase at 0.84%, slightly higher than the 0.79% of 2015.

Widened Government Deficit

In 2016, the central government deficit grew by NT\$34.9 billion to NT\$45.0 billion, as the NT\$9.9

billion increase in revenue was trumped by the NT\$44.8 billion in expenditure.

Of the total revenue, tax revenue continued to contribute around 80%. Adjustments in tax schemes and corporate profit gains helped to bring in 4.7% more tax revenue in 2016 than the previous year. Surpluses of public enterprises and public utilities decreased by 2.5%, while fees, fines, and indemnities posted a sizable reduction of 29.2% owing to a higher base effect. On the other hand, central government expenditure mounted in 2016 mainly because expenditure on social welfare and expenditure on economic development expanded by NT\$20.7 billion and NT\$8.1 billion, respectively.

The central government's debt financing needs rose to NT\$118.0 billion because of a wider deficit and an increase in debt principal repayment. At the end of 2016, the total outstanding debt of the central government posted a new high of NT\$5,372.1 billion, but its ratio to GDP dropped slightly to 31.4%.

Low Unemployment Rate; Slower Wage Growth

The unemployment rate edged up from January onwards amid a slow economic recovery. It reached 4.08% in August, the highest since September 2014. Later, with an economic upturn, the unemployment rate began to drop and recorded 3.79% in December. The annual average unemployment rate was 3.92%, higher than 3.78% in 2015 but still the second lowest since 2008.

The average number of employed persons increased by 69 thousand or 0.62% to 11.27 million in 2016. Employment in the services sector grew the most among all sectors, with an increase of 58 thousand workers or 0.88% from the previous year. The industrial sector hired eight thousand persons more than a year before, increasing by 0.21%.

Average non-farm (industrial and services sectors) monthly earnings per employee gained by 0.62% year on year to NT\$48,790, while average monthly regular earnings of non-farm employees increased by 1.35% to NT\$39,238. Adjusted for inflation, real monthly earnings decreased by 0.77%, and real monthly regular earnings shrank slightly by 0.05%.

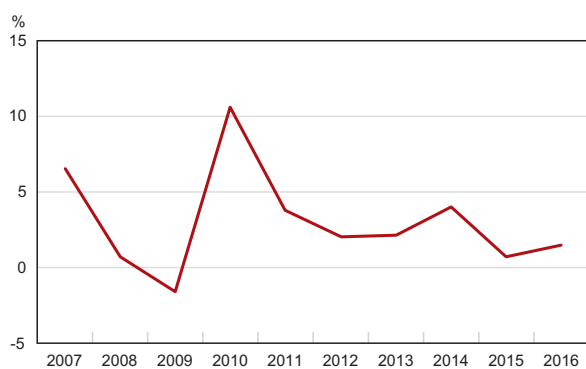
Labor productivity indices of the industrial sector and the manufacturing industry grew by 5.42% and 5.74%, respectively, over the previous year. Unit labor costs dropped by 0.52% in the industrial sector and by 0.71% in manufacturing, reflecting a smaller increase in total earnings over that in production.

2. National Output and Income

In 2016, the Taiwanese economy expanded at a mild pace and real GDP grew by 1.50% over the previous year because of a slight revival in domestic demand. Private consumption rose steadily owing to stronger new car sales, continued expansion in the number of citizens traveling abroad, and an increase in disposable income resulting from declining oil prices. Fixed capital formation displayed modest growth, mainly because the aviation industry expanded capital outlays and the semiconductor industry increased capacity in advanced manufacturing in the second half of the year. External trade witnessed a weaker performance in the first half of the year and then exhibited strong growth during the second half of the year on the back of a broad rebound in global demand. Nevertheless, exports showed a slower recovery for the year as a whole.

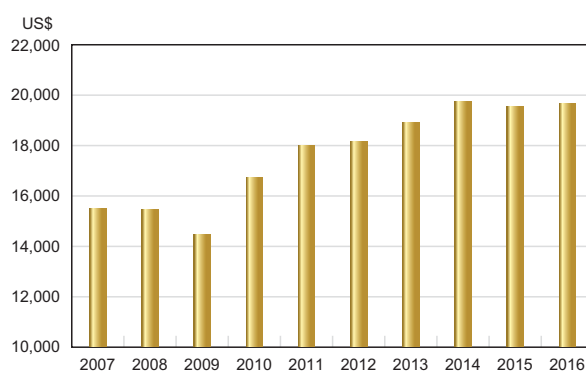
In the first quarter, external trade continued to fall as foreign demand remained lackluster and construction investment decreased. Modest growth in private consumption was unable to offset sluggish external trade and construction investment, leading real GDP to shrink 0.23%. On account of a gradual expansion in external trade, improved private investment, and an increase in private consumption, real GDP grew mildly by 1.13% in the second quarter. The domestic economy continued to expand during the third quarter, reflecting increased private investment and a pickup in external demand boosted by solid global demand for semiconductors. Consequently, real GDP growth rose to 2.12% in the third quarter. During the fourth quarter, as continuously strong demand for semiconductors bolstered external trade and private investment, real GDP growth rose further to 2.88% in the fourth quarter, the highest level in the year. Meanwhile, amid a moderate recovery in the domestic economy, per capita GNI (Gross National Income) in nominal terms increased slightly from US\$19,540 to US\$19,653.

Real Growth Rate of GDP



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2017.

Per Capita GNI



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2017.

Expenditure Components of GDP

All expenditure components of GDP except for private consumption posted higher growth rates than those in the previous year. Among them, exports recorded a positive contribution of 1.36 percentage points to GDP growth for the year, replacing private consumption as the primary source of economic growth. Private consumption also posted a positive contribution of 1.12 percentage points to GDP growth in 2016. Gross fixed capital formation contributed 0.56 percentage points to GDP growth owing to a pickup in capital expenditures by the private sector. Meanwhile, growth in government consumption moved from negative to positive territory and further boosted GDP growth by 0.43 percentage points. With respect to shares of GDP, exports of goods and services still accounted for the largest share of GDP at 62.83%, followed by private consumption at 52.72% and gross fixed capital formation at 21.00% for the year.

(1) Steady Growth in Private Consumption

During 2016, private consumption grew by 2.14% in real terms and contributed 1.12 percentage points to GDP growth. Overall consumer spending grew at a steady pace on account of stronger new car sales, continued expansion in the number of citizens traveling abroad, and an increase in disposable income resulting from declining oil prices.

In the first quarter, driven by the government's consumption-boosting program, an increase in the number of citizens traveling abroad, and a stable rise in consumer spending in the retail sector and restaurant business, private consumption expanded at an annual rate of 2.64%. In the second quarter, affected by weaker retail sales, private consumption registered the lowest growth rate of 1.59% for the year. Subsequently, continued expansion in new car sales, growth in tourism, and the

Expenditure on Gross Domestic Product

Unit: %

	2016			2015		
	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*
Private Consumption	52.72	2.14	1.12	52.27	2.68	1.43
Government Consumption	14.28	3.05	0.43	13.97	-0.26	-0.04
Gross Fixed Capital Formation	21.00	2.71	0.56	20.84	1.64	0.36
Change in Inventory	-0.07	-	-0.22	0.09	-	-0.08
Exports of Goods and Services	62.83	2.12	1.36	64.30	-0.34	-0.24
(Less : Imports of Goods and Services)	50.76	3.39	1.75	51.48	1.19	0.71
Expenditure on GDP	100.00	1.50	1.50	100.00	0.72	0.72

Note: * Percentage point.

Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2017.

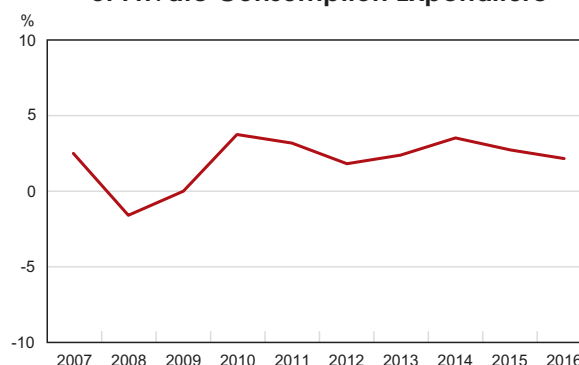
launch of new smartphone products drove private consumption to rise at an annual rate of 2.70% in the third quarter. During the final quarter, despite increases in new car sales and the number of outbound travelers, private consumption growth weakened to 1.62% on account of abated growth momentum for retail sales.

(2) Modest Growth in Fixed Capital Formation

For the year 2016, domestic semiconductor manufacturers continued to invest in advanced manufacturing, yet the sluggish housing market resulted in slower growth in construction investment. Meanwhile, growth momentum for investment by public enterprises softened. Therefore, fixed capital formation exhibited modest growth with an annual rate of 2.71% in real terms and contributed 0.56 percentage points to economic growth. In the first quarter, despite a mild expansion in private investment, continuous contractions in investments by public enterprises and general government dragged growth in fixed capital formation down to a yearly low of negative 0.12%. In the second quarter, imports of capital equipment increased further, pushing private investment to rise. As a result, growth in fixed capital formation turned positive, recording an annual rate of 0.16%. Subsequently, as the semiconductor industry continued to expand capacity in advanced production and airline companies increased investment in aircraft purchases, fixed capital formation expanded by 3.66% and 6.81%, respectively, in the last two quarters.

Regarding expenditure by type of purchaser, investments by the private sector and general government both registered positive growth, whereas investment by public enterprises experienced two consecutive years of decline. In the first half of the year, an increase in machinery and equipment investment was partially offset by decreases in investment in transport equipment and construction, leading private investment to advance by 0.22% and 1.16%, respectively, in the first and second quarters. Later, reflecting a pickup in capital spending led by the semiconductor and transportation industries, private investment rose by 3.99% and 7.24%, respectively, in the last two quarters. For the year as a whole, private investment increased by 3.12%, slightly higher than the 2.97% registered in 2015. Meanwhile, the government's expansionary fiscal policy boosted government investment growth back into positive territory for the first time in six years, with a year-on-year increase of 1.72%. In contrast, investment by public enterprises went down by 1.93%, primarily owing to a decline in investment in machinery and equipment.

**Real Growth Rate
of Private Consumption Expenditure**



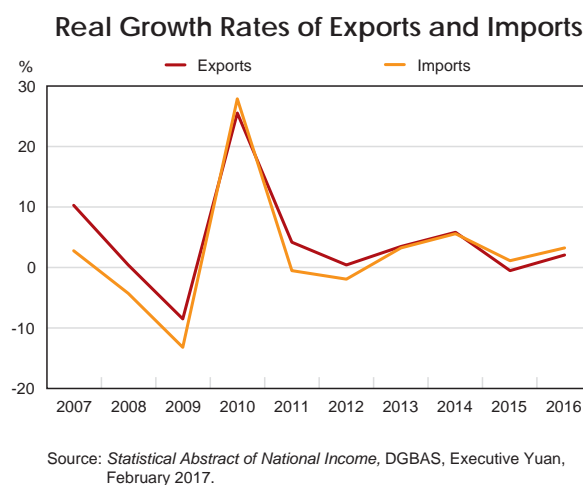
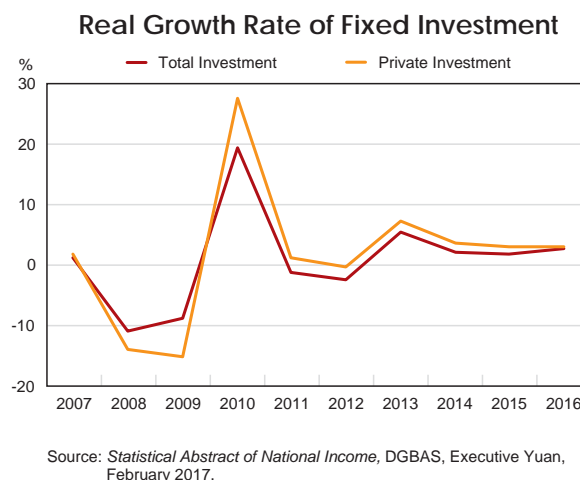
Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2017.

In terms of the type of capital formation, the largest increase was observed in outlays on machinery and equipment, registering a growth of 9.14%, mainly attributable to capacity expansion and technology upgrades conducted by semiconductor manufacturers. Transportation spending decelerated in the first half of the year as a result of a poor domestic business climate. Bolstered by increased procurement of airliners, growth in transportation spending turned positive in the second half of the year. Consequently, transportation investment rose moderately by 3.35% for the entire year. Investment in intellectual property was relatively stable, registering an annual growth rate of 2.51%. On the other hand, because of stagnant growth in the housing market, investment in the construction sector contracted by 2.85%.

(3) Mild Expansion in Exports and Imports

Despite a weaker global business climate, competitive pressure from Mainland China's efforts to localize the supply chain, and volatility in raw material prices, growth in exports still outpaced that in 2015, registering a year-on-year increase of 2.12% and contributing 1.36 percentage points to economic growth for the year as a whole. The increase in exports was mainly due to an improvement in foreign demand as well as a lower base effect.

For the first quarter, growth in exports of electronics products and machinery, plastics, rubber, base metals, and optical and precision instruments all retreated, and net proceeds from merchandising also slid, whereas the number of tourists from abroad rose by 16.03%. As a result, growth in exports of goods and services went down to negative 3.88%. In the second quarter, growth in exports of electronic parts and components returned to positive territory, leading exports of goods and services to rise by 0.21%. Then, influenced by continued solid expansion in exports of electronic parts and components



and regained growth momentum in exports of base metals, machinery, and information, communications and audio-video products, exports of goods and services went up 3.66% and 8.02%, respectively, in the last two quarters.

Since a large proportion of import demand was derived from exports, the growth trends of imports and exports moved together. Import growth was negative in the first half of the year, while it turned positive in the second half of the year as raw material prices gradually rebounded and capital outlays on machinery and electrical equipment rose with mounting export demand. For the year as a whole, imports of goods and services advanced by 3.39%, subtracting 1.75 percentage points from economic growth.

Sectoral Components of GDP

Looking at sectoral production in 2016, industry and services, making up major shares of national output, were key forces behind economic growth. With intelligent technologies being utilized in a wider range of applications, industrial output grew by 2.04%, in contrast to the previous year's contraction, and contributed 0.73 percentage points to overall GDP. Services output exhibited continuous expansion, pitching in 0.83 percentage points to economic growth for the year. On the contrary, agricultural output declined in 2016 as a consequence of abnormal weather conditions and crop damage caused by typhoons, subtracting 0.12 percentage points from GDP growth.

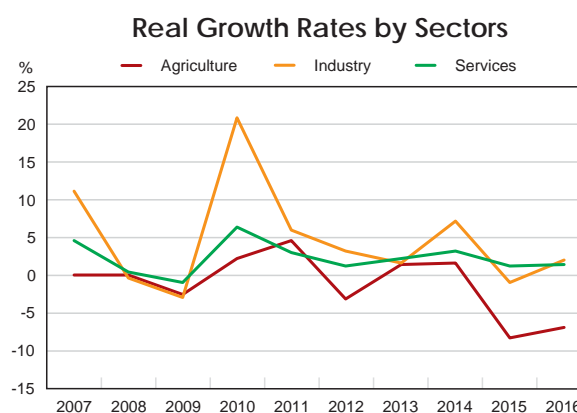
Regarding the sectoral shares of GDP in nominal terms, Taiwan's economy was still dominated by the services sector with a 63.15% share in 2016. The industrial sector accounted for 35.04% of GDP, slightly lower than the share in the previous year. Meanwhile, the ratio of agricultural output to GDP slightly increased to 1.82%.

(1) Continued Shrinkage in Agricultural Output

During 2016, agricultural production, covering agriculture, forestry, fishing and animal husbandry industries, continued to contract owing to adverse weather conditions. Agricultural output shrank by 6.91%, up from an 8.26% decrease in the previous year.

(2) Moderate Expansion in the Industrial Sector

The industrial sector, consisting of the industries of mining and quarrying, manufacturing, construction, and electricity, gas, and water, increased by 2.04% for the year, higher than in



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2017.

the previous year. The growth in industrial output benefited from rising global demand for electronics products amid the improving global economy in the second half of the year.

Manufacturing production in 2016 went up by 2.28%, mainly led by the information and electronics industry, which showed a moderate growth of 4.26% in the production index during the year. The gain in the information and electronics industry was mostly attributed to a boom in semiconductor-related exports in the second half of the year, driven by soaring demand for new mobile devices. The production index of the chemical industry inched up 0.90%, supported by the rebound in oil prices. The index of food, textile, and other industries also rose by 0.77% because of a stable increase in the production of food. However, output growth in metal and machinery edged down to 0.60%, primarily hit by weaker global demand and inventory adjustment.

Output of mining and quarrying also dropped significantly by 9.74% for the year, on account of the decline in the production volume of marble, sand, and gravel. Affected by the softening real estate market, output growth in the construction industry slipped by 2.84%.

(3) Mild Growth in the Services Sector

In 2016, services output increased mildly and recorded a growth of 1.33%, slightly higher than

Gross Domestic Product by Type of Activity

Unit: %

	2016			2015		
	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*	Share	Real Growth Rate	Contribution to Real Growth Rate of GDP*
Agriculture	1.82	-6.91	-0.12	1.70	-8.26	-0.15
Industry	35.04	2.04	0.73	35.13	-1.05	-0.35
Mining and Quarrying	0.08	-9.74	-0.01	0.10	-6.58	-0.01
Manufacturing	30.16	2.28	0.68	30.05	-0.85	-0.26
Construction	2.38	-2.84	-0.07	2.52	-0.88	-0.02
Electricity and Gas Supply	1.76	5.45	0.12	1.85	-5.45	-0.06
Water Supply and Remediation Services	0.65	1.98	0.01	0.61	-0.03	0.00
Services	63.15	1.33	0.83	63.17	1.14	0.71
Wholesale and Retail Trade	16.19	0.63	0.10	16.37	0.27	0.04
Transport and Storage	3.03	3.68	0.11	3.06	-0.26	-0.01
Information and Communications	2.84	3.07	0.09	2.92	4.71	0.14
Finance and Insurance	6.60	2.37	0.16	6.56	3.78	0.25
Real Estate and Ownership of Dwellings	8.20	1.35	0.11	8.16	2.08	0.17
Public Administration and Defense; Compulsory Social Security	6.36	0.20	0.01	6.41	0.05	0.00
Other Services	19.92	0.10	0.25	19.70	0.62	0.12
Gross Domestic Product	100.00	1.50	1.50	100.00	0.72	0.72

Note: * Percentage point.

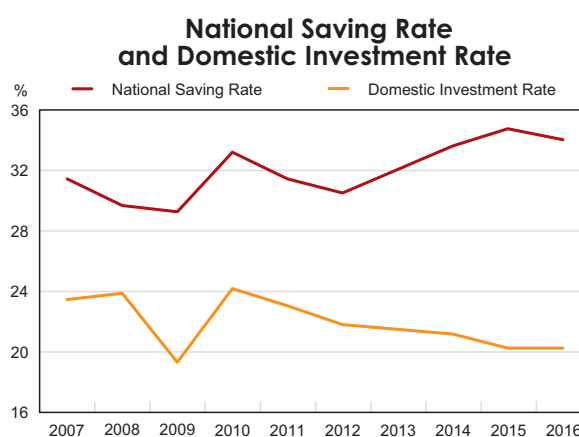
Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2017.

the growth rate of 1.14% of the previous year. The mild growth in services output for the year was consistent with slower private consumption growth. The subsectors of transport and storage services, wholesale and retail trade services, and public administration and defense services recorded higher growth rates compared with those of the previous year.

Owing to increased demand for public transportation, transport and storage services registered the largest growth of 3.68% among the services subsectors in 2016. Information and communications services also posted an increase of 3.07%, largely attributable to a rising number of internet users over the year. Finance and insurance services continued to grow along with increased fee income and life insurance premium income, yet posted a moderate growth of 2.37% for the year. Real estate and ownership of dwellings services expanded by 1.35%, reflecting the lackluster housing market. Wholesale and retail trade services edged up by 0.63% on account of a slowdown in trade-related export demand and slack domestic demand.

Slight Decline in National Saving Rate

As government consumption growth turned positive, national consumption (including both private consumption and government consumption expenditures) grew at a moderate rate of 3.26% in nominal terms for the year, higher than the GNI growth rate of 2.30%. As a consequence, the national saving rate (the ratio of national saving to GNI measured at current prices) declined from 34.70% in 2015 to 34.04% in 2016. The excess saving ratio, defined as the excess of national saving over gross domestic investment to GNI, slid from 14.44% in 2015 to 13.82% in 2016, reflecting a greater increase in domestic investment than that in national saving.



Source: *Statistical Abstract of National Income*, DGBAS, Executive Yuan, February 2017.

3. Balance of Payments

In order to be consistent with international statistical standards and practice, the CBC has adopted the sixth edition of the IMF's Balance of Payments and International Investment Position Manual (BPM6) since the first quarter of 2016.

In 2016, Taiwan's current account registered a smaller surplus of US\$70,938 million, which

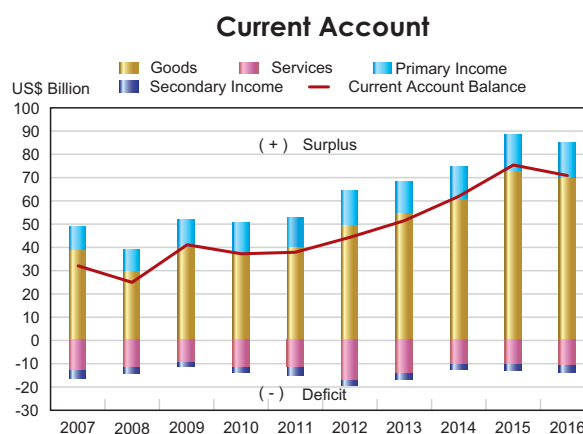
Balance of Payments

Unit: US\$ Million

	(1) 2016	(2) 2015	(1)-(2)
A. Current Account	70,938	75,180	-4,242
Goods: credit (exports)	312,303	336,899	-24,596
Goods: debit (imports)	242,893	264,064	-21,171
Balance on Goods	69,410	72,835	-3,425
Services: credit (exports)	41,443	41,127	316
Services: debit (imports)	52,407	51,259	1,148
Balance on Services	-10,964	-10,132	-832
Primary income: credit	29,459	28,886	573
Primary income: debit	13,810	13,032	778
Balance on primary income	15,649	15,854	-205
Secondary Income: credit	6,944	6,618	326
Secondary Income: debit	10,101	9,995	106
Balance on secondary income	-3,157	-3,377	220
B. Capital Account	-9	-5	-4
C. Financial Account	65,037	66,116	-1,079
Direct investment: assets	17,843	14,709	3,134
Equity and investment fund shares	16,810	13,649	3,161
Debt instruments	1,033	1,060	-27
Direct investment: liabilities	8,333	2,413	5,920
Equity and investment fund shares	7,311	2,478	4,833
Debt instruments	1,022	-65	1,087
Portfolio investment: assets	81,062	56,341	24,721
Equity and investment fund shares	6,547	6,930	-383
Debt securities	74,515	49,411	25,104
Portfolio investment: liabilities	2,643	-858	3,501
Equity and investment fund shares	5,325	1,658	3,667
Debt securities	-2,682	-2,516	-166
Financial derivatives: assets	-11,153	-11,227	74
Financial derivatives: liabilities	-8,925	-12,411	3,486
Other investment: assets	-3,094	-16,498	13,404
Other investment: liabilities	17,570	-11,935	29,505
D. Net Errors and Omissions	4,771	5,952	-1,181
E. Reserves and Related Items*	10,663	15,011	-4,348

Note: * Excluding valuation changes in exchange rates.
Source: *Balance of Payments*, CBC, February 2017.

accounted for 13.4% of nominal GDP, down from 14.3% the previous year as a result of narrower surpluses on the goods and primary income accounts and a wider deficit on trade in services. The financial account posted a net asset increase of US\$65,037 million mainly owing to greater investment in debt securities abroad by residents. The overall balance of payments recorded a surplus of US\$10,663 million, which was reflected in the increase in foreign reserve assets held by the CBC.



Source: Balance of Payments, CBC, February 2017.

Narrower Current Account Surplus

The current account consists of four major items, namely goods, services, primary income, and secondary income.

(1) Goods

A persistently stagnant world economy dragged down Taiwan's external merchandise trade in 2016 despite stronger global demand for semiconductors and rising prices of raw materials in the second half of the year. The value of exports, on a BOP basis, declined 7.3% to US\$312,303 million, and the value of imports decreased 8.0% to US\$242,893 million. As a result of a larger reduction in the value of exports over that of imports, the goods surplus narrowed to US\$69,410 million.

In addition, according to customs statistics, the value of exports declined 1.7% to US\$280,394 million on a free on board (FOB) basis, and the value of imports decreased 2.7% to US\$230,888 million on a cost, insurance, and freight (CIF) basis, respectively.

The top three export partners of Taiwan in 2016 were Mainland China including Hong Kong (hereafter in this chapter referred to as Mainland China), the US, and Japan, accounting for a combined share of 59.0% of total exports. The top three import partners were Mainland China, Japan, and the US, with a combined share of 49.6%.

In terms of Taiwan's trade with Mainland China, the value of exports amounted to US\$112,300 million in 2016, 0.2% lower than the previous year. China's economic slowdown, supply chain localization, and overcapacity limited growth in Taiwan's exports to Mainland China. Among major export products to Mainland China, optical instruments and apparatus posted slower growth, whereas electronic parts and components, and information, communication and audio-video products increased by 16.4% and 0.7% respectively. The share of exports to Mainland China rose to

40.1%, and Mainland China remained Taiwan's largest export market.

Imports from Mainland China dropped 3.0% to US\$45,329 million. With a share of 19.6%, Mainland China continued to be Taiwan's largest import partner. The trade surplus with Mainland China increased by 1.8% to US\$66,971 million in 2016. Furthermore, Mainland China remained the largest source of Taiwan's trade surplus.

Exports to the Association of Southeast Asian Nations (ASEAN), including Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, decreased by 0.6% to US\$51,317 million in 2016. The combined share of exports to ASEAN climbed to 18.3%. Imports from these countries decreased 6.4% to US\$27,192 million, with a share of 11.8% in total imports. In sum, the trade surplus with ASEAN increased from US\$22,601 million in 2015 to US\$24,125 million, with Singapore, Vietnam, and the Philippines being the second, third, and fourth largest sources of Taiwan's trade surplus, respectively.

Despite a stable growth trend in the US economy, Taiwan's exports to the US still declined 2.9% to US\$33,525 million, thus comprising a lower share of 12.0% in total exports. The top three types of products exported to the US were information, communication and audio-video products, base metals and articles of base metal, and machinery. Among these, only information, communication and audio-video product exports increased. Imports from the US decreased by 2.0% to US\$28,603 million, yet its share in total imports grew to 12.4%. The trade surplus with the US, Taiwan's fifth largest

Direction of Trade in Goods by Country

Unit: %

	2016			2015		
	Amount (US\$ Million)	Share	Annual Change	Amount (US\$ Million)	Share	Annual Change
Exports						
Mainland China (including Hong Kong)	112,300	40.1	-0.2	112,540	39.4	-12.4
ASEAN	51,317	18.3	-0.6	51,639	18.1	-14.2
U.S.	33,525	12.0	-2.9	34,543	12.1	-1.6
Europe	26,236	9.4	1.0	25,964	9.1	-10.8
Japan	19,554	7.0	-0.2	19,592	6.9	-2.7
Rest of the World	37,461	13.4	-8.8	41,066	14.4	-12.6
Total	280,394	100.0	-1.7	285,344	100.0	-10.9
Imports						
Mainland China (including Hong Kong)	45,329	19.6	-3.0	46,734	19.7	-8.3
Japan	40,648	17.6	4.6	38,865	16.4	-7.4
U.S.	28,603	12.4	-2.0	29,196	12.3	-2.8
ASEAN	29,045	12.6	1.9	28,499	12.0	-11.1
Europe	27,192	11.8	-6.4	29,039	12.2	-16.4
Rest of the World	60,071	26.0	-7.4	64,887	27.4	-29.5
Total	230,888	100.0	-2.7	237,219	100.0	-15.8

Note: * Including Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.
Source: *Monthly Statistics of Exports and Imports*, Ministry of Finance, R.O.C. (Taiwan), February 2017.

surplus source, shrank to US\$4,922 million.

Exports to Japan decreased by 0.2% to US\$19,554 million, yet the share of exports to Japan went up to 7.0%. The primary export product to Japan is electronic parts and components, which grew for the fifth consecutive year with a year-on-year increase of 1.3%. Imports from Japan increased by 4.6% to US\$40,648 million, with the share rising to 17.6% in total imports. Japan remained Taiwan's second largest source of imports in 2016. In sum, the trade deficit with Japan widened to US\$21,093 million.

Because of a low base the previous year, exports to Europe increased by 1.0% to US\$26,236 million, and their share in total exports grew to 9.4%. Imports from Europe increased by 1.9% to US\$29,045 million, making up a greater share of 12.6% in total imports. The trade deficit with Europe widened to US\$2,809 million.

(2) Services

The adoption of BPM6 led Taiwan's services account to run deficits instead of surplus as under previous manuals, because merchanting is reclassified from services to goods. In 2016, services receipts slightly increased by US\$316 million to US\$41,443 million. Services payments increased by US\$1,148 million to US\$52,407 million. In all, the services deficit widened to US\$10,964 million.

Of the various components of the services account, manufacturing services on physical inputs owned by others, reflected by the receipts of a resident providing a nonresident with the services of processing, assembly, labeling, or packing on goods owned by the nonresident, increased by US\$415 million to US\$2,035 million in 2016. On the debit side, payments for manufacturing services, namely a resident's payments to a nonresident for providing these services for the resident who is also the owner of the goods concerned, decreased by US\$937 million to US\$3,452 million.

In terms of maintenance and repair services n.i.e. (not included elsewhere), which covers maintenance and repair work for or by nonresidents on ships, aircraft, and other transport equipment, the receipts increased by US\$438 million to US\$832 million, while the payments increased by US\$70 million to US\$860 million.

Transport receipts shrank by US\$1,029 million to US\$8,899 million, reflecting decreases in international freight fares and passenger fares received by domestic carriers. Transport payments increased by US\$829 million to US\$10,793 million, resulting from growth in domestic passengers' payments to foreign airlines. Overall, net transport payments substantially increased by US\$1,858 million to US\$1,894 million in the year, with the balance on international passenger fares turning into a deficit after running a continuous surplus since 2009.

Even though tourists from China decreased, the number of inbound visitors reached a record high this year. However, owing to diminishing average daily expenditures per inbound visitor and shortened average length of stay, travel receipts decreased by US\$1,004 million to US\$13,383 million. Meanwhile, travel payments increased by US\$1,071 million to its highest ever level of US\$16,574 million. This was mainly due to a 10.7% increase in the number of outbound travelers. In sum, the deficit on the travel account expanded over a year before to US\$3,191 million, the largest deficit since Taiwan opened up to Mainland Chinese tour groups in 2008.

Other services receipts increased by US\$1,496 million to US\$16,294 million, mainly attributable to an increase in receipts of construction and of professional and management consulting services (which is under other business services). Other services payments increased by US\$115 million to US\$20,728 million on account of increases in expenditures on construction and financial services. In all, the deficit in other services shrank to US\$4,434 million in 2016.

(3) Primary Income

Primary income consists of compensation of employees, investment income, and other primary income. In 2016, primary income receipts increased by US\$573 million to US\$29,459 million, mainly caused by an increase in interest earnings generated by residents' foreign portfolio investment. Meanwhile, primary income payments amounted to US\$13,810 million, US\$778 million more than the previous year, mostly attributable to an increase in dividends from equity securities paid to non-residents. Consequently, the surplus on the primary income account narrowed to US\$15,649 million for the year of 2016.

(4) Secondary Income

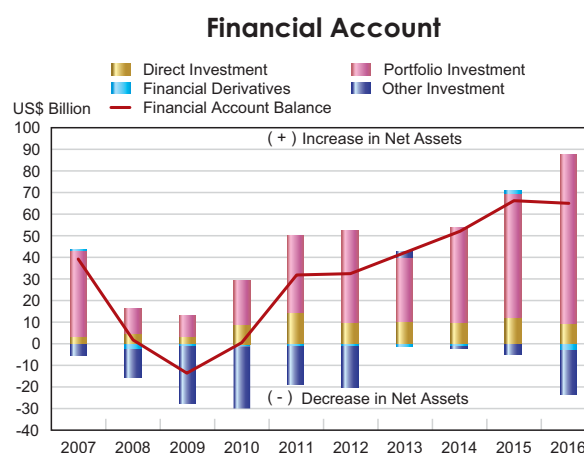
For the year of 2016, secondary income receipts and payments amounted to US\$6,944 million and US\$10,101 million, respectively. As a whole, the deficit in secondary income narrowed to US\$3,157 million in 2016, mainly owing to a decrease in outward donation remittances.

Higher Capital Account Deficit

The capital account includes capital transfers and the acquisition and disposal of non-produced, non-financial assets. In 2016, the capital account deficit went up by US\$4 million to US\$9 million.

Net Asset Increase in Financial Account

The financial account showed an increase



Source: *Balance of Payments*, CBC.

of US\$65,037 million in net assets. In terms of sub-categories, direct investment and portfolio investment exhibited increases of US\$9,510 million and US\$78,419 million in net assets, respectively. Financial derivatives and other investment exhibited decreases of US\$2,228 million and US\$20,664 million in net assets, respectively.

(1) Direct Investment

Direct investment abroad by residents exhibited an increase of US\$17,843 million in assets, and direct investment in Taiwan by non-residents showed an increase of US\$8,333 million in liability, both of which registered record highs in 2016. This was primarily attributable to cross-border mergers and acquisitions, as well as large share swap transactions conducted by both sides.

Based on approved cases, residents' direct investment in China and in other areas reported US\$9,184 million and US\$12,123 million, respectively, suggesting that China remained the major recipient of Taiwan's direct investment abroad. The main investment target sectors included electronic parts and components manufacturing, finance and insurance, computers, and electronic and optical products manufacturing.

The main target sector for inbound investments by non-residents included electronic parts and components manufacturing, machinery and equipment manufacturing, and finance and insurance.

Overall, direct investment reported an increase of US\$9,510 million in net assets in 2016.

(2) Portfolio Investment

In 2016, portfolio investment abroad by residents increased by US\$81,062 million. Of the components, equity and investment fund shares increased by US\$6,547 million, and debt securities increased by US\$74,515 million.

The substantial increase in debt securities was because insurance companies expanded their investment in debt securities (including Formosa bonds) abroad issued by non-residents throughout the year. Their motivation was that insurance companies' holdings of foreign currency denominated international bonds were allowed to be excluded from the amount subject to the overseas investment ceiling.

On the other hand, local portfolio investment by non-residents increased by US\$2,643 million. Of the components, equity and investment fund shares increased by US\$5,325 million, as foreign investors increased holdings of Taiwanese stocks; debt securities decreased by US\$2,682 million, mainly because foreign investors reduced holdings of domestic bank debentures and corporate bonds.

Overall, portfolio investment showed an increase of US\$78,419 million in net assets in 2016.

(3) Financial Derivatives

Assets in financial derivatives decreased by US\$11,153 million, principally because of gains on transactions of financial derivatives received by banks and other financial corporations.

Liabilities in financial derivatives decreased by US\$8,925 million, mainly because of losses on transactions of financial derivatives paid by banks and other financial corporations.

(4) Other Investment

In 2016, other investment abroad by residents decreased by US\$3,094 million. Of the components, currency and deposits decreased by US\$4,801 million as the private sector withdrew overseas deposits; loans increased by US\$5,794 million because banks' short-term lending to non-residents mounted; trade credit increased by US\$26 million; other accounts receivable decreased by US\$4,122 million, owing to diminished accounts receivable from non-residents.

Moreover, other inward investment by non-residents increased by US\$17,570 million. Of the components, currency and deposits increased by US\$9,954 million, because of growing deposits from non-residents and overseas branches; loans increased by US\$9,306 million, owing to expanded short-term external borrowing by banks; trade credit increased by US\$120 million; other accounts payable decreased by US\$1,810 million, owing to falling accounts payable to non-residents.

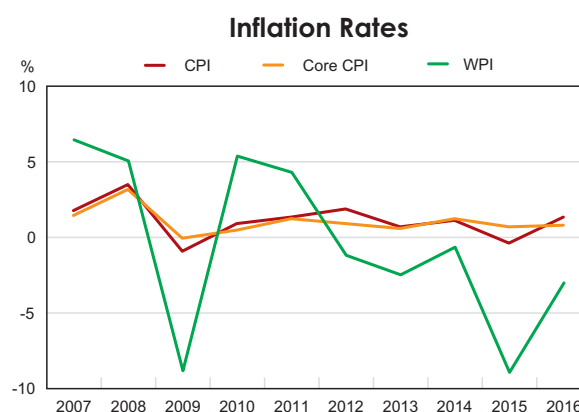
As a consequence, other investment showed a decrease of US\$20,664 million in net assets in 2016.

Increase in Foreign Exchange Reserves

The foreign exchange reserve assets held by the CBC increased by US\$10,663 million as the current account surplus surpassed the net assets increase in the financial account.

4. Prices

Taiwan's wholesale price index (WPI) fell by 2.99% in 2016, yet the pace of decline lessened remarkably compared with a decrease of 8.84% in 2015. The drop in WPI inflation was largely attributable to low international primary commodity prices owing to a moderate recovery in the global economy. Headline inflation, measured by the consumer price index (CPI), increased by 1.40% from the previous year's 0.31% decrease, mainly driven by a rise in food prices, though it was partly offset by reductions in energy prices. The core CPI, which excludes fruits, vegetables, and energy, rose mildly by 0.84%, slightly higher than the 0.79% increase a year before.



Source: Price Statistics Monthly, DGBAS, Executive Yuan.

Moderate Decline in Wholesale Prices

After the WPI experienced the largest decrease of 8.84% in 2015, the decline in the WPI narrowed to 2.99% in 2016. The deceleration mainly reflected low prices for international primary materials stemming from weak global demand. In terms of monthly movements, the pace of the decrease in the annual WPI inflation rate gradually abated in the first eleven months of the year. In December, however, the annual WPI inflation rate reversed to a 1.79% increase on account of the rebound in global oil prices.

Broken down by the three major components of the WPI, the annual rates of change in prices for imports, exports, and domestic sales excluding imports all decreased moderately in 2016, as international raw material prices remained at relatively low levels.

Import prices, weighted at 33.41% of the WPI, decreased by 4.68% in US dollar terms in 2016, mainly led by falling prices of imported raw materials, such as crude petroleum, liquefied natural gas, coal, integrated circuits, and cell phones and parts thereof. As the NT dollar depreciated against the US dollar over 2016, the annual change in import prices lessened to a 3.08% decrease in NT dollar terms. Among the components of import prices in terms of NT dollars, prices of raw materials and consumer goods declined by 4.62% and 0.09% and accounted for 3.47 percentage points and 0.01 percentage points in the import price decrease, respectively. In contrast, prices of capital goods rose by 2.91%, contributing 0.42 percentage points to the increase in import prices.

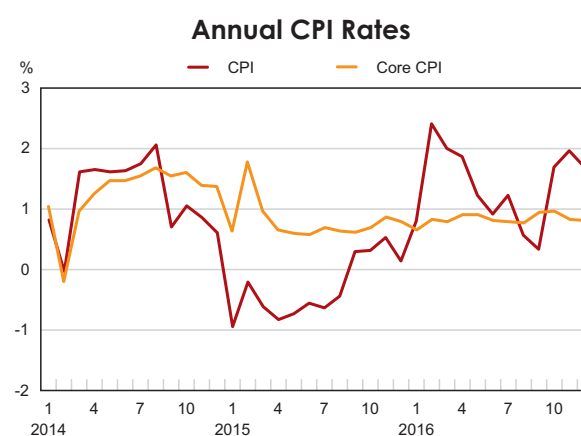
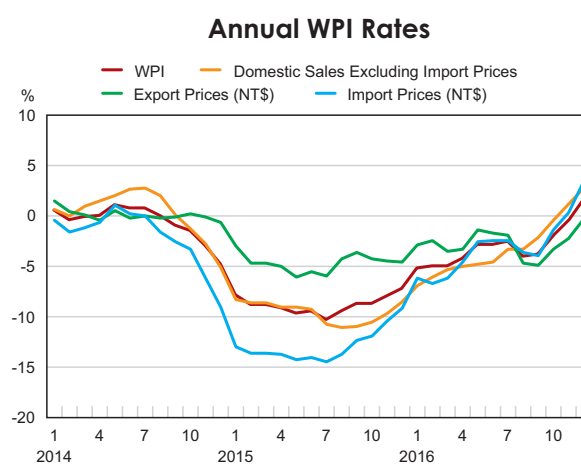
Export prices, weighted at 36.79% of the WPI, declined by 4.32% in US dollar terms in 2016. Owing to the depreciation of the NT dollar against the US dollar, export prices fell by 2.71% in terms of the NT dollar. Among the basic groups in NT dollar terms, prices of mineral products accounted for the largest decrease at 17.92%, primarily resulting from the declines in the prices of gasoline, diesel, and fuel oil. In addition, prices of primary metal products decreased by 4.52% on account of falling prices of iron and steel. On the contrary, prices of animal products rose by 7.47% in 2016, mainly attributable to a lower supply of fish.

Prices of domestic sales excluding imports, weighted at 29.8% of the WPI, fell by 3.23% in 2016, reflecting declining import costs of primary commodities. In terms of the basic groups, prices of water supply, electricity and gas registered the largest decline at 11.86%, largely attributable to a reduction in electricity prices effective in April based on the new electricity pricing adjustment mechanism, together with falling gas prices. Prices of quarrying and mineral products and manufacturing products dropped by 5.15% and 3.25%, respectively. On the other hand, prices of agriculture, forestry and livestock products rose by 9.00%, driven by rising prices of vegetables and fruits stemming from the shortage of supply caused by cold weather and typhoons.

Modest Increase in Consumer Prices

Compared with a slight decrease of 0.31% in the previous year, the CPI rose by 1.40% in 2016. Owing to rising prices of vegetables and fruits affected by weather-related disruptions, the annual rate of change in the CPI in the first quarter climbed to 1.75%. From April onwards, the pace of monthly CPI inflation rates slackened and slowed to an all-year low of 0.33% in September. Afterwards, it went up to 1.97% in November, as prices of vegetables and fruits soared following typhoons and heavy rainfall. At the end of the year, the CPI edged down to 1.69%.

The core CPI inflation rate averaged 0.84% in 2016. Reflecting the slow pace of the recovery in the domestic economy, monthly core CPI inflation rates remained moderate between 0.65% to 0.96%.



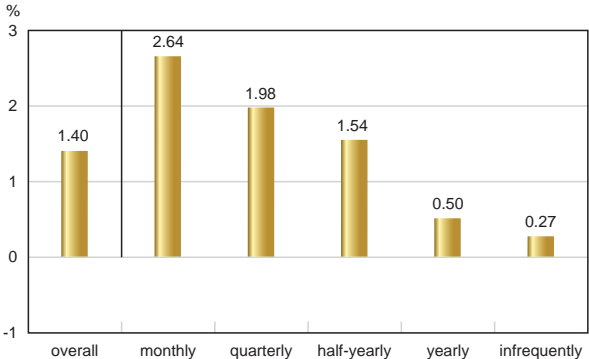
With respect to frequency of purchase, CPI items can be categorized into five groups (monthly, quarterly, half-yearly, yearly and infrequently). Among these five groups, prices for the most frequently purchased goods and services increased at an annual rate of 2.64%, higher than the overall CPI inflation of 1.40%. Soaring food prices, registering a growth rate of 5.24%, constituted the main cause of the uptrend and thus had a far larger impact on consumers' perceptions of price rises.

In terms of CPI movements for households in three disposable income groups, CPI and food prices for the lowest income group both advanced at a higher rate than those of general households as the lowest income group spent a greater share of income on food.

The main factors contributing to the rise of CPI inflation in 2016 were as follows:

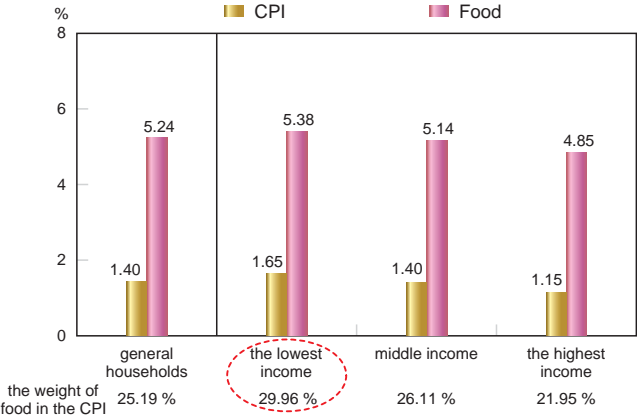
- (1) Owing to crop damage caused by severe coldness and typhoons, prices of vegetables and fruits moved up by 22.46% and 18.81%, and accounted for 0.60 percentage points and 0.47 percentage points in CPI inflation, respectively.
- (2) Despite the declines in oil, electricity and gas costs, higher raw food prices such as vegetables, fish & seafood, and pork & chicken, together with a rise in wages, pushed up the prices of food away from home by 1.48%, contributing 0.16 percentage points to CPI inflation.
- (3) Prices of residential rent continued a mild uptrend and went up by 0.82%, contributing 0.15 percentage points to CPI inflation.
- (4) With the supply of global fisheries constrained by climate change, along with increasing demand from developing countries, prices of fish and shellfish increased at an annual rate of 4.71% in 2016, accounting for 0.08 percentage points in CPI inflation.

Annual CPI Rates by Frequency of Purchase in 2016



Source: Price Statistics Monthly, DGBAS, Executive Yuan.

Annual CPI Rates for Households in Different Disposable Income Groups in 2016

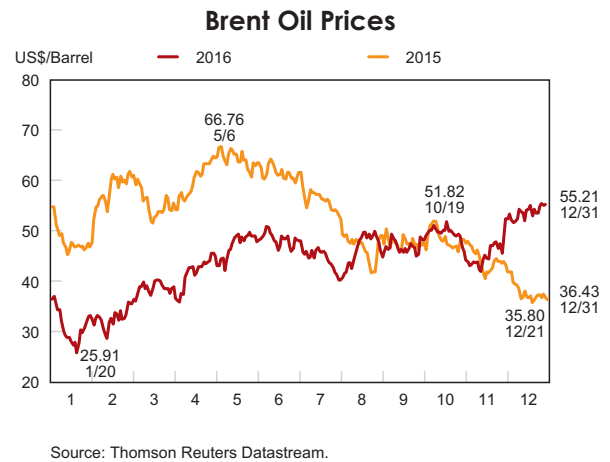


Note: The lowest, middle and the highest household income groups refer to households in the lowest 20 percent, the middle 60 percent, and the highest 20 percent classified by disposable income levels.

Source: Price Statistics Monthly, DGBAS, Executive Yuan.

The main factors contributing to downward pressure on the CPI in 2016 were as follows:

- (1) Following the shrinkage in crude oil production in the US, some temporary supply disruptions in oil-producing countries, such as Canada and Nigeria, and the production cuts agreed by OPEC members and several other major producers in November, international petroleum prices rebounded from a yearly low recorded in early 2016 and showed an upward trend to the year end. However, average Brent oil prices still fell by 16.44% compared with 2015. Reflecting lower imported costs for petroleum and natural gas, prices for domestic oil and gas dropped by 5.88% and 15.47% and accounted for 0.16 and 0.13 percentage points in the CPI decrease, respectively.
- (2) Affected by a reduction in electricity prices in April, electricity prices went down by 6.11%, subtracting 0.13 percentage points from CPI inflation.



Percentage Changes in the Major Components of the CPI in 2016

Item	Annual Rate of Change (%)	Contribution to CPI Inflation Rate (Percentage Point)
CPI	1.40	1.40
Food	5.24	1.44
Vegetables	22.46	0.60
Fruits	18.81	0.47
Food away from Home	1.48	0.16
Fish & Shellfish	4.71	0.08
Residential Rent	0.82	0.15
Total		1.59
Fuels & Lubricants	-5.88	-0.16
Gas	-15.47	-0.13
Electricity	-6.11	-0.13
Total		-0.42
Others		0.23

Source: Price Statistics Monthly, DGBAS, Executive Yuan.

5. Public Finance of the Central Government

For the year 2016, central government revenue slightly increased by 0.5%, whereas central government expenditure expanded by 2.4%, causing the overall central government deficit to increase to NT\$45.0 billion from NT\$10.1 billion in 2015.

Mild Growth in Central Government Revenue

In 2016, central government revenue grew by NT\$9.9 billion or 0.5% to NT\$1,895.6 billion. Of its various components, tax revenue remained the major source, with a share of 80.9% of the total revenue, exhibiting growth of NT\$68.7 billion or 4.7% from the previous year and registering a record-high level. The increase was mainly attributable to adjustments in tax schemes and the deferred effect of income tax.

Surpluses of public enterprises and public utilities, accounting for 12.2% of the total revenue, slightly decreased by NT\$6.0 billion or 2.5% in 2016. Fees, fines and indemnities fell significantly by NT\$35.1 billion or 29.2%, primarily owing to the effect of a higher base in revenue from the second auction of 4G mobile-phone service licenses in the previous year.

Total Revenue and Expenditure of the Central Government

Unit: NT\$ Billion

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Total Revenue	1,635.5	1,640.9	1,553.7	1,497.3	1,671.3	1,668.3	1,730.5	1,726.4	1,885.7	1,895.6
(Ratio to GDP : %)	12.2	12.5	12.0	10.6	11.7	11.4	11.4	10.7	11.3	11.1
Total Expenditure	1,552.0	1,617.7	1,714.8	1,654.4	1,734.4	1,882.4	1,855.9	1,853.5	1,895.8	1,940.6
(Ratio to GDP : %)	11.6	12.3	13.2	11.7	12.1	12.8	12.2	11.5	11.3	11.3
Surplus/Deficit	83.5	23.2	-161.1	-157.1	-63.1	-214.1	-125.4	-127.1	-10.1	-45.0
(Ratio to GDP : %)	0.6	0.2	-1.2	-1.1	-0.4	-1.4	-0.8	-0.8	0.0	-0.2
Debt Repayment	6.0	65.0	65.0	66.0	66.0	94.0	77.0	64.0	66.0	73.0
Financing:	0.0	41.8	226.1	224.2	129.1	308.1	202.4	191.1	76.1	118.0
Debt Financing	0.0	0.0	164.5	224.2	129.1	288.1	202.4	191.1	76.1	118.0
Surplus of Previous Fiscal Years	0.0	41.8	61.6	0.0	0.0	20.0	0.0	0.0	0.0	0.0
Tax Dependency Ratio (%)**	77.9	76.8	61.3	65.4	69.4	64.9	65.6	72.5	77.3	79.0
Debt Dependency Ratio (%)***	0.0	0.0	9.6	13.6	7.4	15.3	10.9	10.3	4.0	6.1

Notes: * The figures for 2015 and the previous years are final audit accounts; the figures for 2016 are final accounts.

** Tax dependency ratio is defined as the ratio of annual tax revenue to total expenditure.

***Debt dependency ratio is defined as the ratio of annual revenues from government bonds and borrowing from banks to total government expenditure.

Sources: 1. Department of Statistics, MOF.

2. DGBAS, Executive Yuan.

Modest Increase in Central Government Expenditure

Central government expenditure rose by NT\$44.8 billion or 2.4% to NT\$1,940.6 billion in 2016. Of total expenditure, social welfare and education, science & culture remained the largest two categories, accounting for 23.7% and 19.7%, respectively, followed by national defense and economic development with respective shares of 15.9% and 13.7%.

Social welfare expenditure expanded by NT\$20.7 billion or 4.7%, mainly because the government set aside expenditures to address the shortfalls of mandatory outlays for the national health insurance program and the national pension fund. Meanwhile, expenditure on economic development increased by NT\$8.1 billion or 3.1%, mostly related to the disbursements of more capital to the Export-Import Bank and of more funds to transportation infrastructure projects. Furthermore, expenditure on general administration grew by NT\$2.6 billion or 1.5%, principally resulting from the purchases of land lots for New Taipei Judiciary Park and increased expenses for alternative military service.

Total Revenue and Expenditure of the Central Government by Category

Unit: NT\$ Billion

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Total Revenue	1,635.5	1,640.9	1,553.7	1,497.3	1,671.3	1,668.3	1,730.5	1,726.4	1,885.7	1,895.6
Taxes	1,208.7	1,243.0	1,051.5	1,082.3	1,203.5	1,222.1	1,218.0	1,343.4	1,465.1	1,533.8
Surpluses of Public Enterprises and Public Utilities	271.5	253.4	318.8	264.8	264.7	262.5	251.0	241.0	238.0	232.0
Fees, Fines and Indemnities	81.1	83.1	78.1	81.6	81.0	108.2	197.3	83.7	120.3	85.2
Proceeds from Sales of Properties and Recalled Capital	51.3	40.0	53.7	46.7	64.0	60.1	52.3	43.7	49.3	26.6
Others	22.9	21.4	51.6	21.9	58.1	15.4	11.9	14.6	13.0	18.0
Total Expenditure	1,552.0	1,617.7	1,714.8	1,654.4	1,734.4	1,882.4	1,855.9	1,853.5	1,895.8	1,940.6
General Administration	168.2	170.8	168.8	170.2	176.4	176.2	172.7	174.2	177.1	179.7
National Defense	256.7	282.4	291.2	276.8	284.2	303.4	289.0	291.4	305.4	309.3
Education, Science & Culture	308.7	310.3	326.4	342.7	356.2	358.9	355.7	364.5	379.4	382.7
Economic Development	193.3	203.6	244.4	194.5	217.1	263.9	258.3	269.0	258.6	266.7
Social Welfare	305.1	298.4	320.2	327.4	348.5	420.1	438.9	411.8	439.7	460.4
Community Development & Environmental Protection	19.4	13.5	21.4	9.0	6.6	15.9	15.9	16.1	15.9	17.5
Retirement & Compassionate Aid	134.6	133.8	133.4	134.5	138.5	138.3	132.8	134.6	138.4	146.8
Obligations	124.0	117.4	116.7	109.8	111.8	114.5	117.4	115.1	111.7	113.2
General Subsidies and Other Expenditure	42.0	87.5	92.3	89.5	95.1	91.2	75.2	76.8	69.6	64.3

Note: * The figures for 2015 and the previous years are final audit accounts; the figures for 2016 are final accounts.

Sources: 1. Department of Statistics, MOF.

2. DGBAS, Executive Yuan.

Widening Fiscal Deficit

The fiscal deficit, defined as expenditure minus revenue, increased to NT\$45.0 billion in 2016. This, combined with debt repayment, represented that the central government needed to finance NT\$118.0 billion for 2016.

Rising Tax Dependency and Debt Dependency

The tax dependency ratio, defined as the ratio of annual tax revenue to total central government expenditure, rose from 77.3% in 2015 to 79.0% in 2016, indicating that tax revenue grew faster than central government expenditure.

With respect to the debt dependency ratio, defined as the ratio of revenues from government bonds and borrowing to total central government expenditure, it rose from 4.0% in the previous year to 6.1% in 2016, largely reflecting the increase in demand for debt financing in line with the expansion of the fiscal deficit.

Lessening Debt-to-GDP Ratio

The total outstanding debt of the central government grew by NT\$47.9 billion to a record-high level of NT\$5,344.7 billion at the end of 2016. However, the ratio of outstanding central government debt to GDP decreased slightly from 31.6% in 2015 to 31.2% in 2016, reflecting higher output growth.

Public Debt of the Central Government

Unit: NT\$ Billion

End of Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Outstanding Debt	3,718.2	3,778.1	4,126.3	4,536.5	4,750.9	4,996.6	5,146.6	5,275.9	5,296.8	5,344.7
(Ratio to GDP : %)	27.7	28.7	31.8	32.1	33.2	34.0	33.8	32.7	31.6	31.2

Note: * The figures for 2015 and the previous years are final audit accounts; the figures for 2016 are final accounts.

Sources: 1. Department of Statistics, MOF.

2. DGBAS, Executive Yuan.

6. Labor Market

From the beginning of year 2016, as the pace of the domestic economic recovery continued to slow, the unemployment rate gradually trended upward to 4.08% in August, the highest since September 2014. After August, however, economic activity picked up. Consequently, the unemployment rate dropped after September and reached 3.79% in December. For the year as a whole, the unemployment rate averaged 3.92%, higher than the 3.78% registered in 2015.

The labor force participation rate was 58.75% in 2016, 0.10 percentage points higher than the year before. The labor participation rate for male was 67.05%, 0.14 percentage points higher than year 2015. On the other hand, the female labor participation rate increased by 0.06 percentage points over 2015 and reached a new record high at 50.80%, indicating the role of females in the labor force has gradually expanded. Moreover, while Taiwan's total labor force participation has been increasing, it is still lower than those of countries such as the United States, Japan, South Korea, and Singapore. Extension of schooling among young people and early retirement of middle-aged people are two of the main causes for the lower labor participation rate.

Annual average employment in 2016 was 11.27 million persons, an increase of 0.62% from the previous year. In terms of employment by sector, employment in the services sector grew by 0.88%, more than all the other sectors. Employment in the industrial sector increased 0.21%. Employment in the agricultural sector also increased 0.50%.

The average monthly earnings per worker of the non-farm sector (the industrial and services sectors combined) was NT\$48,790 in 2016, a 0.62% increase from 2015. However, after adjustment for inflation, average real monthly earnings decreased by 0.77%.

An increase in total production and a decrease in working hours caused labor productivity of the industrial sector and the manufacturing industry to increase by 5.42% and 5.74%, respectively. On the other hand, because the increase in total earnings was lower than that in production, unit labor costs in the industrial and services sectors decreased by 0.52% and 0.71%, respectively.

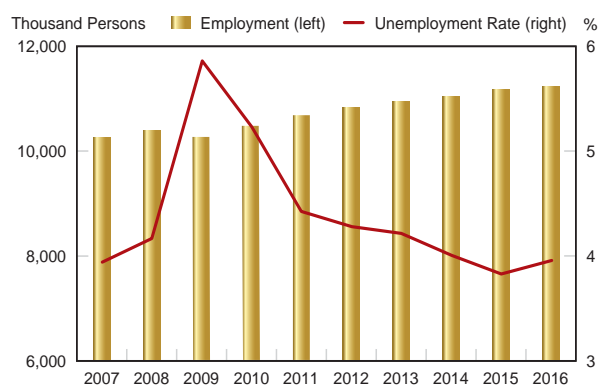
Increase in Employment Lower than Expected

Owing to a slowdown in economic growth, the increase in general employment was lower than expected. Annual average employment in 2016 was 11.27 million persons, an increase of 69 thousand persons or 0.62% from the previous year. From the beginning of the year to August, the annual growth of employment broadly trended down. After September, the annual employment growth rate turned positive as the economy expanded further.

In terms of employment by sector, the agricultural sector in 2016 hired two thousand persons more than the previous year, increasing by 0.50%. Employment in the industrial sector increased eight thousand persons or 0.21%. Within this sector, employment in manufacturing and in construction each increased by four thousand people. Employment in the services sector grew by 58 thousand persons or 0.88%. Among which, employment in accommodation and food services increased by 13 thousand, while wholesale and retail added 11 thousand jobs. Of total employment, the services sector accounted for 59.17%, up by 0.15 percentage points from a year before, while the agricultural and industrial sectors made up 4.95% and 35.88%, respectively.

In terms of employed persons by occupation, employment of white collar workers (legislators, senior officials, managers, professionals, technicians, associate professionals, and clerical support workers) increased 32 thousand persons or 0.64%. Services and sales employment increased 25 thousand persons or 1.12%. Employment of blue collar workers (skilled agricultural, forestry, fishing, and animal husbandry industries, craft and machinery related workers, etc.) increased 14 thousand persons or 0.35%. These figures indicate that professionals and technical talents were in greater demand.

Employment and Unemployment Rate



Source: DGBAS, Executive Yuan.

Unemployment Rate Slightly Increased

From the beginning of the year, a slow economic recovery led the unemployment rate to climb gradually. The unemployment rate rose to 4.08% in August 2016, the highest since September 2014. However, the unemployment rate started to decrease in October as economic growth gradually picked up. By December, the unemployment rate dropped to 3.79%. For the year as a whole, the unemployment rate was 3.92%, the second lowest since 2008.

As labor market conditions moderated, unemployment duration only slightly increased by 0.12 weeks to 25.07 weeks over the previous year. The average number of the long-term unemployed (those who were unemployed for 53 weeks or more) was 69 thousand people, the same as that in the previous year. Of the long-term unemployed, 57.60% were males, while 62.97% were in the age group between 25 and 44, and 54.31% had a college degree or above. This indicates long-term unemployment remained a serious problem for males, those aged 25-44, and those with a higher education.

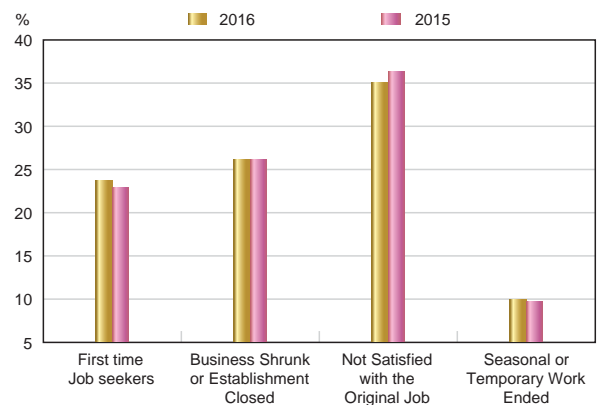
In terms of causes of unemployment, total unemployment increased by 20 thousand people or 4.44% from the year before, mainly because first-time job seekers increased by eight thousand persons or 8.25%. The ratio of such unemployment to total unemployment went up to 23.72%, compared to 22.89% the previous year. People who lost their job because business shrunk or establishment closed made up a major portion of the unemployed. This type of involuntary unemployment increased by five thousand persons or 4.49%, and its ratio to total

unemployment slightly increased to 26.30% from 26.28% the previous year. On the other hand, those unemployed who were not satisfied with their original job only increased by one thousand persons, and the ratio to total unemployment dropped to 35.21% from 36.53% the previous year.

In terms of age groups, the unemployment rate of the age group 15-24 slightly increased by 0.07 percentage points to 12.12%, the highest among the age groups. The unemployment rates of the age groups 25-44 and 45-64 were 4.08% and 2.15%, respectively, representing year-on-year declines of 0.13 and 0.16 percentage points.

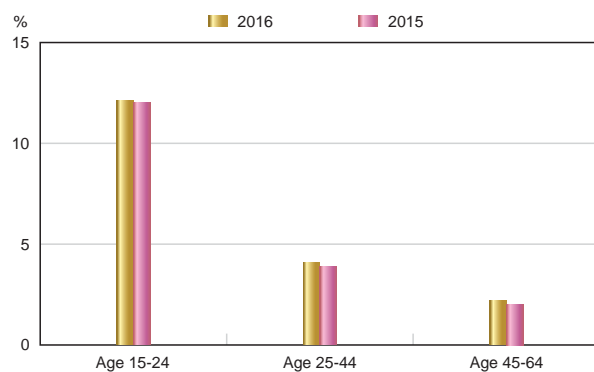
In terms of educational background, unemployment of people with a junior high school degree or below increased by five thousand persons or 9.24%, and the unemployment rate increased to 3.09%. The unemployment rate of people with a middle high school or vocational school degree rose to 3.90%, with an increase in number by three thousand persons or 1.85%. For those with a college degree or above, unemployment grew by 12 thousand persons or 4.87%, bringing the unemployment rate higher to 4.24%.

Contribution to Unemployment by Reason



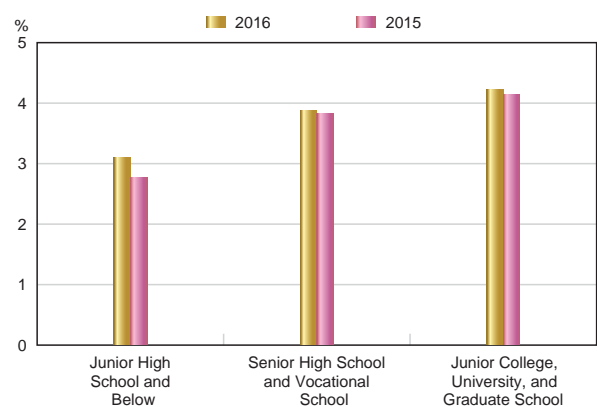
Source: DGBAS, Executive Yuan.

Unemployment Rate by Age



Source: DGBAS, Executive Yuan.

Unemployment Rate by Education



Source: DGBAS, Executive Yuan.

Labor Force Participation Rate Rose

The labor force (employed and unemployed combined) grew modestly by 89 thousand persons or 0.76% to 11.73 million in 2016.

The labor force participation rate was 58.75% in 2016, an increase of 0.10 percentage points over the year before. In terms of gender, the male labor force participation rate increased by 0.14 percentage points from the preceding year to 67.05%, while the female rate also rose to 50.80%, up by 0.06 percentage points over the previous year. Such improvement reflected government efforts to promote gender equality and to improve the work environment. In general, the female labor force has played an increasingly important role in economic development.

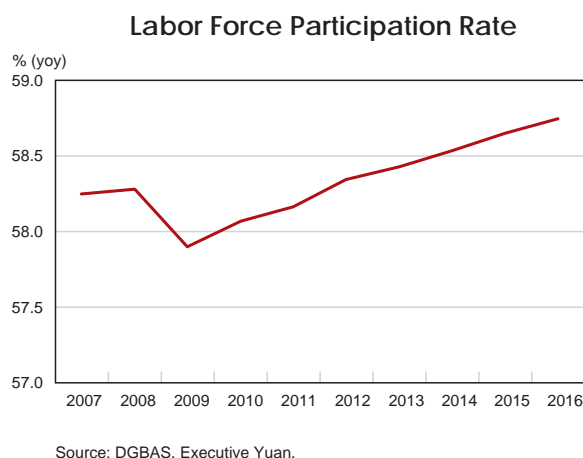
In terms of age group, the labor force participation rates of all age groups went up in 2016. The 16-24, 25-44 and 45-64 age groups saw their rates go up by 1.13, 0.42, and 0.53 percentage points to the levels of 31.37%, 87.82% and 62.42%, respectively. While Taiwan's total labor force participation has gradually increased in recent years, it is still lower than those of countries such as the United States (62.8%), Japan (60.0%), South Korea (62.8%), and Singapore (68.0%). Extension of schooling and early retirement of middle-aged people are two of the main causes for the lower labor force participation rate.

In terms of educational background, the labor force participation rate of the working population with a junior high school degree or below and middle high school or vocational school degree increased by 0.20 and 0.02 percentage points to 40.37% and 62.06%, respectively, while those of people with a college degree or above decreased by 0.50 percentage points to 67.29%.

Real Earnings of Non-farm Workers Decreased

The average monthly earnings per worker of the non-farm sector reached NT\$48,790 in 2016, a 0.62% increase from the year before. However, after adjustment for inflation, the average real monthly earnings decreased by 0.77%.

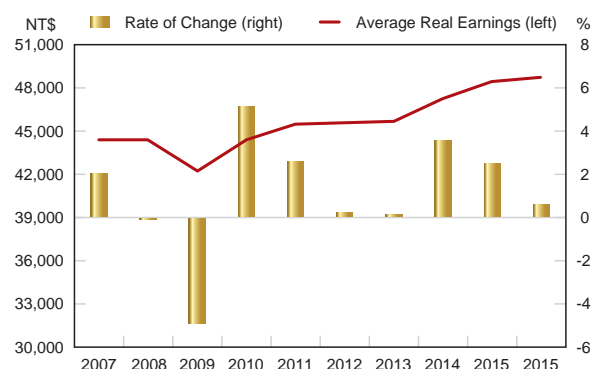
In terms of major sectors, the average monthly earnings of industrial sector workers increased by 0.64% over the previous year to NT\$47,035 but their earnings in real terms decreased by 0.75%. Meanwhile, the average monthly earnings of services sector workers increased by 0.57% to NT\$50,146 and their real earnings decreased by 0.81%. The electricity and gas supply sector still



enjoyed the highest average monthly earnings with NT\$94,292, while education services workers earned only NT\$24,873 per month, the lowest among all sectors.

In terms of growth rate, education services workers' earnings enjoyed the largest increase at 2.35%. The information and communications sector came in second with a 1.89% increase, while water supply and pollution control workers' earnings decreased by 3.03%, the largest decline among subsectors.

Average Real Earnings of Non-farm Workers

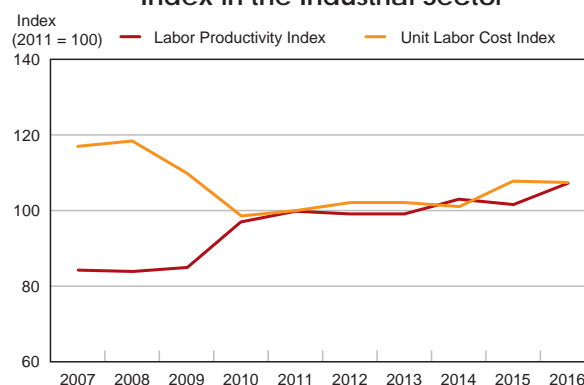


Source: DGBAS, Executive Yuan.

Labor Productivity Increased While Unit Labor Cost Decreased

As total production increased while total working hours decreased, labor productivity of the industrial sector and the manufacturing industry went up by 5.42% and 5.74%, respectively. In the manufacturing sector, wood and bamboo products manufacturing registered the highest increase in labor productivity of 10.67%, followed by a 9.86% increase for electronic parts and components manufacturing. Since the increase in total earnings was lower than that in production, unit labor costs of the industrial and manufacturing sectors decreased by 0.52% and 0.71%, respectively. Of all the manufacturing sectors, basic metal manufacturing experienced the largest decrease in unit labor costs of 5.53%, and electronic parts and components manufacturing came in second with a decrease of 3.85%.

Labor Productivity and Unit Labor Cost Index in the Industrial Sector



Source: DGBAS, Executive Yuan.