

IV. Annex

Key Issues Behind Taiwan's Economic Slowdown and Policy Suggestions

From the year 2000 onwards, the growth momentum for Taiwan's economy has gradually diminished. Although external demand has played an increasingly significant role in driving growth, it is weak domestic demand that mainly contributed to the slowdown. Moreover, since 2015, short-term cyclical factors and long-term structural issues have combined to pose a large challenge to Taiwan. Global economic deceleration (particularly in China), weak cyclical conditions facing the global technology industry, and the high concentration of Taiwan's exports on a few markets and products have all served as heavy drags on external demand. Meanwhile, sluggish growth in private consumption and investment has dampened domestic demand. This Annex looks at the key issues behind this longer-term slowdown and presents suggestions including active participation in regional economic integration, boosting investment to increase domestic demand, and promoting innovation.

1. Taiwan's Economy in the Past Three Decades: Driven by Domestic Demand from 1985 to 1999; Driven by External Demand from 2000 to 2015

In the period between 1985 and 1999, the economy grew at an average annual rate of 7.47%, with a 7.35 percentage-point contribution from domestic demand and 0.13 percentage points from external demand. Then, from 2000 to 2015, the economy grew at an average annual rate of 3.84%, with a 1.74 percentage-point contribution from domestic demand and a 2.10 percentage-point contribution from external demand.

Compared to the 1985-1999 period, the average economic growth rate in the 2000-2015 period slowed by 3.64 percentage points, and the contribution from domestic demand fell by 5.61 percentage points. The contribution from private consumption was 2.88 percentage points less, hampered mainly by stagnant wage growth, structural unemployment, an aging society, and a larger population of Taiwanese working abroad. The contribution from fixed capital formation recorded the second-largest decline of 2.02 percentage points, with investment by private enterprises, public enterprises and the government sector all posting contribution declines.

Component Contributions to Taiwan's GDP Growth

Units: % ; Percentage Points

Period	Economic Growth Rate =(1)+(2)	Domestic Demand (1)								Net External Demand (2)		
			Private Consumption	Gov. Consumption	Fixed Capital Formation				Inventory Changes		Exports	(-)Imports
						Private Sector	Government	Public Enterprises				
1985-1999 (1)	7.47	7.35	4.28	1.08	2.22	1.47	0.57	0.18	-0.23	0.13	4.49	4.36
2000-2015 (2)	3.84	1.74	1.41	0.19	0.20	0.40	-0.16	-0.05	-0.05	2.10	3.83	1.73
Change= (2)-(1)	-3.64	-5.61	-2.88	-0.89	-2.02	-1.06	-0.73	-0.23	0.18	1.98	-0.66	-2.64

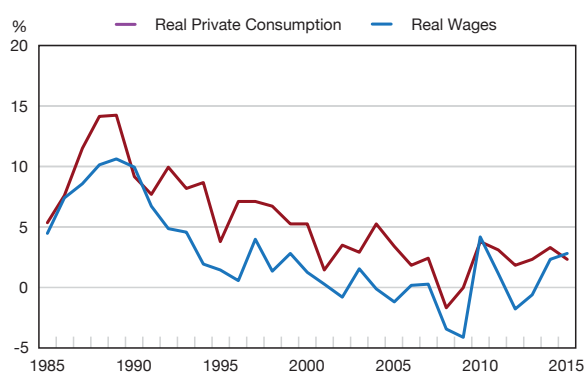
Source: DGBAS, Executive Yuan.

2. Private Spending Constrained Mainly by Wage Stagnation

In Taiwan, private consumption and wages are highly correlated. Between 1985 and 2015, the annual growth rate of real private consumption had a correlation coefficient of 0.86 with the annual growth rate of real wages. Compared with the 1985-1999 period, real private consumption posted a slower growth rate in the 2000-2015 period, a 5.87 percentage point decrease attributable mainly to a drastic slowdown in wage growth.

The nominal wage stagnation since 2000 resulted mainly from the following factors. Taiwan's products witnessed price reductions amid a price war among emerging market competitors and a low value added ratio under an OEM (original equipment manufacturer) business model. In addition, the industrial relocations driven by the trend of globalization led to lower demand for labor. Finally, employers turned less willing to hike wages because they had already increased non-wage compensation for employees in response to institutional changes by the government such as cutting legal working hours, launching the New Labor Pension System, and raising labor and health insurance costs.

Growth Rates of Taiwan's Private Consumption and Wages



Sources: DGBAS, Executive Yuan; Ministry of Labor.

Period Comparison: Taiwan's Private Consumption and Wages

Period	Unit: %	
	Real Growth Rates of Private Consumption	Real Wage Growth Rates
1985-1999 (1)	8.42	5.28
2000-2015 (2)	2.55	0.12
Change= (2)-(1)	-5.87	-5.16

Sources: DGBAS, Executive Yuan; Ministry of Labor.

3. Overall Investment Dampened by Limited Fiscal Policy Space and Investment Hurdles

The domestic investment rate was 25.52% between 1985 and 1999, but slid by 2.99 percentage points to 22.53% in the 2000-2015 period. This was mainly due to sluggish growth in investments by the government sector and public enterprises

Curbed by less wiggle room for fiscal policy, the government cut back on infrastructure investment. Except in 2009 when government budgets were increased in response to the global financial crisis,¹ growth in government investment between 2000 and 2015 mostly fell into negative territory. Growth in investment by public enterprises also turned negative, as some of them began the privatization process or saw their projects hampered by environmental protection concerns.

As for the private sector, investment growth lacked momentum as a hollowing industrial sector, investment hurdles and non-wage cost increases trimmed corporate enthusiasm for investment.

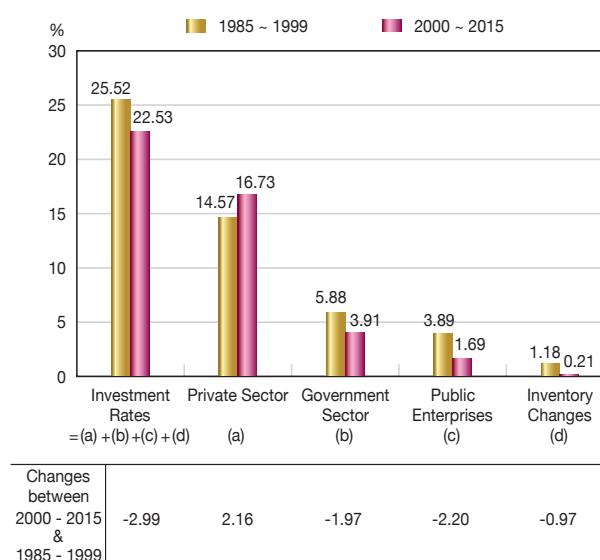
4. Economic Slowdown in 2015: Export Product/Market Concentration Amplified the Impact of Weak External Demand amid Global Downturn

Since the beginning of 2015, the drag on exports under short-term cyclical and long-term structural influences have also depressed investment growth and slashed economic growth.

The cyclical factors include weakening global demand (particularly in China) and a sluggish business cycle for the global technology industry. In terms of structural factors, first, since Taiwan has not signed many free trade agreements so far, the WTO's ITA (Information Technology

¹ The government announced a four-year (2009-2012) special budget worth NT\$500 billion, increasing public spending to stimulate the economy.

Investment Rates (by Sector)

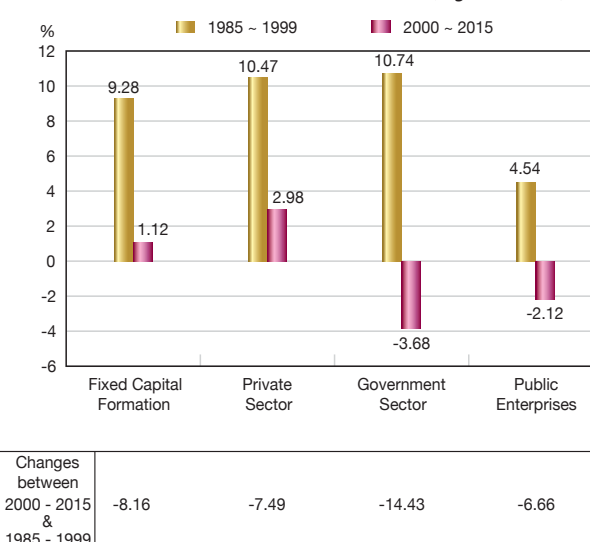


Notes: 1. Investment rates = gross domestic investments / GNI.

2. Investment rates by sector are the simple averages of annual rates.

Source: DGBAS, Executive Yuan.

Investment Growth Rates (by Sector)



Note: Investment growth rates by sector are the simple averages of annual growth rates.

Source: DGBAS, Executive Yuan.

Taiwan's Trade Dependence and Export Concentration in 2015

Exports/GDP(%)	Share of Exports to Mainland China (incl. Hong Kong) (%)	Share of Exports of Electronics and ICT Products (HS-85) (%)	Export Market Concentration	Export Product Concentration
64.5	39.4	42.1	43.3	44.9

Note: Exports are on a national income account basis and include goods and services.
Sources: DGBAS, Executive Yuan; trade figures, Ministry of Finance; CBC.

Agreement) plays a central role for Taiwan's trade, leading electronics products to make up a predominant share in total exports. As a result, Taiwan's exports are vulnerable to a global tech-industry slump. Second, China makes up a dominant share in Taiwan's exports. In recent years, China has embarked on a path towards economic rebalancing (from an investment-driven to a consumption-driven economy, with an import substitution strategy) and industrial upgrading, consequently taking a toll on Taiwan's exports and investment. Third, exports comprise a major component of Taiwan's GDP but the income elasticity of global trade declined in recent years, thus restraining Taiwan's ability to grow its exports.

5. Policy Suggestions to Stimulate Taiwan's Economy

The World Bank (2015) suggests that the appropriate policy response for emerging market economies to halt economic deceleration and stimulate growth includes a mix of countercyclical policies (e.g., fiscal expansion and monetary easing) and structural reforms (e.g., fiscal reforms, labor market reforms, product market reforms, governance reforms, etc.).²

(1) Given Taiwan's High Global Value Chains (GVC) Participation, Taking Part in Regional Economic Integration Is Essential to Boost External Demand

Taiwan is a small open economy, driven by external demand. Taiwan's participation in GVC is greater than most of G-20 economies.^{3,4} As increased regional economic integration in recent years has brought about a deeper impact on the GVC, Taiwan should strive to be part of this integration so as to secure a key role in the GVC and to diversify export products.

(2) Channeling Excess Savings into Investment to Boost Domestic Demand by Reforming Governance and Expediting Infrastructure Building

² Didier, Tatiana, Ayhan Kose, Franziska Ohnsorge and Lei Sandy Ye (2015), "Slowdown in Emerging Markets: Rough Patch or Prolonged Weakness?" *World Bank: Policy Research Note*, Dec. 8.

³ Du Qiaoxia (杜巧霞) (2015), "Wo Guo zai Quan Qiu Jia Zhi Lian de Can Yu ji Zheng Ce Yi Han (我國在全球價值鏈的參與及政策意涵) (Taiwan's GVC Participation and Policy Implications)," *Guo Ji Jing Ji Qing Shi Shuang Zhou Bao (國際經濟情勢雙週報) (The International Economic Developments Biweekly)*, No. 1840.

⁴ Related data are calculated based on OECD TIVA statistics.

Indicators of Taiwan's Saving and Investments

	Saving Rate (%)	Investment Rate (%)	Depreciation Rate (%)	Excess Saving Rate(%)	Gross National Savings (NT\$ Trillion)	Gross Domestic Investments (NT\$ Trillion)	Excess Savings (NT\$ Trillion)
2005	29.62	23.89	(13.75)	5.73	3.7	3.0	0.7
2010	33.14	24.23	(15.88)	8.92	4.8	3.5	1.3
2015	34.14	20.27	(14.65)	14.14	5.9	3.5	2.4
2005-2015	31.40	22.41	(15.43)	8.99	50.4	35.7	14.7

Notes: 1. Saving rate=gross national savings /GNI; investment rate = gross domestic investments/GNI; depreciation rate= consumption of fixed capital /GNI; excess saving rate = excess savings /GNI.

2. The rates of the 2005-2015 period are the simple averages of their annual rates.

Source: DGBAS, Executive Yuan.

Given the lackluster growth in domestic investment, Taiwan should make strong efforts to remove investment hurdles, so as to channel the large excess savings into domestic investment. In terms of spurring private investment, reforms should be carried out to improve public and private sector governance, and enhanced efforts are needed to speed up the development and delivery of infrastructure. Other examples include promoting private sector participation in government projects, setting up a Petrochemical and Recycling Industrial Park that answers to both ecological and economic appeals, and utilizing the National Development Fund as venture capital funds aiming to promote industrial innovation.

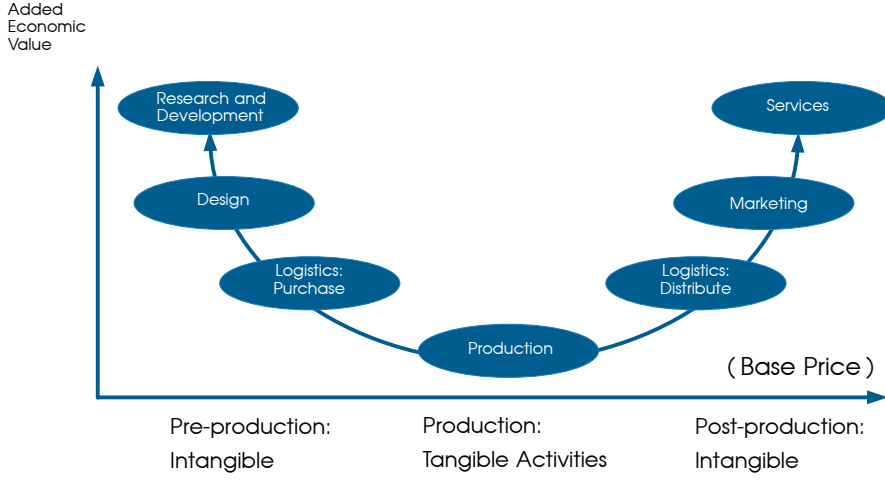
(3) Innovating the Way Toward the Highest GVC Value Added Positions (Upstream R&D and Downstream Marketing & Services)⁵ to Enhance Product Value Added and Stimulate Economic Growth

From 2000 to 2014, Taiwan's value added ratio of industry as a whole dropped by 5.4 percentage points. The key to revive Taiwan's economy lies in innovation. With innovation come industrial upgrading and an increase in the value added of products and services, which will help Taiwan stay competitive. This will also bolster labor productivity and, in turn, employer willingness for wage hikes, so as to foster long-term momentum for private consumption growth.

⁵ UNCTAD (2015), "Tracing the Value-Added in Global Value Chains: Product-Level Case Studies in China," UNCTAD Publication, June 8; IMF (2015), "Reaping the Benefits from Global Value Chains," Regional Economic Outlook: Asia and Pacific, May; OECD, WTO and World Bank (2014), "Global Value Chains: Challenges, Opportunities, and Implications for Policy," Report to the G20 Trade Ministers Meeting, Jul. 19.

Value Creation Within GVCs

(Relationship Between Value Added and Global Value Chain Position)



Source: UNCTAD (2015).