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Sector Overview
The Electronic Industry
In Thailand

1 Introduction

The electronics industry has played a significant role for Thailand's economy during the past two decades as an important export earner aiding overall development.

The electrical and electronics sector has contributed about one-third of Thailand's export revenue over the past five years. Thailand has become the largest production base for the electrical appliance industry in ASEAN with many international manufacturers engaged in expansion programs. The country is also the second largest hard-disk drive exporter in the world after Singapore.

More than 370,000 people are employed in the industry. Foreign brands and manufacturers currently dominate this large and fast-growing sector. Multinational companies, mainly from Japan, USA, Netherlands and Taiwan, generally establish their production, testing and assembling facilities in Thailand. The government is committed to further developing this industry and consequently, the Board of Investment (BOI) has taken steps to ensure that the investment climate remains favourable and offers attractive incentives to foreign companies interested in setting up operations in Thailand.

Thailand hopes to boost foreign direct investment in the sector threefold on the way to becoming the electronics manufacturing centre of Asia. The government plans to establish manufacturing clusters during the coming three years. The strategy will develop integrated manufacturing from electronic parts through value-added products. The government concentrates on promoting the industry because it is the country's biggest earner, taking in Baht 1.3 trillion (DKK 203 bill.) last year.

According to The Board of Investment, manufacturers will invest at least Baht 50 billion (DKK 7.8 bill.) this year to expand production, which would help boost annual exports to Baht 1.5 trillion (DKK 234 mill.).

The electronics industry took off during the 1960s, when Thailand looked at attracting investments to reduce reliance upon costly imports. During the 60s and early 70s, most projects were joint ventures between Thai and Japanese companies. During the late 70s and mid-80s, the government actively promoted the production of ICs (integrated circuits) for export, and investment in this sector picked up sharply in the 1990s.

Since the mid-90s, Thailand has entered what is called the 'cluster' phase of development, because as the domestic capabilities improved, assemblers began to source parts and components locally.

2 Market structure and market size indicators

2.1 Export

The electronics component industry is vital to the country's exports. The products of the electronic industry in Thailand, especially semiconductors, integrated circuits, printed circuit boards and computers, depends on the demand of the global market. The value of export is a good estimate of the market size and the market growth of the electronics industry in Thailand as 80% of production is for export. The export value of this industry ranks first and accounts for around 20 percent of the country's total exports. In 2004, Thailand's exports of electronic components topped 790 billion Baht (DKK 115 billion), rising by 11.3 percent over 2003. This value represents some 15.8 percent of the GDP.

The hard disk drive (HDD) and component part industry has long been among the most significant industries in Thailand's export business. More than half of the exports of computers, parts and accessories - Thailand's top export category - come from the HDD and parts industry. It is estimated that exports of this industry account for around 6 percent of the country's total export and there is a production value of more than 3 percent of the country's GDP. HDD manufacturers in Thailand will soon benefit from the supply of electronic parts produced locally by Digi Cron, a semiconductor and electronic parts manufacturer. Set up last year, the company will produce electronic parts and supply them directly to hard disk and semiconductor manufacturers in Thailand. This will help them save the cost of imported products as well as reducing delivery time. Now manufacturers import electronics parts from abroad, mostly from Korea, Japan, Taiwan and Singapore.

Other key export items are electronic integrated circuits. Major export markets are the USA, Netherlands, Taiwan, Japan and Singapore.

With the signing of a number of bilateral free-trade area agreements, especially the pact with China, the market will open up considerably and the government will need to establish some industrial standards to cope with the rising imports. As well, the Thaksin administration plans to support the local electrical industry in its plans to establish a national brand sometime later this year.

2.2 Investments

The electronics industry in Thailand relies mainly on foreign investment. Around 80% of the registered capital in the electronics industry belongs to foreigners, especially Japanese. The electronics industry is still a driver of the Thai economy, being the second biggest investment category in Thailand after the automobile industry.

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Currently, Thailand is the world's second largest HDD manufacturing base, following Singapore. With support measures for the HDD and parts industry in the form of business clusters initiated by the Board of Investment (BOI), four of the world's largest HDD manufacturers, whose' combined market share accounts for 67 percent of global HDD sales, has invested more than 30 billion Baht (DKK 4.4 billion) into Thailand. They have decided to expand their large investment to use Thailand as a manufacturing base for HDD production for exports worldwide. According to their production plans, Thailand will have the potential to produce around 130 million units in 2005-2006, more than double the output in 2003. This would make Thailand the world's leading HDD producing country, overtaking Singapore and stands to boost its output to 200 million units within a period of five years, or by 2008, rising by 270 percent over 2003 when total output stood at 54.1 million units.

With the new incentive package aimed at promoting cluster production in Thailand, HDD manufacturers have been offered up to eight years of tax incentives if they meet the criteria for R&D input and technology transfer to their part suppliers. By tempting investors to Thailand, the government is hoping to overtake Singapore as the world's number one HDD exporter by 2006.

Although it is believed that reaching this target is possible, there are concerns over the lack of specific engineering skills in Thailand. Development, in creating greater added value economically, are proceeding on a limited basis and Thai entrepreneurs, in hard disk drive-related industries, are still few in number compared to entrepreneurs of this industry in Singapore and Malaysia.

Still, most of the electronic parts manufacturers are subcontracting to electronics manufacturers, the facets of the business that require huge investments but generate very low margins. Foreign brand owners still control design and marketing activities that consume fewer resources and generate higher margins.

The government should take more steps to support subcontract manufacturers by encouraging them to upgrade into more value-added products by building up their own design and marketing capabilities. As long as parts makers and supporting industries remain financially sound and technologically advanced, Thailand will remain attractive in the eyes of international manufacturers and consequently the electronics industry will become an increasingly more valuable sector to the economy.

3 Market trends

Normally, growth in electronic products follows global economic trends. This means that if the world economy this year slows as a result of surging oil prices, exports of Thai electronic products will decelerate as well. In 2004, Thailand's exports grew considerably. In 2005, exports of electronic products from Thailand are expected to expand steadily, though at a slower pace than the year before. One of the reasons is the expected world economic slowdown.

In 2005, global economic growth is likely to be slower at around 4.3 percent from the 4.6 percent in 2004. However, it is estimated that Thailand's exports of electronic products will increase 5 % in 2005 total some 830 billion Baht (DKK 121 billion). Exports of computers and accessories should grow markedly, while semiconductors are poised to expand modestly due to low demand in the world market. So far, there has yet to be any sign of high growth as seen last year, which was supported by environmental factors, namely, changes in technology.

The Thai electronic components industry in 2006 will tend to slow from 2005 as a result of the slowdown in the world economy and uncertainty in the market that has changed due to various negative factors, including volatile oil prices that are hovering at a high level, demand for IT goods that has dropped in larger markets like the US, and changes in production technologies that depend more on electronic devices.

A restructuring of the tax system related to this sector, an area cited as a barrier to doing business in Thailand, has not been completed. Nevertheless, the government has taken steps to deal with this issue that have been well received by the manufacturers.

It started by proposing to cut duties on 'fast-track' items including televisions and fibre optics three years ago. This measure was implemented in response to the planned relocation of some foreign manufacturers with substantial investments in Thailand led by Japan's Toshiba, to lower-cost countries.

Under the tariff scheme, the rates are 1% on raw materials, 5% on intermediate parts and 10% for finished products for those items imported from non-ASEAN members, while within the ASEAN Free Trade Area (AFTA), the rates, which are now 0-5%, will all be cut to zero by 2010.

Furthermore, the Thai government has cut tariffs on raw materials and components used for producing electrical and electronic products. Import tariffs on 76 items would be waived or reduced to less than 5%. The government expects to lose about one billion Baht per year as a result of these tax cuts. On the other hand, the benefits are projected to help serve as an incentive for companies to keep their manufacturing operations in Thailand as well as boost the country's competitiveness and attract new investments from abroad.

4 Production base

The nature of investments of major electronics operators is to use Thailand as a production base for export to the mother company's home country or export to other countries. The electronics industry is capital intensive and requires know-how. Thailand can mainly provide low labour cost, incentives and privileges offered by BOI for investors in this sector. Furthermore Thailand serves as a good hub for activity in South East Asia, with good transportation links to the rest of the region and China. Thailand also holds the attraction of being cheaper than other possible locations in the region, which may well prove to be an important factor to companies seeking to set up operations.

Most electronics operators are BOI promoted companies and 100% foreign ownership or joint ventures.

Thai electronic products manufacturers will continue to be dependent on imports. Local content of electronic products manufactured in Thailand is minimal and electronic producers will continue to rely on foreign sources for their higher tech components.

Electronic components manufacturers in Thailand do not have the capacity to meet the growing demand for electronic components from electronic products manufacturers. Also we see that electronic components manufacturers in Thailand are not as competitive as those in Singapore or Taiwan where companies operate on higher economies of scale. Furthermore most of the higher tech electronic components cannot yet be produced in Thailand.

5 Future challenges

Thailand faces medium- and long-term developments in the electronics industry that could cause some risks, such as volatility in currency values, changes in production technology, self-adjustments of domestic entrepreneurs, and competition from overseas, all of these causing Thailand to urgently adapt to withstand these risks.

As the electronics industry is important to the country's economy, particularly as an important employer, it is necessary that the authorities initiate solutions to problems that could impact the industry in the long run. At present, although the electronic component manufacturing industry in Thailand has developed for a long time, it has not grown as much as it could have. The authorities should support linkages in fully integrated production circles, from upstream to downstream, provide support to research and development, improve tariff structures, develop basic infrastructure, develop Thai manufacturers, and help make them superior to manufacturers overseas. Moreover, knowledge and skills in the workforce should be developed, particularly those who work in the field of electronic circuit design, for sustainable growth in the Thai electronics industry in the future.

6 Opportunities

As Thailand provides low labour cost, good infrastructure and a lot of incentives and privileges offered by BOI, it is an interesting market for companies seeking to set up operations. Particularly in the HDD industry there are plenty of opportunities after the government is offering up to eight years of tax incentives to foreign manufacturers.

In that context outsourcing represents a business opportunity in the short run. Furthermore, the increasing demand for R&D and know how creates opportunities in offering technical expertise, and engaging in joint ventures.

The recent cuts in import tariffs on raw materials and parts used for producing electrical and electronics products additionally makes the market interesting for Danish companies.

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