

E-COMMERCE DEVELOPMENT AND GOVERNMENT POLICIES IN TAIWAN

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I. E-commerce Development in Taiwan

1.1 Network Popularity in Taiwan

The application and popularity of the network are prerequisites for e-commerce (EC) development. According to estimates by Dresdner Kleinwort Benson, the popularity of the network in Taiwan is currently third in Asia (excluding Japan) lying behind Singapore and Hong Kong, and is set to grow from 14.8% in 1999, to 34.8% by the year 2004 (Table 1). It seems that for a country such as Taiwan—one of the world's major exporters of electronic products—the overall conditions for promotion of EC are quite favorable. Therefore, this high network popularity gives Taiwan a particular advantage in the development of business-to-business (B2B) EC.

Table 1.
Network Popularity in Asian Countries

| | 1999 | 2004E |
|-------------|-------------|--------------|
| South Korea | 10.2% | 30.1% |
| Taiwan | 14.8% | 34.8% |
| China | 0.5% | 3.9% |
| Hong Kong | 17.2% | 39.0% |
| Singapore | 18.5% | 46.5% |
| Malaysia | 5.6% | 15.2% |
| Thailand | 1.8% | 5.0% |
| Indonesia | 0.4% | 1.2% |
| Philippines | 1.2% | 4.0% |

Source: Dresdner Kleinwort Benson (DKB)

1.2 The Importance and Market Potential of EC in Taiwan

Taiwan is particularly good at OEM/ODM businesses, but lately it has been facing challenges in this field from other developing countries. Taiwanese manufacturers must transform their businesses from simple OEM/ODM into a manufacturing service industry featuring a combination of manufacturing and material control, before other additional value can be created and all existing competitive advantages can be maintained. What's more, it is common knowledge that the heart of Taiwan's industry is its small and medium enterprises which commonly apply a system of vertical division of labor. Maintaining adequate control over the conditions of all the related major plants and their satellite plants, and carrying out resource integration through supply chain management can strengthen industrial competitiveness.

One may wonder how big the market in EC in Taiwan has become. Its current development is limited due to the characteristics of the living environment (large population in a comparatively small land area, highly concentrated commercial areas, and low incentives in the convenience of EC), the differences in expenditure habits (people are more used to exchanges in kind and enjoy haggling over prices), and the unsatisfactory network environment (less advanced software and hardware technologies than the developed countries, insufficient humanized planning and low safety and privacy protection). Nevertheless, there is plenty of room for growth, and the status of B2B EC, in particular, will undergo a major change in the future.

According to the Market Information Center of the Institute for Information Industry, the potential for EC in Taiwan appears to be strong. It was estimated that the market for EC information services between businesses in Taiwan would jump from approximately NT\$ 1 billion in 1999, to approximately NT\$ 16.5 billion in 2002.

1.3 Business Opportunities and Impacts on Small-Medium Businesses and Effects on

Industrial Structure caused by EC

In general, EC has benefited small and medium sized businesses in the following ways :

- EC has made the interaction between small-medium businesses and their customers more convenient, and the Internet and the WWW have lowered the threshold for transnational marketing and trade, so that the goal of global sales is now easily achievable.
- Internet characteristics , including standards, connection, low cost and high popularity, have provided small and medium businesses with needed help in the areas of customer support and services.
- EC has expanded the possibilities for small-medium businesses, with burgeoning channels for closer connection between up-stream and down-stream manufacturers, reducing not only the marketing costs, but also the time for product development.

The development of EC also created many disadvantages for small-medium businesses, including:

- It becomes a heavy burden on those small-medium businesses that do not have sufficient capital, when brand name establishment involves such major costs.
- For small-medium businesses, the necessary investment in service costs creates an obstacle to the development of EC.
- Small-medium businesses may have greater business opportunities, but they face keener competition as the number of competitors increases dramatically.
- As the network allows large -sized businesses to provide greater flexibility, this places further pressure on small-medium businesses.
- The network economy will have a stronger impact on the retailing industry.
- The size of traditional industries, such as papermaking and printing, will shrink

What effect will the development of EC have on Taiwan's industrial structure? This question can be viewed from two different aspects.

In terms of B2B EC, along with the development of the Internet large manufacturers (such as IBM and Cisco) have tended to concentrate their business to specific core fields with higher added value (such as EC and sales) resulting in a shift to OEM manufacturing. For example, more than 90% of Cisco's sub-assemblies are now produced by OEMs. Consequently, OEM manufacturers in Taiwan have increasing opportunities to gain substantial orders. However, the majority of these orders are still placed with a few large-sized OEM manufacturers. Small-medium businesses can secure only very limited orders directly from major international firms since 'well-matched' is stressed even in the large OEM businesses.

Furthermore, the broad application of EC has reduced the middleman role of wholesalers. For example, since the application of the direct sales model, the number of wholesalers used by Dell has dropped from 200 to 15. This development trend redefines the industrial structure with the phenomenon of 'large will always remain large' occurring as a result.

As far as EC application service providers (ASP) are concerned, large -sized manufacturers more commonly use the ERP and CALS models when the application costs for these models easily exceed NT \$1 million. However, since large-sized manufacturers generally prefer the well-known ASP companies such as IBM and Compaq, local ASP manufacturers can search for opportunities to serve local small and medium -sized businesses in the profit-based market.

Regarding business-to-consumer (B2C) EC on the other hand, SMEs will benefit directly as the application of both the network and EC allows them to deal directly with end users. This will generate more business opportunities through the elimination of disadvantages, such as

wholesaler handling charges and weak sales networks. Hence, large-sized manufacturers will not totally dominate the industrial structure and there will be room for small and medium-sized businesses to survive.

1.4 Analysis of EC Promotion in Taiwan's Business Industry

From a questionnaire survey of 836 companies (with a response rate of 241 or 23.9%) the Chung-Hua Institution for Economic Research found:

- With EC still in its initial takeoff stage, around 70% of the manufacturers in the sample had never been involved in any EC business.
- Large-sized businesses have a higher EC introduction rate than small and medium-sized businesses.
- Amongst the group of manufacturers that had already experienced EC, more had been involved with B2B than B2C.
- Major considerations affecting manufacturers' decisions to introduce EC, include: promoting transmission effectiveness, improving operation flow between departments, ensuring data accuracy, lowering transmission costs, reducing paper consumption, increasing procurement efficiency, approval and regulation, and transaction safety.
- Inability to intuitively perceive the importance of EC is a major obstacle to the application of EC in small and medium-sized businesses.
- Both the variety of product types and the status of competition affect a manufacturer's intentions to introduce EC.
- The application of EC apparently improves manufacturer performance (including increase in sales, reduction in inventory costs, and simplification of transaction procedures).

II. Government Policies

In order to push the development of EC within Taiwan, the commerce department of the Ministry of Economic Affairs has set up the 'Chinese Taipei E-commerce Policy Outline' as the basis for promoting private EC application in the country. Based on this outline, Taiwan can adhere to a development strategy "guided by private enterprises actively participating in international cooperation, setting examples by government and ensuring a fair chance for all to participate" in order to promote overall industrial competitiveness and consolidate competitive advantages.

The individual policies consist mainly of:

2.1 Executive Yuan (*Resolutions of the E-commerce Promotion Meeting*):

The Executive Yuan began integrating the resources of all government departments in July 1999. So far, a budget of NT\$1 billion has been listed for the five-year "Industrial Automation and Electronic Business Promotion Project." In the first two years, promotion will be targeted at the introduction of EC in the information technology industry, where businesses may apply for related subsidies for electronic business promotion. The guidance aims mainly to assist local information technology manufacturers to establish domestic web-based supply chain systems linking information technology manufacturers and mid-stream and down-stream suppliers.

The Executive Yuan and the Ministry of Economic Affairs are supporting and facilitating the construction of "TaiWeb," an Internet-based link between Compaq Computer Corporation and more than twenty local manufacturers. Along with government planning and financial assistance, local firms will receive business infrastructure from Compaq enabling them to link up with the supply chain which is intended to become a model integrated electronic procurement system.

2.2 Ministry of Economic Affairs

As stipulated in Article 6 of the 'Industrial Development and Upgrading Law', business operators may receive subsidies from the Ministry of Economic Affairs and enjoy a 20% tax cut for

purchases of electronic business-related software, hardware, or consulting fees for automatic equipment.

The Industrial Development Bureau of the MOEA will post a budget NT\$1-1.2 billion for electronic business promotion, within which the computer industry has been designated as the national demonstration industry for electronic business. The ten main guiding industries are computers, semiconductors, cars, motorcycles, bicycles, textiles, tools and machinery, precision apparatus, network communications and consumer electronics.

Subsidies will be provided directly to business operators working on electronic business in accordance with the current methods of subsidizing investment in automation in the manufacturing industry. The subsidy is limited to 50% of the total investment and NT\$1 million per manufacturer.

The Industrial Development Bureau will establish an electronic business service group to provide on-site guidance services for manufacturers.

2.3 Ministry of Finance

Under current government planning, Internet service companies may be eligible for listing on the stock market under the status of high-tech firms within strategic industries. Firms with this classification are exempt from the listing requirement that they must have been established for at least 3 years. The Executive Yuan has appointed the Industrial Development Bureau of the MOEA as the authority for the network service industry. The main standards for a network company include: successful industrial development and more than 50% of the company's total sales made up of the 10 top new industrial products and related technology services.

III. Look Forward to an E-World

3.1 Suggestions for the Government

Strengthen the EC infrastructure. The distinct lack of appropriate infrastructure is one of the greatest obstacles to the development of EC in Taiwan. Therefore, the government should establish a suitable environment, draw up the necessary standards, and deal with the regulations and commercial activities derived from future virtual business, in order to overcome technical problems and build up the future business mechanism. The government should simultaneously instruct all related departments to develop or propose solutions towards the key and common technologies used in developing EC as a basis for the network infrastructure. In addition, taxation, payment for goods and services, and consumer's rights and safety are crucial areas that the government must seriously consider.

Examine unemployment and related labor problems created by EC. From the experience of some advanced nations, EC may cause joblessness among older workers and those with low-level technical skills as it replaces many tasks carried out by with those workers. The government must attend to effective measures to guide and re-train these workers for other jobs.

Set an example to drive the uptake of EC by government action. The spontaneity of industry alone is insufficient to drive the take-off of EC in Taiwan; the aggressiveness of the government in promoting EC will also have an enormous influence on its development. Therefore, the government should first of all undertake promotional policies, including the transmission of documents and all government procurement through the network to demonstrate the benefits of EC. At the same time it should also cooperate with private enterprises to transfer to government departments the technical abilities and management expertise of high-ranking supervisors within private enterprises. This will create an 'electrized government', and encourage the whole society to be driven to promote and participate in the uptake of EC.

Increase Cooperation among Asian Countries.

3.2 Suggestions for Industry

Early application of EC. Industry should seek to apply EC as quickly as possible to deal with the growing challenge. The commitment and attitude of responsible people within each company will be the key to the promotion of EC.

Choosing the right business model. All companies must carefully select the correct business model in accordance with their own comparative benefits.

Good material control (home delivery system) is key to the success of EC. In many flowcharts, EC can be virtualized through networks, but it will be impossible to virtualize material distribution control. Cooperation with channel providers is necessary before a commodity can be delivered to customers. If enterprises do not have talented people or sufficient capital to establish a material control system, they can cooperate with material control businesses or form strategic alliances to control their distribution channels.

Start connecting to Asian businesses