

THE DEVELOPMENT OF THE IT INDUSTRY IN HONG KONG

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Hong Kong was a late starter in the area of Information Technology (IT); its high-tech industry is underdeveloped. This deficiency has been recognized and addressed. The Chief Executive declared the importance of bringing Hong Kong up to speed in IT in his First Policy Speech in 1997, even before the outbreak of the Asian Financial Crisis. In the aftermath of the crisis, Hong Kong has become determined to develop its IT industry through production of IT products including software and use of IT to produce goods and services, and the application of IT to trade and commerce.

Where economic activities once took place in physical space, they are increasingly taking place in cyberspace. I want to look at four implications of this New Economy and at how Hong Kong has responded to these challenges. I will conclude by discussing the opportunities they present for businessmen.

1. Industrial Policy

Hong Kong has taken up a new, proactive industrial policy. Because the New Economy is scale-neutral it offers great potential for small and medium-sized enterprises. The Internet gives firms equal access to markets and information regardless of their scale. The flexible manufacturing systems and individual design made possible by IT allow small-scale firms to compete in non-standard production activities.

Hong Kong has recently come to recognize the importance of SMEs to the age of the New Economy. Over 98% of firms in Hong Kong employ less than 100 people. Hong Kong adopted an Integrated Approach to foster the comparative advantage of SMEs establishing an SME Committee in 1996 and in 1999 instituting an SME Office and adopting an SME loan scheme to provide Information, Finance, and Technical Support and coordinated policies towards smaller firms.

2. Technology Policy

The New Economy is one of rapid change and continuous breakthroughs. Indeed it has brought a new growth paradigm, replacing the orderly flying geese pattern of sequential development based on the diffusion of production technology. Now we see clusters of production oriented around technology and involving economies at different stages of development. The clusters form and reform depending on the immediate production needs and technologies in place. I call this new development pattern 'aerobatics' because the changing clusters resemble aeroplanes forming and reforming new squads to perform different stunts.

Recognizing the pervasive diffusion of IT creates significant social benefits and positive externalities, Hong Kong has set out to build up its technological capability to make up for the past. The basis of the policy is to provide maximum support with minimum intervention. The program began in 1997 when C.L. Tien was attracted back to Hong Kong from the Chancellorship of University of California at Berkeley to head the Innovation and Technology Committee. A HK\$5.5 billion (US\$700 million) Innovation and Technology Fund was set up in 1999. In March of 1999 Hong Kong opened a 23-hectare Science Park and a 28-hectare Cyber port which was privately funded by Pacific Century. The year 2000 will bring the opening of the Applied Science and Technology Research Institute (ASTRI). Spending on R&D has increased ten-fold to a still too low 0.5% from less than 0.1%.

3. Education (Manpower) Policy

Success in the New Economy and the accompanying globalization of economic activities depends on flexible, innovative workers with an international outlook. It requires an educational system that fosters creativity, that develops competence in both the sciences and the arts, and that encourages life-long learning. Ireland's recent performance is surely due in part to its historical strength in education and tradition of supporting arts and culture.

On May 8 Hong Kong announced an unprecedented reform proposal of its educational system touching the curriculum, institutions, and quality. The reform is directed at fostering an

international, cross-cultural outlook and upgrading creativity and science capabilities.

In the near future, Hong Kong can count on importation of expertise from China and elsewhere. But in the long run, Hong Kong has to be on its own.

4. Financial Policy and Corporate Governance

The New Economy has brought with it the need for new methods of financing as well as changes in corporate governance. With the rapid proliferation of new technologies, new goods and services, and new companies the financing needs of the New Economy are not the same as those of the Old Economy. Financing based on a company's past performance leaves new companies with no history out in the cold. In the New Economy the Price/Earnings ratio is giving way to the 'Price/Expectations' ratio.

To meet the needs of its New Economy firms for financing based on risk capital and venture-capital markets rather than personal savings channeled through state-controlled banking system in 1999 Hong Kong opened a second board on the Hong Kong Stock Exchange. The GEM (Growth Enterprise Market) now consists of 23 stocks.

The changes in sources of financing are leading to changes in corporate governance. With the rise of venture capital companies have come the breaking up of traditional family firms and the increasing use of external experts and external financing. The regulatory framework needs adjusting to ensure adequate protection to investors in the presence of new financial instruments and institutions such as the Second Board, options, and market derivatives.

Over the past two years, Hong Kong has had some successes in building up its IT-related businesses. These are concentrated in three main areas and they represent ongoing opportunities for overseas investors.

1. IT Production

Hong Kong has become a Regional Headquarters or branch office and operations site for overseas manufacturers of IT equipment. As yet there are no Japanese firms and few European firms represented among the foreign IT-related firms operating in Hong Kong. They are by and large American.

Through these overseas firms Hong Kong is engaged in a wide variety of IT-related activities. Hong Kong supplies semiconductor chips to US firms and printer parts for Lexmark International of the U.S. It is involved in software as Microsoft's headquarters for activities in Asia outside of Japan and as the RHQ for other Silicon Valley firms (e.g. Persistence). Internet Service Providers Yahoo and AOL both have a presence in Hong Kong. Aiming to become a Digital Island or data processing center for Greater China, Hong Kong has attracted CMG's Asia-Pacific regional headquarters. It is regional headquarters for Baltimore Technologies, an e-commerce security firm and for Analogtech, a chip and semiconductor R&D concern.

2. Property Development and E-commerce

Hong Kong's ailing property development companies are turning to IT and e-commerce. Some have formed strategic alliances with high-tech financing ventures to develop ways to internalize IT services. For example, Sun Hung Kai has tied up with Microsoft to develop an IT service system for commercial and industrial buildings. The top floor of each new building would be designed to provide the technology infrastructure for all of the building's tenants. Sun Microsystems has been trying to find property developers as its partners in such businesses in Hong Kong.

3. Operations/Control Center for Greater China

Hong Kong has great potential as an operations and control center for Greater China once the Mainland gains entry to the WTO. It is particularly attractive as a location for databank operations. Already, Motorola has its operations center in Hong Kong while production is in Tianjin. Likewise, IBM/Compaq have their operations center in Hong Kong and production in Shenzhen. Microsoft maintains its RHQ in Hong Kong while locating R&D Beijing. Dell's regional production takes place in Xiamen and its RHQ is in Singapore, but it still has a regional office in Hong Kong. Finally Yahoo and Lucent Technologies both have operations centers in Hong Kong for their Internet businesses in Beijing and Shanghai respectively.