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ViewPoint

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Taiwanese Industrial Policies

The “Taiwan Problem” in the 1980s

Since the 1960s, Taiwan leveraged its low labour cost and absorbed vast investment to its manufacturing sector. However, wage, property prices and exchange rate were soaring in the 1980s, compelled manufacturers to move to the mainland China. Although Taiwan still enjoyed a large trade surplus at that time, its low-cost labour-intensive industrial based economy was shaking. Reforms were necessary.

The Policies

In 1989 the government announced the “Enhancing Productivity Act” which aimed to encourage and foster the structural change of the economy to a high-technology high productivity profile. The act substituted the “Encouraging Investment Act” which was frequently revised in 1980s. The government introduced a number of policies that encourage investment on R&D, equipment (especially those with high technology / high productivity), human capital, and venture capital.

Those reforms were extremely successful in transforming Taiwan into highly productive industrial economy: Taiwan now has one of the most robust ICT sectors after the United States, and ranked the 12th in the global competitiveness¹. The policies are as follows:

a) Incentive for venture capital investment

The positive initiatives were taken by the government in 1987 to encourage investment on venture capital. Investors of the initial share of a venture capital fund would have 20% tax credit (personal and corporation) over 5 years. The 20% tax credit can be claimed in 5 years implying a carry-forward option for current loss-making or low-profit

¹ IMD: Global Competitiveness Report, 2004

firms. Yet, second round shares would not be eligible for tax credit. Also, share must be held for two years in order to be eligible for the benefit. These encourage early entry and medium-to-long run investment and minimise the chance of tax evasion from investors' buying and selling venture capital funds.

Other details:

1. The funds must be invested in un-listed companies, which encourage money to flow into SMEs.
2. Management team of the funds should have technological sector investment experience.

b) Positive tax depreciation policies

Investments on replacing existing equipment and machine would be allowed to depreciate over half of its economic life. For assets with economic life less than 2 years, immediate depreciation is granted. This policy aimed at raising productivity by updating productive equipment.

c) Policy on retained earnings

For new shares issued against retained earnings; if the sum of money collected is spent on purchasing equipment for the following purposes, the shares are deductible for income tax:

- 1) Immediate use for production
- 2) R&D
- 3) Quality examination
- 4) Anti-pollution and saving energy
- 5) Repaying the loan previously borrowed for purchasing equipment

This policy encouraged capital investment from retained earnings. As it only applied to additional shares issued based on the retained earnings, it also increased the inflow of capital to profitable companies. This is a form of build-in reward for the winning companies, while the cash inflow builds balance sheet strength in the company.

d) Incentives on R&D

Hundred-percent first-year tax deduction was allowed on current spending in enhancing technology and developing new products. As mentioned, capital spending on R&D can be deducted if the economic life is less than 2 years, and is depreciated half of the economic life otherwise. Also, an incremental tax credit of 20% was provided for R&D expenditure in excess of the highest amount spent in the previous five years.

e) Other forms of tax credits

Tax credits are also provided for some other specific activities like investment on automation which aimed at lowering the reliance on labour in the manufacturing process. Tax credits are also eligible for expenditure on building international brand and human capital investment. For instance, 35% tax credit is available for any spending on vocational training. Fifty-percent can be applied if the expenditure is above the average of the previous two years.

Results of the policies

It can be noted that the above policies are consistent in nature: They aim at uplifting the productivity by improving equipment, human capital, technology and availability of investment funds. Some highlights of these policies:

a) Results of the venture capital policies

The system was abolished in 1999 as the government considered the venture capital market was matured. Yet, on the eve of the abolishment, the number of venture capital funds surged. Nevertheless, the results of the venture capital supporting policy were enormous. It helped to develop the Taiwanese venture capital market, which invested more than 75% of its fund on ICT industries. It contributed to the strong linkage with the Silicon Valley in the United States, which further enhanced Taiwan's competitive advantage in the sector.

It was estimated by the Taiwan Ministry of Economic Affairs that 18% of venture capital fund was induced by the policy. Real Net National Income² was raised by 0.32% per

² Net National Income (NNI), which is equal to Gross National Product minus depreciation, is a measurement of output level after taking into account of wear and tear of capital assets.

year. Over the 20 years from 1983 to 2003, NT\$100 billion was invested in the Taiwan based venture capital fund, and NT\$8 billion was distributed as tax credit, which the government sees as a small price to pay for creating a world class high technology industry on the island³.

b) Results of tax credit on mechanisation

The Taiwan Ministry of Economic Affairs conducted an empirical analysis suggested that revenue effect of the government is minimal. Under the 20% tax credit system for investing in machines, the government would lose 0.2 dollar revenue from one dollar increase in R&D expenditure. But it only means that the government is investing in the R&D project. The R&D investment, if it is not a failed one, would bring about profit to the company and tax to the government. By using the manufacturers' data, result of the analysis is that, the government could have 0.24 dollar net return for giving out one dollar of tax credit, as long as the machine could be used for 7 years. In other words, tax loss can at least partly be offset by the increase in tax revenue.

Concluding remarks

Coherence is the essence of Taiwan's growth policy. Taiwan's experience shows that there is no single policy that would boost up productivity and technological level overnight. Yet, the whole set of policies focuses on encouraging technology-raising activities rather than specific sectors. Indeed, the policies have been evolving toward that principle since their first appearance in the 1960s. It is true that the development of an economy needs more than the policies above, like a well-educated system, infrastructures and a stable macroeconomic environment. Nevertheless, Taiwan's experience is a good example of policy coherence supporting the private sector technology system. It must also be noted that technology is not everything. Businesses must be evolving to the customer's needs. By and large, firm-level technology is a prerequisite for that.

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³ Source: www.tax-news.com/reports/v92220/vc_taiwan.asp