Consumer Electronics Industry in Hong Kong

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Abstract

This paper reports some aspects of the consumer electronics industry in Hong Kong. The sector has been declining at 14% p.a. over the past five years mainly due to the shifting of manufacturing bases from Hong Kong to the Pearl River Delta (PRD) by manufacturers in order to take advantage of the low labour across the border. It can be concluded that Hong Kong is strong on the design of appearance and aesthetics of commodity products but less capable when come to designing products with substantially different features or performances. The consumer electronics sector in Hong Kong is the biggest after Japan and South Korea in the East and South-east Pacific region including Singapore and Taiwan.

Introduction

World-wide consumption of consumer electronics products in 1992 [2] is approximately US$133 billion which represents about 17% of the world-wide electronics market. Consumer electronics in general include audio, video electronic products, personal electronics such as games, toys, cameras, watches, clocks etc. It also includes products such as alarms and sub-systems in home appliances. In general, products are highly sophisticated and low cost. Over the last thirty years, the trend has been the migration of products from industrial or office applications into mass consumer market as a result of cost reduction and mass production.

Consumer electronics are dominated world-wide by a number of large multinational corporations such as Sony, Mitsushita, Philips, to name just a few. The world-wide market is expected to grow at about 5% p.a. over the next few years. This is small compare with other sectors of the electronics industry. On the other hand, the Asia-Pacific region excluding Japan is expected to grow at an annual rate of 16% over the next few years, albeit starting from a relatively low base.

In this paper, the market trends and other aspects of the consumer electronics industry in Hong Kong, including the Pearl River Delta (PRD) will be discussed. It will also look at the competitive advantages of this sector of the electronics industry in terms of R&D, design, manufacturing, marketing and sales as well as after sale service. The materials presented are essentially extracts from the two Hong Kong Government Industry Department Consultancy Reports [1,2]. The author would like to take this opportunity to express his gratitute to the Hong Kong Government Industry Department for the support, and permission to use materials contained in the two reports [1,2] the publication dates of which are yet to be decided.

The Market trend

In Hong Kong consumer electronics is the largest sector in terms of output and the number of enterprises in the Electronics industry. It was worth USD4.72 billions [1] in 1986 falling to USD2.54 billion in 1991 adjusted to real 1991 dollars. The above data exclude telephones and TV receivers. Telephones and TV set outputs were worth USD250 millions in 1991. This represents a real compound average rate of decrease of about 14% per annum. In 1991 the sector comprises 636 establishments and employs 19.5 thousand people. Both of these have fallen over the past over the past five years, at compound average rate of 9% and 19 % respectively. Table 1 gives the output of major consumer electronics products by Hong Kong manufactures

Real Sales Volume, 1991 HK$ M	1987	1988	1989	1990	1991	CAGR
Video cassette tapes	$4,246	$3,346	$2,809	$2,580	NA	-15.3%
Audio cassette tapes	$1,404	$894	$924	$665	NA	-22.1%
Portable cassette recorder	$5,152	$2,911	$1,220	$576	NA	-51.8%
Telephone answering machine	$824	$902	$723	NA	NA	-6.3%
Toys, remotely controlled	NA	$827	NA	NA	$409	-20.9%
Standalone electronic games	NA	$1,063	$811	$688	$410	-27.2%
Watches and clocks movements	NA	NA	NA	$13,185	$11,656	-11.6%
Unit Sales, 000 units						
Video cassette tapes	205881	213151	172556	249371	NA	6.6%
Audio cassette tapes	565293	425842	406307	508679	NA	-3.5%
Portable cassette recorder	27020	16117	7085	3259	NA	-50.6%
Telephone answering machine	1956	2262	1900	NA	NA	-1.4%
Toys, remotely controlled	NA	8832	NA	NA	4685	-19.0%
Standalone electronic games	NA	13811	15653	17862	5222	-27.7%
Watches and clocks movements	NA	NA	NA	314723	282388	-10.3%
Unit Price, 1991 HK$						
Video cassette tapes	$20.6	$15.7	$16.3	$10.3	NA	-20.5%
Audio cassette tapes	$2.5	$2.1	$2.3	$1.3	NA	-19.3%
Portable cassette recorder	$190.7	$180.6	$172.2	$176.8	NA	-2.5%
Telephone answering machine	$421.2	$398.9	$380.6	NA	NA	-4.9%
Toys, remotely controlled	NA	$93.6	NA	NA	$87.2	-2.3%
Standalone electronic games	NA	$77.0	$51.8	$38.5	$78.6	0.7%
Watches and clocks movements	NA	NA	NA	$41.9	$41.3	-1.5%

Source: SIP data

Table 1: Major consumer electronics products sold by Hong Kong manufacturers [1]

The table indicates that decline occurs in total sales values and volume over almost all products, and that this decline has occurred concurrently with declining unit prices. It is noted that decline in real unit prices has been most severe for commodity products such as video and audio tapes.

On the other hand, re-exports have been increased over the same period, reflecting the migration of manufacturing facilities over the border into the PRC. The combined Hong Kong PRD consumer electronics sector has experienced correspondingly strong growth over the same period at around 23% and in 1992 it was worth USD11.2 billion. The combined consumer electronics sector has been increasing over the past five years to 1992 at a small compound rate of 3%. The major markets are the United States, China, Germany and the United Kingdom which account for 22%, 17%, 9% and 4% respectively of the total export.

Hong Kong environment and Competitive Advantages

The migration of manufacturing to the PRD region of Guangdong has caused the domestic Hong Kong industry to decline sharply over the past five years. Over the same period, the industry in Guangdong has been booming, growing at a rate of 22% p.a. in real Hong Kong dollar terms. The PRD region accounts for 92% of Guangdong's production. Overall, both Hong Kong and PRD industries are dominated by small firms. It is worth noting that on average, the remaining Hong Kong enterprises are a fraction of the size of their PRD counterpart, employing 62 people compared to an average of 278 for the PRD enterprise [1]. Hong Kong's industry production is focused on "mature" products and those in the consolidation stage. In these stages, key technical elements can be readily accessed by all manufacturers. The product is essentially a commodity, with any differentiation being limited to aesthetic elements or minor variations in features. This constraints the majority of Hong Kong manufacturers to relatively low value added end of product sprecta.

Proximity to the PRD provides Hong Kong with a capability as a low cost manufacturer, as well as some advantages in marketing and distribution to the huge Chinese domestic market. Specifically, proximity to cheap labour in the PRD region has given the sector the capability to compete on a low-cost basis while using highly responsive labour intensive processes. Also, the ability to form joint venture agreements in the PRD enables Hong Kong companies to access the protected Chinese domestic market.

In contrast, capabilities in research and development, design (other than aesthetic and minor feature increments), marketing and distribution are underdeveloped. This is largely because of the dominance of OEM type manufacturers who do not see a need to develop capabilities in these areas.

Capabilities of the Hong Kong Industry

The first stage is product research and development. This stage include the ability to commercialise results from basic research and the ability to develop new class of products based on existing technology. Generally speaking, investment in the area of research and development and product innovation is risky, and has an inherently long pay-off period of five or more years. There are few Hong Kong companies with the necessary financial resources and the will to venture into this area. Other contributing factors may be the lack of experienced product research personnel and incubation type of environment like the Silicon Valley.

The second stage is product design, during which the product is developed into a blueprint for manufacturing, including aesthetic design and technical design, manufacturing, packaging etc. Key factors at this stage are: 1) the ability to design products with specific performance and features; and 2) the ability to alter product aesthetic appearance. In this regard, Hong Kong companies have excellent ability to tailor the appearance and aesthetics of commodity products to targeted markets and trends. This is particularly clear in consumer electronics such as electronic toys, audio equipment, watches etc. In general Hong Kong companies are less capable when come to designing products with substantially different features or performance from their prototypes. This is probably due to the restrictions placed by the parts and components from overseas suppliers as Hong Kong has a weak parts and components sector.

Hong Kong manufacturers operate at different levels across the market. These include OEM manufacture and design (if needed) according to customers specifications; products are designed and produced for the customer under the customers' brands; and own brands. In general manufacturing is the strongest capability and advantage for Hong Kong electronics industry. This advantage strings largely from cultural and geographic proximity to low cost manufacturing sites in the PRD region, which enables the industry to be among the most cost efficient in the region.

The third stage is marketing, sales and customer service. The core measure of this capabilities are 1) the ability to develop brand awareness among customers; 2) the ability to access markets and to channel products to customers; 3) the ability to spot market trends and shifts in customer tastes and feed these back into the product development and marketing functions and 4) the ability to respond rapidly to customers' expressed service needs and to tailor offerings to customers' requirements. There are few brands owned by local electronic companies and in general, brand management capability is low. The composition of the electronics industry in Hong Kong has meant that distribution has not historically been a major issue . For OEMs, distribution means delivering product to a single customer who manages his own distribution channels to reach customers. Few electronics companies are involved with the distribution of products to different distribution channels or even to multiple customers. Industry capabilities in the area of customer service are negligible which is mostly due to the product mix and to the overall structure of the industry.

The consumer electronics industry capability and competitive advantages are summarised in the following diagram.

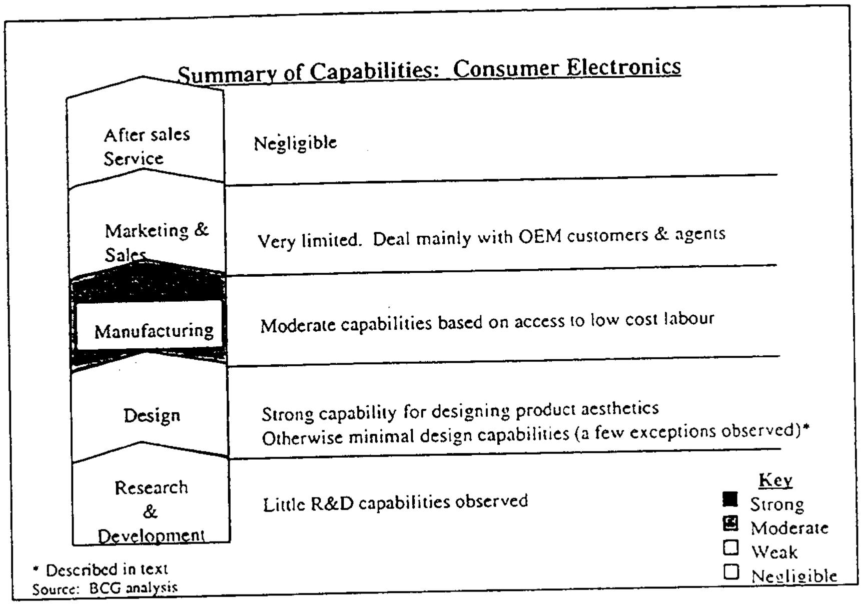

Figure 1: Summary of Hong Kong consumer electronics industry capabilities [1]

Comparison with South Korea and other South-East Asian Countries

This section briefly describes the consumer electronics industry in competing countries/regions including China, Singapore, Taiwan, South Korea, Malaysia and Thailand.

P.R. China - the Consumer electronics sector composes a few large state owned enterprises, some new large scale joint venture operations involving major Japanese multinationals such as Matsushita, Mitsui & Co. producing components for consumer products assembled in Japan. It also has numerous relatively small scale assembly operations of low technology products in the PRD. This sector accounts for 45% of the total Electronics industry output of USD14.5 billion in 1991.

Singapore - the sector is dominated by a small number of large Japanese companies operating very large manufacturing facilities. Consumer electronics products are also assembled on a contract basis for these and other international companies by some small-scale local companies. The total output is about USD 150 million in 1991.

Taiwan - the sector is composed mostly of small to medium sized establishments operating chiefly on OEM basis. The sector is relatively small with an output of USD7.6 million in 1991.

South Korea - the Korea consumer electronics industry is dominated by several large companies and accounts for just over half of the total output of the electronics industry worth USD33 billions. The top three, Samsung, Goldstar and Daewoo alone account for over 50% of the sales in this sector. There is a strong shift of these companies towards the manufacturing of parts and components.

Malaysia - the sector is relative small with 82 manufacturers produced consumer electronics products worth USD21 millions in 1991. It is dominated by large Japanese consumer electronics companies to assemble non-leading edge products.

Thailand - the sector is dominated by multinationals who use Thailand as a manufacturing base, importing components and exporting finished products. The sector is worth about USD100 millions in 1991.

In general, the above countries/regions can be divided into two groups - one seeking be value added based competitors and the other to compete as low-cost manufacturers. A summary of comparison of the consumer industry in terms of R&D, design, manufacturing and marketing and sales are given in Figure 2.

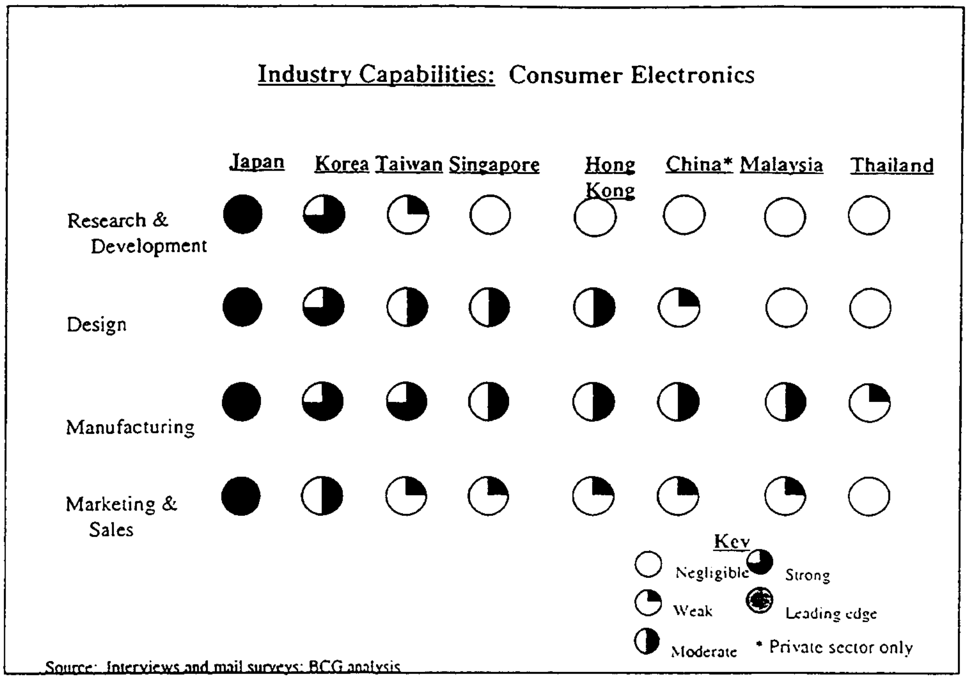

Figure 2 Asia Pacific region consumer electronics industry capabilities [1]

The South Korean consumer electronics industry, to a certain extend, rivals the Japanese in many product categories. High level R&D are essentially confined to Japan and Korea. Taiwan and Hong Kong are primarily dependant on mature non-proprietary technologies and have few enterprises with fundamental R&D capabilities in this sector. On the other hand, moderate design skills can be found in the consumer products sectors of most competitors in the region. On the marketing and sales front, only Japan and increasing South Korea are producing internationally recognised brands. Marketing and sales skills are weaker in the other countries/regions due to the predominance of OEM and multinationals.

Conclusion

This paper has briefly described the consumer electronics industry in Hong Kong in terms of the market trends and its competing capabilities. It has also briefly reviewed the sector in the competing countries/regions and compared their capabilities.

References

[1] Hong Kong Government Industry Department, '1992/93 Techno-economic and market research study on Hong Kong's electronics industry - part 1', Final Report, The Boston Consulting Group, August 20, 1994, to be published.

[2] Hong Kong Government Industry Department, '1992/93 Techno-economic and market research study on Hong Kong's electronics industry - part 2', Draft Final Report, Dataquest, June 1994, to be published.