

Hong Kong as an Innovation Hub for Southern China¹

By Naubahar Sharif and Erik Baark

Hong Kong has experienced sweeping changes over the past decade as a result of its transition from a British colony to a Special Administrative Region of the People's Republic of China. While such significant political change makes for the biggest headlines, Hong Kong's economy is also undergoing a major overhaul as it seeks a new model for economic development through which it can take advantage of its new relationship with Mainland China. As it carves out a role in the new knowledge-based global economy, Hong Kong is positioning itself to make *innovation* a centerpiece of this effort—but can do so only if it comes to its senses and leverages its technology-based assets intelligently.

Economists and policymakers have paid too little attention to the question of technological innovation in Hong Kong's developmental experience. The few studies that have addressed the issue have emphasized the "big market, small government" policies that characterize the industrialization process in Hong Kong. To be sure, Hong Kong's entrepreneurs have adroitly exploited available technology, but generally they have not carried out research and development (R&D) to create marketable, exportable technology of their own. Indeed, technological innovation has attracted serious attention only since the handover, as the government has launched a new strategy in pursuit of knowledge-intensive economic growth. Since 1997, industrial R&D investment has been gradually rising while continuing public support of efforts to generate new technologies is helping Hong Kong transform itself into an innovation hub with global links to and from Mainland China.

The Characteristics of an Innovation Hub

Our concept of an innovation hub envisions a center of exchange that builds on the foundation of a 'trade' or 'financial' hub. Although the term 'trade hub' is of recent coinage, there is a long history of precedents in the emergence and decline of commercial centers. For example, commercial cities such as Venice occupied important positions in the European economy of the Renaissance; Venice was a focal point of the trading activity that permeated much of continental Europe and fueled the industrial revolution. Later, Amsterdam and London took its place as

‘world cities’ and, while these centers increasingly commanded the flow of goods in international trade, they also became important hubs of financial transactions. The ability to consolidate financial or trading activity is, therefore, a key to turning a city or region into a ‘hub.’ When a city is termed a ‘world city,’ therefore, it is typically because of its ability to act as an activity hub (of finance, trade, tourism or perhaps of a combination of activities). Once a locality becomes an activity hub, of course, its influence extends beyond its immediate borders into neighboring cities, regions or countries.

Now when we argue that recent developments in Hong Kong have positioned it to become an ‘innovation hub,’ we mean first that, like a trade or financial hub, its advantageous economic activity, in this case innovation, should predominate within and even beyond the region. Second, Hong Kong’s recent emphasis on innovation and technology has helped it create strong linkages and knowledge flows—relationships between industrial, financial, and other institutions in which information and new technologies are exchanged—into neighboring regions. Hong Kong can serve as an innovation hub through its ability to facilitate innovation-related activities. This means not only devoting more local resources to innovative activities in a greater commitment to R&D but also, and just as importantly, effectively applying new knowledge produced elsewhere to create additional value in the production chain.

Our vision of an innovation hub imagines a system that operates somewhat like a science park but on a broader scale that marshals the resources of several economic and social sectors—industry, finance, education and government—to create an extensive network of linkages and value-creating activities that generates and disseminates new knowledge and technology. Here in Hong Kong, these linkages would overlay those developed through Hong Kong’s historical status as a trade and finance hub. In this role, Hong Kong has traditionally served as a conduit for trading and financial activities between China (particularly the Pearl River Delta region and Guangdong province) and the rest of the world. Over the last decade, Hong Kong also has provided an increasingly attractive alternative to Western finance centers, giving Chinese firms access international sources of equity. In both cases, the key idea has been that the flow of goods, services and capital through Hong Kong is essential to its competitiveness. Hong Kong firms have facilitated this flow by capitalizing on their expertise in logistics, supply chain management and transportation, while creating a favorable environment for the movement of capital.

We believe, moreover, that the people and organizations that operate an innovation hub should devote substantial resources to innovative activities. That is, we expect to see major expenditure increases on R&D in public as well as private organizations. One of the keys to creating an innovation hub, as we see it, is to establish a *culture of innovation* within firms, which after all are the most important players within a free market innovation systems framework. This is especially important if the transition to innovation-hub status requires organizations without strong histories of innovation or R&D to upgrade their capabilities. Moreover, to maximize the use of resources and accelerate the pace of technological development, firms must learn to recognize and seize opportunities arising from the effective implementation of innovation and technology produced elsewhere. The point is to take advantage of Hong Kong's position as a gateway linking China and the world, which the government has recognized as its greatest historical and present-day competitive advantage.

An innovation hub also provides extensive services and an institutional framework that facilitates various forms of innovation. Key resources include financial institutions such as venture capital firms and a stock exchange for high technology firms as well as advanced legal, accounting and management services. An ideal institutional infrastructure would include protection of intellectual property rights. Finally, innovation hub status can be demonstrated through an analysis of 'innovation-friendly' government policies. Such policies might include loans, grants, subsidies, etc., for innovation-centered companies; the provision of services to make it easier to form 'incubation' organizations in which new ideas are made practical and readied for the marketplace; and an emphasis on fostering university-industry relationships to make it easier to bring new technologies to that marketplace.

Is Hong Kong Evolving as an Innovation Hub?

There is no doubt that Hong Kong is extensively integrated into the international economic system, and that globalization therefore has had a significant impact on the innovation system in Hong Kong. During the colonial period, Hong Kong's development was linked to policies of the United Kingdom; participants in the open economy sought opportunities on the international market. Moreover, industrial and innovation policies were governed by a *laissez-faire* attitude according to which government tried to avoid intervention in free markets and therefore didn't attempt to create new markets. This is the "big market, small government" orientation we have already mentioned. Now, however, the government's

response to globalization has included playing a more active role in bringing international business to Hong Kong and vice-versa. In particular, since the return to Chinese sovereignty, the Hong Kong government has consistently supported foreign investment and has made creating a business environment that would encourage transnational corporations to set up regional headquarters in Hong Kong a key priority.

Many Hong Kong industries have developed technological capabilities that enable them to easily link global markets with production bases in the Chinese Mainland. In the garment industry, for example, the technology that Hong Kong firms has accumulated and developed over the years supports more effective management of human resources, more efficient production and more streamlined interactions with suppliers. These technologies, sometimes termed “soft” because they have more to do with processes than products, may be vital in helping Hong Kong firms sell to buyers in the demanding, fashion-oriented markets of advanced industrial economies. They also offer benefits as urgently needed on the Chinese Mainland as those of other forms of technology.

Several important industries that compete from a base in Hong Kong were created in the wave of expansion in the manufacturing and services sectors in the 1970s and 1980s, including light manufacturing, transportation, tourism, financial and business services, and communication and media industries. Hong Kong-based industries have remained strong in specialized niches of global product markets. Thus, in the late 1990s, Hong Kong remained among the world’s largest exporters of items such as watches and clocks, toys and games, imitation jewelry, travel goods and handbags, fur clothing and telephone sets.

The relocation and expansion of producer networks from Hong Kong to the Pearl River Delta has supported the development of important producer services in Hong Kong such as financial services, insurance, communications and logistics. The relationship between Hong Kong and southern China has often been described as “qian dian hou chang” (Hong Kong as the shop in front and China as the factory to the rear). As a consequence, these transformations have resulted in an ever-growing, knowledge-based business sector whose primary activities are enhanced by innovation and research. The innovative character of these Hong Kong-based services is not adequately reflected in the available R&D statistics. The producer services offered by Hong Kong firms have been constantly improved in terms of quality, reliability and the development of innovative solutions during the last two decades.

Despite the relatively high cost of qualified labor, Hong Kong-based firms in logistics, telecommunications and finance have remained competitive in the region. Transnational service firms make up a substantial portion of the services sector and these firms have often brought the latest technological advances to Hong Kong. But service firms increasingly originate in Hong Kong and they have been aggressively adopting new systems based in information technology as their products and service delivery benefit from the resulting innovation.

In addition to offering producer services and specialized support for global production chain management, the territory has maintained and expanded its role as a regional financial centre. Notably, Hong Kong has become an important venue for raising financial resources such as venture capital or equity. It has become the largest venture capital center in Asia, managing 30% of the region's total capital pool. Most of these funds originated outside Hong Kong—the majority outside of Asia—and they often finance activities at companies outside of Hong Kong, particularly in China.

As a financial services hub, Hong Kong offers free-flowing capital and information, an independent judicial system resting on the rule of law and backed by an uncorrupted government, a very simple and straightforward tax law plus world-class transportation and information technology infrastructure. The business environment also benefits from an abundant supply of legal, accounting, finance and consultancy professionals, enabling venture capitalists to benefit from a clustering effect.

Perhaps even more essential to venture capital firms and others involved in financing innovation is the possibility of utilizing the high liquidity of the Hong Kong Stock Exchange, which has a market capitalization of US\$470 billion. Profits can therefore be earned by sales of equity shares through initial public offerings (IPOs). In an attempt to further promote Hong Kong's status as a financial service hub, the Growth Enterprise Market (GEM), established in November 1999, provides a new fundraising channel for emerging growth companies backed by a mature market and regulatory infrastructure. Over 150 companies are listed on the GEM, making up a total market capitalization of about US\$8 billion.

Although R&D and innovation have been increasing over the past several years, innovative activities are undertaken least aggressively by smaller firms. But with the government's effort to raise awareness of the importance of innovation as well as its recent innovation-promoting

initiatives, more and more smaller firms are undertaking innovative activities. This trend has emerged in part simply because R&D activities had traditionally been under-reported, but also because government assistance has increased actual R&D activity. As Hong Kong firms find it increasingly difficult to maximize profit margins through cost reduction alone, innovation and R&D loom ever larger as drivers of future profits. Combined with government incentives, business R&D expenditures in Hong Kong's smaller businesses have begun to rise over the past few years. In particular, more of Hong Kong's smaller firms are moving from relying completely on designs provided by customers to taking over design functions for themselves.

Government support of innovation in Hong Kong has grown significantly since the handover. The effort was spearheaded by the establishment of the 'Innovation and Technology Fund' (ITF), set up in 1999 with HK\$5 billion (approximately US\$650 million/€500 million) earmarked to provide funding for projects that contribute to innovation and technology upgrading in both new and established industries. The Innovation and Technology Commission (ITC) was also set up to lead Hong Kong's drive to become a world-class knowledge-based society. The establishment of The Hong Kong Science and Technology Parks Corporation (HKSTPC) is an important expression of this ambition to increase R&D spending in small firms. The HKSTPC aims to establish a flagship technology infrastructure to provide a comprehensive range of services that cater to the needs of the high technology industry at various stages, ranging from nurturing technology start-ups through the incubation program to providing facilities and services in the Science Park for applied R&D activities. It also provides land in industrial estates for production.

Among the many significant assets of Hong Kong's innovation system is its relatively dynamic higher education sector, which is particularly well-suited to fueling innovation. University research in Hong Kong is higher in quality than that of its neighbors in the region (as indicated by research output), although recently proposed budget cuts have yet to affect this part of the system. Increasing interaction with industry (in terms of technology and research transfer) marks an important policy-initiated trend in this area. In this respect, the Applied Science and Technology Research Institute (ASTRI), established in 2000 to perform high quality R&D for transfer to industry and to act as a spawning ground for technology entrepreneurs, has begun to yield dividends in the area of university-industry collaboration.

Conclusions

Hong Kong has the potential to become an important hub of innovation in Asia. We believe its history as a trade hub should eventually allow it to achieve global significance as an innovation hub as well, as it facilitates the process through which Mainland China, in particular the Pearl River Delta region and Guangdong, integrates its economy into the global marketplace. Whether Hong Kong can sustain its role as a trading centre will depend, to a considerable extent, upon how effectively its traders strengthen their innovative capabilities in establishing a new competitive edge.

As doing business through Hong Kong becomes more expensive in comparison with direct trade with China, Hong Kong companies will need to provide innovative, value-added services such as quality control, brand management, supply chain stability, etc. There is no escaping the short-term need to strengthen Hong Kong's business environment as well as the competitiveness of its trading sector if it hopes to maintain its status as a trade hub in the region. Over the longer term, this means achieving the status of an innovation hub in order to maintain its lead in providing products and services that enhance the value of just about everything of economic significance that flows to and from the Southern China region.

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¹This article is loosely based on a previous publication by the authors, "From Trade Hub to Innovation Hub: The Role of Hong Kong's Innovation System in Linking China to Global Markets", from the journal: *Innovation: Management, Policy & Practice*, vol. 8, no.1-2, pages 193-209.