TAIWAN’S INFORMATION AND COMMUNICATION TECHNOLOGY INDUSTRY

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Executive Summary

1. The Information and Communication Technology (ICT) industry has taken a significant share of Taiwan's economy over the last decade. Since 2006, the ICT industry has accounted for over 50% of Taiwan's GDP in manufacturing and about 29% of Taiwan's manufacturing employment.

2. Taiwan's concentration in ICT production made it the third largest ICT producer in the world, behind the US and Japan, measured by ICT firms' total revenues in 2009. Especially in mask read only memory, notebook PCs and cables, Taiwan took almost all the global market share (over 90% in 2010).

3. The Taiwanese government has contributed to the development of the ICT industry since the 1970s with measures including encouraging the acquisition of foreign technology and introducing it to local companies, establishing science parks, and promoting the expansion of ICT related education.

4. During the 1980s, Taiwan began producing basic ICT products and components for foreign multinational corporations (MNCs). Thanks to its on-time delivery, strict quality control and production flexibility, Taiwanese producers have gradually gained large orders from foreign firms in the manufacturing of ICT related products.

5. The intense price pressure after the 1990s has forced a mass migration of low-end manufacturing activities to China where operating costs are considerably lower. In 2011, 91% of Taiwan's investments in ICT industry were in China.

6. As a result of relocating final goods assembly to the Mainland, Taiwan concentrates on manufacturing the key components. Electronic integrated circuits and liquid crystal devices (LCD) are the two major ICT components in Taiwan's exports (24% of Taiwan's total exports in 2011) and most of them are exported to China for assembling into final products.

7. However, Taiwanese manufacturers only acquire a small profit margin in the global production chain. Taiwan's lack of talents in international marketing and relatively low level of innovation capacity made it less capable of developing an internationally recognized brand.

8. Although China's R&D sector is less significant and Taiwan is still in possession of the more advanced ICT technology, the importance of China's R&D is set to rise and may even surpass Taiwan's in the global production network in the future.

9. The acquisition of foreign technology and investment in R&D are deemed necessary to continue upgrading the industry in Taiwan. More Taiwanese and Japanese businesses are expected to form strategic alliances in technology cooperation in the ICT industry to meet competition from their South Korean rivals in the global market.

10. Taiwan's relatively well protected Intellectual Property Rights and highly experienced ICT engineers will also provide opportunities for local hardware and software developers to integrate, leading to better adaptation for a rapidly changing technology market.