Background

The Education Bureau (EDB) develops this book with the aim of enriching teachers’ understanding of the industrial policy of Hong Kong. This book contains related economic theories, case studies of some selected cities and the development of the industrial policy of Hong Kong.

It is our honour to have Dr. Law Cheung-kwok to write this book for the EDB. Dr. Law is an expert in the area of public policy and has extensive study in the industrial policy of Hong Kong.

If you have any comments and suggestions on this book, please send them to:

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Since 1997, every Government has initiated to establish high level commissions in order to formulate new industrial policies to promote Hong Kong’s economic development. For example, Mr. CH Tung set up the “Innovation and Technology Commission” in 1997, Mr. Donald Tsang organized the “Task Force on Economic Challenges” in 2008, and Mr. CY Leung established the “Economic Development Commission” and “Financial Services Development Council” in 2013.

According to the report published by the “Working Group on Long-term Fiscal Planning” of the HKSAR Government in 2014, the average long-term GDP real growth rate for Hong Kong would only be 2.8% for the next 30 years. Indeed, the average annual real growth rate was only 4.0% between 2001 and 2010 and would be 2.7% between 2011 and 2015. Despite many economic and industrial policies were declared by the governments since 1997, it seems that Hong Kong’s economic performance has been declining structurally.

As a keen observer of Hong Kong’s public policy, this is an exciting and confusion area for me. Though industrial policies are very important for Hong Kong’s future economic development and the HKSAR Government has injected billions of dollars into them, there have been very little systematic studies on the subject. There are two major reasons: (i) industrial economics is not a main stream in the economics discipline, and (ii) information and data are not readily available. With limited resources and capability, I have tried to understand this fascinated subject and published two Chinese books in 2008 and 2014 respectively. And it is my honour to share my observations and conclusions with you.

In this book, we will provide an introduction on “Hong Kong’s Industrial Policy”, starting with the relevant economic theories, following by case studies of selected cities and different types of industrial polices implemented in Hong Kong, and concluding by a brief discussion about Hong Kong’s economic prospects.
Readers of this book are secondary teachers and students. We wish this book would enhance your interest and understanding in Hong Kong’s industrial policies. If you have any comments, please contact me by the following email address: ckwoklaw@netvigator.com.

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I. Introduction

1. Introduction

In May 2015, the Chinese Academy of Social Sciences published the “Urban Competitiveness Report”. Hong Kong was overtaken the first time by Shenzhen and became number two, after ranking number one for 12 consecutive years. The report stated that Hong Kong’s core competence has been diminishing. Innovation and technology have been particularly weak. Hong Kong has not been able to restructure its economy along with the Pearl River Delta’s rapid development. The sustainability of the competitiveness of Hong Kong was questionable.

According to the report published by the “Working Group on Long-term Fiscal Planning” of the HKSAR Government in 2014, the average long-term GDP real growth rate for Hong Kong would only be 2.8% for the next 30 years. This estimate has fully taken into account of factors affecting Hong Kong’s future economic development, including the global economic situation, Mainland-Hong Kong integration, economic restructuring, productivity changes, immigration, aging, etc. Indeed, the average annual real growth rate was only 4.0% between 2001 and 2010 and would be 2.7% between 2011 and 2015. Despite many economic and industrial policies as declared by various governments since 1997, it seems that Hong Kong’s economic performance has been declining structurally.

Since 1997, every Government has initiated to establish high level commissions in order to formulate new economic and industrial policies for Hong Kong. For example, Tung Chee Hwa set up the “Innovation and Technology Commission” in 1997, Donald Tsang organised the “Task Force on Economic Challenges” in 2008, and Leung Chun Ying established the “Economic Development Commission” and “Financial Services Development Council” in 2013. Such development is in great contrast to the “positive non-intervention” strategy adopted by the British Government before 1997.

In broad terms, the Chief Secretary, Carrie Lam, highlighted the five main strategies adopting to enhance Hong Kong’s competitiveness as: (i) strengthening economic performance, (ii)
investing in infrastructures, (iii) expanding the talent pool, (iv) increasing land supply and (v) building a city with quality life for the people (Wen Wei Po, 3/12/2015, A15).

In this book, we will provide an introduction on “Hong Kong’s Industrial Policy”, starting with the relevant economic theories, following by case studies of selected cities and different types of industrial polices implemented in Hong Kong, and concluding by a brief discussion about Hong Kong’s economic prospects. There are eight Sections with the following titles:

(a) Introduction
(b) Economic Theories and Industrial Economics
(c) Industrial Development and Industrial Policy
(d) Case Studies on Industrial Policy of Selected Cities
(e) Generic Industrial Policy
(f) Industrial Policy on Four “Pillar” Industries
(g) Industrial Policy on Six “New” Industries
(h) Hong Kong’s Economic Prospects

2. Tung Chee Hwa’s New Industrial Initiatives

For a long time, many academics, political parties and business associations asked the HKSAR Government to restructure the economy and to develop high-tech industry. The then Chief Executive CH Tung took active steps to set up the “Innovation and Technology Commission”. In Tung’s 1997 Policy Address, he proposed Hong Kong would become the Centre for Product Invention and the International Centre for Chinese Medicine.

In his 1998 Policy Address, he further advocated to develop Hong Kong as:

- The leading global city in developing and applied information technology, especially maintaining leading position in electronic business and software development;
• World’s 1st Class Design and Fashion Centre;
• Asia’s Multimedia and Entertainment Centre;
• International Chinese Medicine Centre, especially in drugs and health food production;
• World’s major Supply Centre for high value-added products and components;
• Asia’s Centre for Professionals and Technology Experts, and Services Centre; and
• The best Market for Technology Transfer between the Mainland and other countries.

3. Donald Tsang’s Six “New” Industries

In view of the global financial crisis in 2008, Donald Tsang set up the Task Force on Economic Challenges. It was having the full participation by the business sector, in order to identify new economic activities for Hong Kong and enhance Hong Kong’s competitiveness. In 2008 Policy Address (para. 21), he proposed the government to promote the six “new” industries: “Apart from the four pillar industries, the six industries are crucial to the development of our economy. At present, the private sector of these six industries directly contributes about 7% to 8% of GDP, and employs around 350,000 workers, or about 10% of the total workforce.”

Subsequently, in his 2009 Policy Address (para. 97), he further stated that “Last year, I accepted the recommendations of the Task Force on Economic Challenges for the development of six industries where Hong Kong enjoys clear advantages. They are medical services, environmental industries, testing and certification, education services, innovation and technology, cultural and creative industries. We are gradually implementing the relevant measures. This is a long-term industrial development plan which can put Hong Kong on a path towards diversified and value-added economy. We will continue to monitor the development of these six industries, with emphasis on integration with the Mainland market, so as to inject new impetus into our economy.”

The Task Force had its last meeting in 6/2009 and Tsang announced that the functions of the Task Force had been fully accomplished. Further implementation of the recommendations by the Task Force was carried out by the respective Bureaus involved.
4. Leung Chun Ying’s New Attempts

Leung Chun Ying established the Economic Development Commission and Financial Services Development Council in 2013. In his first year of office, Leung Chun Ying mentioned that both the education and medical services would not be appropriate for promotion as an economic sector.

Over the years, the Economic Development Commission did undertake more detailed studies (some for internal reference only) before making recommendations for new industrial policies. For example, there was a “Report on the Feasibility Study of Establishing a Civil Aviation Training Institute in Hong Kong” to recommend setting up a Training Institute by HKAA. The objective is to guarantee the long-term manpower supply to the aviation sector. Additionally, the Government has undertaken studies for about two years before making the decision to promote aircraft leasing business in Hong Kong. These two policies are related to the aviation industry and financial sector, of which Hong Kong has clear advantages. The opportunity of participation of major corporations in these two sectors into the formulation of these two policies would have provided a higher effectiveness for the government’s initiations.

To some extent, the work of the Financial Services Development Council has overlapped with the long-standing regulatory system and advisory bodies for the financial sector, which are having the function to promote financial services as well. Thus, even though the Council completed many studies, they did not provide many new and workable ideas (please see Section (VI) (2) for more information).

Regarding the innovation and technology initiative, the Government established the Innovation and Technology Bureau in 11/2015. Other than coordinating and enhancing existing activities promoted since 1997, the new Bureau would have the policy objectives for “re-industrialization” and establishing Hong Kong as a “Smart City”.
II. Economic Theories and Industrial Economics

There has not been a coherent and vigorous theoretical framework to assist the understanding of industrial development and to guide the choice of industrial policies. Different economic theories and concepts would be drawn upon to formulate the analytical framework. In the following, relevant economic theories will be introduced briefly, so that readers could have a better sense of the complexity of the theoretical issues involved in the formulation of industrial policy.

1. Industrial Economics

Industrial Economics is a distinctive discipline in Economics which is best defined as the analysis of economic issues of firms, markets, industries and policies. Industrial Economics has two broad elements. The first one is the descriptive aspect which would include all information about the natural resources, business and competition environment, infrastructure provisions, transportation system, supply of production factors, government policies, etc. The second one concerns business decision-making, including market analysis, pricing, choice of technology, location of plant, investment and financial decisions, manpower policy, product diversification, ownership and management structure, etc. There are two related study approaches to the subject: (i) the structure-conduct-performance framework; and (ii) the price theory framework. The neoclassical microeconomic theory is the basis for the analysis. Game theory has attempted to explain more complicated interactions among market players.

In the economic literature, the content of Industrial Economics is grossly overlapping with economic subjects termed “Industrial Organization”, “Industry and Trade”, and “Business Economics”. Industrial Economics concerns more about the evolution of industry as a process, under dynamic market and policy development. Market structures and implications on economic welfare are the key issues. As implications on economic welfare would attract great attention on policy issues regarding economic development, the subject gives overriding emphasis on empirical work (market analysis, econometric analysis, general equilibrium analysis, etc.) and policy analysis (welfare analysis, cost and benefit analysis, etc.).
Public policies under Industrial Economics had a long history to focus on competition policy, free trade policy, manpower policy, economics of regulation and efficiency of government enterprises. In recent years, liberalization policy, taxation policy, enhancing institutional framework, promoting innovation and technology, fostering entrepreneurship, sustaining international competitiveness, etc., have been gaining significance in the formulation of industrial policy. Although traditionally the main focus has been on the secondary (industrial) sector, there is no reason why the study on primary or tertiary (services) sectors should not be applicable.

Industrial Economics concerns with evolution of firm and industry as a process and impacts of various government policies upon this process. For example, many countries adopted policies to liberalize monopolies in the last 20 years, including airlines, telecommunication, electricity supply and public transportation. These markets gradually turned into oligopolies. What were the roles of public policies and market processes involved in such development? How social and consumer welfare, economic efficiency, firms and political decisions were affected? Furthermore, some sectors turned from perfect competition to monopolistic competition to oligopoly, probably including convenient stores, books publishing, banking, etc. Causes, effects and quantitative impacts of public policies upon their evolving processes are key areas under study.

The objective of economists working in the field of Industrial Economics is essentially the same as that of economists working in other fields. It is to describe, explain and to draw inferences about the effectiveness with which scarce resources are used; and to comment on policies which might improve the situation. The overall aim is to understand the economic reality and consequently to improve the well being of society.
2. Neoclassical Economic Theory and the Austrian School

The Neoclassical Theory of the firms' behaviours provided the basis for Industrial Economics. Under this framework, laissez faire would be the best policy option for industrial development. Neoclassical Economics is often criticized for not explaining the economic reality. Instead, it describes a "utopia" in which the Pareto optimality would be resulted. In the dynamic context, serious analytical problems would occur as the general equilibrium theory becoming incompatible with an economy growing under the contribution of capital goods and technological advancement.

The Austrian School provides a more satisfactory theoretical framework to justify government intervention into economic activities. For example, several important propositions of the Austrian School are:

(i) the price system economizes the information that people could make their decision;
(ii) private property right is a necessary condition for rational economic decision;
(iii) the competition in the market is a process of entrepreneurial discovery; and
(iv) effective social institutions are often the result of human interactions, but not of human design.

Based on these propositions, their policy prescriptions would be limited to removing impediments to the operation of competitive process (e.g. recognizing the existence of transaction costs, promoting competition, removing market barriers, supporting free flow of information, strengthening private property rights, strengthening the rule of law, fostering entrepreneurship, strengthening effective institutions, improving government efficiency).

Whereas traditional economic theory concentrates on the costs of production, more recent work has sought to add greater realism by stressing importance of transaction costs. These are costs involved in acquiring information and those involved in concluding transactions. The explicit consideration of such costs would offer important new insights into firms' behavior and the effectiveness of certain policies.
Furthermore, there are five areas of market failure which may warrant government intervention with an active industrial policy:

(i) monopoly and oligopoly (regulation required to restrict “abnormal” profit);
(ii) provisions of public goods and services;
(iii) externalities, such as differences between private and social returns, private and social time preference rates;
(iv) high transaction cost and information cost; and
(v) other related concepts: incomplete private property rights, incomplete contract, asymmetric information, rent seeking, etc.


Welfare Economics is another sub-field in Economics that applies microeconomic techniques to evaluate economic welfare at the aggregate level. The basic theory is that under certain assumptions, competitive markets would produce Pareto efficient outcomes. Such policy studies would attempt to measure economic efficiency and equity. However, economists of the Austrian School casted serious doubts on the relevance of Pareto optimality, which would require the existence of a “social welfare function” that had many theoretical problems and could not be measured.

The decision on industrial policy requires the establishment of criteria against which results of the policy can be examined. The invariable yardstick is the impact of such policy change on economic welfare of the society as a whole. The Potential Pareto Improvement (PPI) criterion, overall welfare is enhanced by change as long as those who benefits are (theoretically) capable of compensating the losers while, themselves, remaining better off, is the generally accepted principle. Furthermore, cost and benefit analysis, and general equilibrium analysis are also quantitative tools for assessment of policy impacts.

The Public Choice theorists attempted to use economic tools to analyse issues in political science. They concluded that motives of politicians and bureaucrats were not always altruistic, so that industrial policies introduced by the government cannot be guaranteed to improve
economic welfare. Vote buying and rent seeking are important elements affecting policy
decisions, under the democratic system.

4. Economic Geography

Economic Geography is a sub-field in Geography, mainly analyzing the location, distribution
and spatial organization of economic activities across regions. It has taken many approaches
to study different subjects, including location of industries, economies of agglomeration,
transportation, core-periphery theory, economics of urbanization, etc. Many economists have
also tackled similar issues in the economics discipline.

Thus, industrial policy involves spatial distribution and coordination of various economic
activities, including transportation, logistics, housing, infrastructures, labour supply, etc. The
government could provide favourable conditions to reduce transportation costs so as to attract
and allocate resources for most efficient productions to benefit the economy. In developing
countries, it is vital to have a comprehensive understanding of the spatial elements for
successful economic development.

5. Porter’s “Industrial Cluster” Theory

The theory of “industrial cluster” by Porter provided the understanding of successful features
of an industry’s dominance in a certain location and important insights into the formulation
of industrial policies. The concept of “industrial cluster” was theorized under a competitive
advantage framework to analyse the success of various industries across locations. Competition
among similar industries is region against region. A successful “industrial cluster” in a certain
location is having following characteristics:

- A successful industry must have acquired certain “core competence” (special technology,
special economic environment, unique resource endowment, cultural value, etc.) over time,
and evolved as an integrated and sustainable learning and innovative system;
- A complete supply chain, with forward and backward linkages;
- With many professional suppliers and services providers;
- Keen competition among local firms to enhance efficiency and innovation, thus maintaining superiority;
- Mechanism for promoting synergy and cooperation among firms and public institutions;
- With strong business associations and university cooperations;
- Mechanism and platform for new knowledge and technology to be disseminated through the industry; and
- Technology expertise and management moving around private and public sectors for knowledge exchanges, particularly for the formulation and implementation of relevant policies.

An “industrial cluster” in a certain location would be self-sustaining, out-competing similar industries in other locations, with the following advantages:

- Attracting more firms and new investment;
- Enhancing the scaling and scoping effects;
- More local talents joining the industry;
- More inflow of foreign talents;
- More related services providers;
- Expanding network and market;
- Accumulation of information and knowledge;
- Intense domestic competition could promote innovation, thus maintaining comparative advantage;
- Academic institutions providing professional training, innovation and policy research;
- Strengthening professional and business associations; and
- Enhancing political (e.g., top corporate leaders joining senior government posts) and social impacts.

Porter’s theory provided an important framework for us to understand the necessary features of a successful “industrial cluster” and the subsequent dynamics to sustain and enhance its “core
competence”. If a certain “industrial cluster” would have lost its learning and innovative ability, the “cluster” would disintegrate and decline in dominance, thus overtaken by regional rivals. (Is this true for the Hong Kong’s container terminal business?)

6. Concluding Remarks

The Neoclassical economic theory, Austrian School and Industrial Economics provide us with the basic framework to understand the structure and development of different economic activities in an economy. But we do not have sufficient understanding about the dynamic nature of industrial development in various economic sectors.

The Porter Theory also analysed the characteristics of a successful industry in a certain location. However, the fundamental question would still be how “core competence” of a certain successful industry could be acquired? Could the required “core competence” of a certain industry be developed automatically or be acquired by some means from zero? Is there a role for the government to facilitate this? Porter’s theory did not provide the answer. In the following section, we would briefly introduce the theory of industrial development and the nature of different types of industrial policies.
III. Industrial Development and Industrial Policy

According to development economists, industrialization is the major force behind a country’s economic development, aiming at increasing the living standards and quality of life of the people. In general terms, industrial development of a country would depend on comparative advantage of its factors of production, e.g. labour, capital and natural resources. However, appropriate industrial policy would make a great difference for economic development (for example, the experience of China, Japan and South Korea), and human and financial resources are more important than natural resources. Over time, relative importance of traditional factors of production would be declining. Instead, innovation, technology and entrepreneurship are the key for further economic development. The developed world has been moving into this competitive era.

1. Industrial Development and City’s Growth

Industrial development involves changes in quantity and quality of various economic activities within an economy. These included changes in relative importance of various economic sectors and their spatial distribution. Industrial development reflects their natural development process under market forces and results of human planning efforts as well. Appropriate and successful industrial policy (under organized effort of the government) would promote industrial and economic development, while poor and wrong industrial policy would result in wastage of economic resources and economic stagnation.

Under market economy, do we need a centrally-guided process for industrial and sectoral development? If the answer is YES, what are the major conceptual elements and theories for an active industrial policy? Also, what are the relationships between industrial policy and other government policies, e.g. economic, social, infrastructure, fiscal, urban and education? Their relationships are very complicated and cannot be established easily.
As Hong Kong is a metropolitan city, we should also review a whole range of relevant literature explaining why a city grows. These factors are important and they are evolving over time. A static analytical framework shall not provide us with a satisfactory answer. They are mainly in the following disciplines: (i) urban economics and economic geography, (ii) economic growth and development, and (iii) institutional economics. These theories focus on three major phenomena: (i) development and sustainability of industrial specializations, (ii) accumulation of human capital, and (iii) changes in institutional structures. Economic specialization is one of the major causes and effects of urbanization.

Agglomeration economies can keep growing for a long time. The endogenous and sustainable increase in efficiency in certain city (e.g., financial services in London) could continue be larger than the high cost of production in those particular location. More innovative sectors can earn rents in the short to medium term. They can then have more resources for re-investment to prolong their technological and operational superiority. However, as cities are facing external changes and competition (e.g., Detroit went in bankruptcy in recent years), successful responses to challenges in sectoral upgrading and succession (e.g., the entire ceramic industry moving out of Foshan in Guangdong Province) are the key for sustainable development. This is consistent with Porter’s theory.

The next important factor for a city’s growth is the accumulation of human capital. As the natural birth rates are usually low for metropolitan cities, policies for importation of labour and improvement in education are the key for future development. Knowledge can increase productivity, which is embodied in people.
The third major factor suggested that institutions determined the long-term economic growth. In the regional development literature, they were interested in sector-specific institutions that would assist a region to promote a particular industry. But in a broader sense, institutions determine microeconomics and institutional environment that individuals participate in education and work, firms operate, government performs and solves problems, and public and private sectors interact.

Another important factor would be “connectivity” (less developed in the economic literature), including airports, seaports, rail-links, highways, airlines, shipping, speed trains and other land transports, etc. Connectivity determines the scale, scope and depth of economic interactions of a city with its hinterland and the outside world.

2. Four Approaches to Industrial Policy

Industrial policy is a general term referring to government’s conscious actions to achieve certain economic objectives by affecting development of various economic sectors. By focusing on specific industries and economic sectors, the government could use special funding, land provision, tax concession, labour policy, etc. to engage in these sectors’
production, operation and business directly. Industrial policy of an economy evolves over time as society develops. Such policies would be generic or specific in nature. As there has not been a coherent and vigorous theoretical framework behind the formation of industrial policy, many economists could have doubts on the theoretical foundation of such policies for various reasons. We can classify the development philosophy of different types of industrial policies into four approaches.

(a) Laissez-faire Industrial Policy

This is founded on the presumption that information flows are perfect, market could adjust perfectly and rapidly, leading to economic equilibrium and the most efficient allocation of resources. The approach holds that market is a better judge for the resources allocation than the government. Thus, most industrial policies will be rejected. The only appropriate policies are those aimed at strengthening and promoting a competitive business environment. This is similar to the approach of “positive non-intervention” adopted by the British Government before 1997.
(b) Supportive Industrial Policy

The supportive approach accepts the underlying superiority of market forces, but acknowledges the presence of imperfect information and transaction costs (in closer conformity with the Austrian theory). This advocates industrial policy to help markets function more effectively. Generally, this approach agrees to improve the allocation and enforcement of private property rights, to encourage education and entrepreneurship, to ameliorate market failure, in order to foster economic change and to recognise that external constraints may force to adopt “second-best” policy solutions.

(c) Active Industrial Policy

This active approach attempts to use wider and more direct government involvement in industrial activities. It considers that the judgment by government agencies would be more effective than the market judgment. Certain industries would be selected as “winners” by the government. They would be given financial and fiscal support to promote restructuring and protected from external competition. Furthermore, domestic competition would be promoted. For example, the operation of Industrial Reorganisation Corporation of the UK and Ministry of Economy, Trade and Industry of Japan are classic examples of an active approach to industrial policy. This is probably the description of the current policy approach adopted by the HKSAR Government.
(d) Centrally-guided Industrial Policy

The government believes that economic welfare can be improved through centrally-guided economic and productive activities. The intervention is in a much wider scale and more comprehensive in nature than under the active approach. Government enterprises are still controlling many strategic productions. Many developing countries are still at this stage of economic development, including China. Arguments for the centrally-guided industrial policy are based on the belief that the government can deal more effectively with innovation, uncertainty, market failure and imperfect information, as compared with the market and private firms.

3. Three Types of Industrial Policy

Based on the nature of different policies, we can also sub-divide major industrial policies into three different categories:

(a) Generic (or Neutral) Industrial Policy - seeking to improve the market framework within which economic agents operate. This aims to reduce market failure and promote competition, and is generally consistent with both the Austrian School and mainstream views which explicitly recognise the presence of transaction costs and imperfect markets. These would include the following:

- Reducing transaction cost and incomplete private property rights (e.g. clear-assigned property rights would eliminate many cases of market failures);
- Promoting competition (e.g. competition law, fair trade ordinance);
- Enhancing education (e.g. public education, vocational training, exchange programmes, international schools, student loans, special scholarships);
- Promoting international trade and capital flows (e.g. efficient use of resources, liberalizing capital controls, attracting foreign investment);
- Enhancing rule of law (e.g. protection of intellectual property, protection of consumers and investors, reducing uncertainty);
- Promotion of free flow of information (e.g. no restrictions on internet);
- Improving public health (e.g. public and private partnership, health insurance);
- Promoting SMEs (e.g. providing credit guarantee, provision of market information); and
- Promoting labour supply and mobility (e.g. transportation subsidy, importation of labour, child-care facilities, labour market information).

(b) Accelerative Industrial Policy - the objective of accelerative policy is to speed up the innovation and operational process of the most promising firms, markets or technologies actively (i.e., selecting “winners”), by providing financial and other supports. The premise behind such a policy is that the economy could benefit from adopting innovations ahead of its economic rivals. This has little bearing to traditional arguments, such as “infant” industry and market failure.

(c) “Revitalizing” Industrial Policy- the most frequent justification for supporting “failure” firms or industries is that their possible collapse would lead to seriously adverse effects on the entire economy (e.g., the cases of supporting AIA and GM by the US Government in 2009). Or the government considers the industry still has a bright future (e.g., garment and film industry in Hong Kong). Under both circumstances, vested interests in such industries would urge the government to provide direct funding and other supports to revitalize these industries.
4. Concluding Remarks

Nowhere is the contrast between rigorously-derived theory and loosely-derived policy prescriptions greater than that in the area of industrial policy. However, most economists invariably argue that governments should intervene in a certain industry when the market fails to provide an efficient utilisation of resources. Unfortunately, governments often intervene for reasons that have only a hazy connection with market failure.

Resources will be needed for implementing industrial policies. Government should only try to correct a market failure where the potential benefits exceed the total cost of the policy. The opportunity cost of industrial policy has rarely been discussed. The types of industrial policy that are more acceptable politically are those directed at improving the dynamic performance (higher education, supporting small and medium enterprises (SMEs), government funded R&D) of the economy. Even though such policies cannot be justified under the traditional economic theory.

The major difference among the four approaches of industrial policy is the advocacy for non-interference versus advocacy for government involvement (i.e. targeting policies to particular industries and firms. For example, in 5/2012, HK Government decided to use HK$50m to subsidize non-profit making organizations to publish e-textbooks to compete with the printed textbooks by private sector. What is the economic rationale behind this policy? The result has yet to be seen.) The basic underlying differences in belief or judgment are:

- Greater the belief in efficiency of market and impotence of government agencies, greater tendency to reject government intervention and to favour an essentially “hands-off” industrial policy;
- Greater doubt that the objective of politicians is enhancement of society’s welfare, greater tendency to advocate industrial policy with minimum government intervention; and
- The choice between laissez-faire approach or centrally-guided approach is based on the judgment regarding whether the market or the government agencies could use the information and other resources more efficiently.
In actual practice, most governments have chosen to intervene heavily and directly in some industries:

- Few governments in the world have chosen to make use solely of generic or neutral policies (aiming simply at reinforcing efficiency of market) to promote industrial development;

- Many strategic industries (e.g. banking, military related, building and construction, food related), and monopoly and oligopoly industries (e.g. power supply, transportation, iron and steel, car manufacturing, airlines, telecommunication) have been heavily regulated by government;

- Accelerative policies designed to improve the speed at which selected “winners” would prosper; and

- Many active policies are chosen to create a new supply to meet an expected profitable demand, both domestic and international.
IV. Case Studies of Industrial Policy of Selected Cities

1. Introduction

Services account for about 93% of Hong Kong’s GDP. There have been many comments suggesting that Hong Kong’s economy is not stable and sustainable. Many criticisms stated that Hong Kong should promote high-tech production and be re-industrialized. In particular, Hong Kong’s economic structure was frequently compared with South Korea, Taiwan, Singapore, Israel, Sweden, etc. However, Hong Kong’s economic structure should be compared with other metropolitan cities instead, e.g. London, New York, Tokyo, and not with countries. Manufacturing activities are having the strong tendency to move out of metropolitan areas into other parts of the country (or even beyond the border), mainly because of high operating costs. As for the relative importance of manufacturing sector and services, the following statistics (around 2012) could provide better understanding about Hong Kong’s current status:

- Hong Kong: 2% manufacturing; 93% services
- London: 2% manufacturing; 92% services
- New York: 7% manufacturing; 88% services
- Shanghai: 34% manufacturing; 62% services
- Singapore: 19% manufacturing; 76% services
- Taipei: 15% manufacturing; 80% services
- Tokyo: 7% manufacturing; 87% services

Indeed, Hong Kong’s economic structure is very similar to that of London, New York and Tokyo. In the following, the industrial policies of London, New York, Singapore and Taipei will be presented in broad terms for reference. We will highlight their main features which would provide valuable reference for Hong Kong.
2. London

Services account for about 92% of the London’s economy, very similar to that of Hong Kong. In 2011, “The London Plan” (2011-2031) report was announced by the Mayor of London. Suggested industrial policies included the following:

(i) Supporting innovation and research, promoting London as the centre for research and commercialization of R&D;

(ii) Supporting the development of higher education in London, focusing on the demand for dormitory and other special regional needs;

(iii) Ensuring adequate land supply for innovation and R&D activities, including provision of industrial and commercial premises;

(iv) Supporting development of green industry (including renewable energy, low-carbon technology, waste reduction and recycling, etc.); and

(v) Promoting development of the innovation and R&D cluster, fostering cooperation among industries, firms, high education institutions and research institutes.

Between 2011 and 2031, promoting the cluster of innovation and research in London is the key for development. Furthermore, London aims at developing as a “Connected Economy”, given the rapid development of information and communication technology. This would enhance the quality and delivery of services, reduce traffic congestion and thus improve the quality of life of people living and working in London. The promoted industrial policies for London are mainly generic in nature (e.g., promoting innovation and R&D activities) and supportive to pillar industries (e.g., application of information and communication technology), not specific for promoting certain new industries.

Moreover, according to an earlier report published by the Government in 3/2006, it stated that under many circumstances, government could not effectively resolve problems of “market failure”. The report recommended that the London Government should only intervene in certain industry if the following two conditions could be met: (i) intervention could mitigate “market failure” and (ii) intervention could significantly improve operation of industry. Thus, it is obvious
that the London Government initiated very few sector-specific policies, except information and communication technology and bio-tech.

Furthermore, based on the “London Plan”, the Mayor is having the responsibility to formulate an “Implementation Plan” for the “London Plan”, which would be revised over time. Transparency is the key for the private sector, other stakeholders and the public to understand the objectives of the Government. Regarding the effectiveness of the “Implementation Plan”, the Mayor formulated comprehensive standards and targets for policy assessment. A set of 24 “Key Performance Indicators” has been adopted. The results will be incorporated into the “Annual Monitoring Report” for the consumption of all stakeholders and the public.
3. New York

Services also achieved dominance in New York City, at about 88% of its economy. The industrial policy of New York is undertaken by the New York City Economic Development Corporation. According to its 2011 Annual Report (NYCEDC, Annual Review, 2011), its “Emerging Industries” mainly concentrated in two areas, namely green industry and bio-tech. Additionally, the City is also responsible for R&D projects assigned by the New York State Government.

In the selection of “Emerging Industries”, the New York City Government understood the reality and limitations faced by the City. On one hand, it is very important to centralize the utilization of limited resources. On the other hand, although innovation is vital for the future development of the City, it should be aware that a strategy attempting to promote a new technology or industry may not be successful.

It is the responsibility of the City Government to design detailed development targets for these new industries and set up monitoring and assessment mechanism. For these new industrial programmes, these targets should cover GDP, employment, tax revenue, environmental impacts, energy consumption, spatial distribution of the industry, technology level, investment intensity, etc. Additionally, the Government would also establish assessment and monitoring mechanisms, such that the performance of every government department involved would be assessed and rewarded.
4. Singapore

The economic structure of Singapore is a hybrid of a nation and a metropolitan city. Its industrial sector still accounted for about 24% of GDP (18% for manufacturing), including petroleum and petro-chemical industry, military-related industry, heavy industries, electronics, electricity, ship building, other high-tech, etc. Services accounted for the other 76%. In the next ten years, Singapore is aiming at increasing the total productivity by 2% to 3% annually. Given the anticipated lower growth in the labour force, the productivity increase would guarantee a GDP real growth rate of 3% to 5% annually. The seven development strategies adopted by the Government are:

(i) Applying innovation and technology to support growth;
(ii) Establishing Singapore as a Global-Asia Hub;
(iii) Building a Vibrant and Diverse Corporate Ecosystem;
(iv) Innovating business operation and enhancing commercialization of R&D;
(v) Developing Singapore as a Smart Energy Economy;
(vi) Increasing land productivity to ensure future economic growth; and
(vii) Becoming a unique international city with excellent living environment.

The industrial policies of Singapore are:

(i) Supporting the existing pillar industries: high-tech, finance, services, tourism, trading, etc.; and

(ii) Promoting three new industries: water-related tech, bio-tech and multimedia.
The Singapore Government plays a more active role and participation in the formulation of industrial policy. The Porter’s Theory has been seriously explored. Other than employment targets; the Government also sets targets on total productivity, R&D expenditure and importation of labour.

5. Taipei

Taipei is the political, economic and social centre of Taiwan. The service sector accounted for about 80% of GDP in 2013. Industry declined from about 22% in 2007 to 19% in 2013. The Taipei Government adopted a diversification policy for the development of new economic activities（臺北市政府：《臺北市產業發展政策》，2012年5月）. 16 major areas have been identified by the Taipei City Government, including information technology, bio-tech, medical services, cultural and creative, green industry, exhibition, special business, agriculture for leisure, traditional community markets, etc. Other than enhancing business environment and overall competitiveness of Taipei, the focus of industrial policy is to increase the attractiveness of Taipei as a metropolitan city. These include:

(i) Raising knowledge-base ability as the core competence;
(ii) Promoting the 16 industries;
(iii) Fostering “industrial clusters”;
(iv) Developing high value-added, knowledge-based activities; and
(v) Promoting those historical and cultural economic activities which could improve the quality of life and Taipei’s attraction.

In formulating industrial policy, Taipei Government gave detailed analysis about prospects of international development and competition among metropolitan cities. The Porter’s Theory has been seriously applied. GDP and employment were generally included as explicit targets.
6. Concluding Remarks

Regarding Donald Tsang’s six “new” industries (in which most of Tung Che Hwa’s efforts have been also incorporated into them), the following table provides a comparison with other metropolitan cities. Indeed, all the following five industries, namely cultural and creative industry, innovation and technology industry (mainly on information and communication, bio-technology), education, medical and environmental (green) industry, are being promoted by every city.
### Tsang’s Six “New” Industries and Comparing with Other Cities

<table>
<thead>
<tr>
<th>Industry</th>
<th>Hong Kong</th>
<th>New York</th>
<th>London</th>
<th>Singapore</th>
<th>Taipei</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural &amp; Creative Industry</td>
<td>✓</td>
<td>Existing</td>
<td>Existing</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Innovation &amp; Technology Industry</td>
<td>✓</td>
<td>Focus on: (i) I&amp;C Tech (ii) Bio-tech</td>
<td>Focus on: (i) I&amp;C Tech (ii) Bio-tech</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Medical Industry</td>
<td>✓</td>
<td>Existing</td>
<td>Existing</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Education</td>
<td>✓</td>
<td>Existing</td>
<td>Existing</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>Environmental Industry</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Testing &amp; Certification Services</td>
<td>✓</td>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>X</td>
</tr>
</tbody>
</table>

Source: Compiled by the author.

Notes:

✓ : Government promoting the sector actively.
X : Government did not promote the sector.

Among these five selected cities, the industrial policy by London and New York are mostly market driven. There are more government-led participations in Singapore and Taipei, and Hong Kong is somewhere in between. In the following table, we provide the theoretical backgrounds adopted by various governments to assist them to formulate their respective industrial policies. Furthermore, we summarize the major experiences (this is not a detailed analysis to examine the rights and wrongs of each city’s policies) which are relevant for Hong Kong.
### Theoretical Reference on Industrial Policy by Various City Governments

<table>
<thead>
<tr>
<th></th>
<th>Hong Kong</th>
<th>New York</th>
<th>London</th>
<th>Singapore</th>
<th>Taipei</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional competition</td>
<td>X</td>
<td>X</td>
<td>Δ</td>
<td>Δ</td>
<td>Δ</td>
</tr>
<tr>
<td>Applying Porter’s theory</td>
<td>Δ</td>
<td>Δ</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Applying market failure theory</td>
<td>X</td>
<td>X</td>
<td>✓</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Setting quantitative economic targets</td>
<td>X</td>
<td>Δ</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Setting monitoring mechanism</td>
<td>Δ</td>
<td>✓</td>
<td>✓</td>
<td>Δ</td>
<td>✓</td>
</tr>
</tbody>
</table>

Source: Compiled by the author.

**Notes:**

- ✓ : making detailed reference
- Δ : making some reference
- X : making no reference

(i) All city governments recognized the importance of formulating industrial policies to enhance the competitiveness of their respective “pillar” industries.

(ii) The promotion of new industrial activities by different metropolitan cities is usually very focused, for example, in the cases of London, New York and Singapore, except in the case of Taipei.

(iii) For the formulation of industrial policy, city governments had sparsely made direct reference to the regional competition environment. There were little discussions about the industrial policies adopted by other neighboring cities and their relative comparative advantage.
(iv) The Porter’s theory of “industrial cluster” has been generally referred to by all city governments, particularly regarding the enhancement of existing pillar industries. However, regarding the development of new industries, very little references and analyses have been undertaken based on the Porter’s theory.

(v) For the case of London, the theory of “Market Failure” has been seriously pursued. But this has not been sufficiently followed by other governments. The existence of “Market Failure” has been used by many governments as the rationale for intervention. However, this is only a necessary condition, but not the sufficient. Given “Market Failure”, the government may fail too to do a better job to mitigate the situations.

(vi) For the formulation of industrial policy, city governments had generally provided some quantitative targets, mainly on GDP, employment and investment. In fact, London designed a detailed “Key Performance Indicators” scoreboard with 24 parameters and was required to submit an annual monitoring report. However, the linkage between effective implementation and clear policy objectives has not been vigorously explored.

(vii) Singapore puts much emphasis on promoting productivity and considers this as a vital strategy to sustain its economic and social development. Very few cities have had such an explicit strategy on raising productivity.

(viii) For a country, the industrial policy of its largest city (or other metropolitan cities included) would be the core part of the industrial policy of the entire country. For example, the industrial policy adopted by New York City is the core of industrial policy implemented by New York State Government as well. It receives funding and strategic supports from New York State and the entire country. This is the same case for London and Taipei. How Hong Kong, under “One-country, Two-systems”, would fit into the industrial policy of Guangdong and the mainland as a whole? This is a very crucial issue. Hong Kong should explore the economic integration with the mainland constantly and cautiously. For many of the new industries considered to be developed by the Hong Kong Government, including manufacturing of Chinese medicine, high-tech production, bio-tech, high-end car components, etc., it would be very difficult for Hong Kong to expand their productions (into a meaningful scale) just by itself.
The new industrial policy reflects the long-term vision of a society. It must be aiming at enhancing the overall welfare of the people, including improving the living environment and better quality of life for every citizen (achieving better social equality is a very important objective as well). Relating industrial policy to GDP to employment to the quality of life of the people is not straightforward. This involves the administrative capability of the government, consensus of the public and support of the private sector. It should be aware that the formulation of industrial policy, engaging the public and undertaking the assessment mechanism properly are all important elements of the development process.
V. Generic Industrial Policy

1. Introduction

The Generic (or Neutral) Industrial Policy as described above seeks to improve the market environment within which economic agents are operating. There are many types of generic industrial policy adopted by the Hong Kong Government over the years (e.g. market liberalization, protection of intellectual property, strengthening the rule of law, promoting international trade and investment, promoting capital market development, enhancing education, promoting financial stability, rationalizing the housing market, improving public health, etc.). In the following parts, two major policies would be presented for reference, namely the SMEs’ policy and competition policy.

2. SMEs’ Policy

SMEs accounted for 98% of firms and 50% of the employment in Hong Kong. Hong Kong Government had a long history to provide supports for SMEs, despite their business nature. In 1960, Hong Kong Government established the Hong Kong Export Credits Insurance Corporation, and then the Trade Development Council and Hong Kong Productivity Council in 1966. These are semi-government organizations providing financial, market information, technology and management services for SMEs. In 2000, Hong Kong Government set up InvestHK to attract foreign investment, including foreign SMEs.
Since 1997, the Government has established many specific funds to support the development of SMEs in Hong Kong. Each of the schemes is designated to meet different business needs, such as guarantee for bank loans, sponsorship for export marketing activities, funding for SMEs’ development projects and commercialization of innovation and technology ideas. Major funds established by the Government include the following.

(a) In the early 2000s, the SME Development Fund was set up to provide financial support for non-profit organizations to implement projects which aimed to enhance the competitiveness of Hong Kong’s SMEs. Projects could include seminars, workshops, conferences, exhibitions, research studies, award schemes, codes of best practices, databases, service centers, support facilities and technology demonstration, etc. The maximum amount of funding support for each approved project is HK$5m, or 90% of the approved project expenditure. The applicant has to contribute the remaining 10% of the project expenditure, which may be in cash, in kind or in the form of sponsorship.

(b) The SME Export Marketing Fund aims at providing grants for SMEs to encourage them to participate into activities for export promotion. The Fund can be used for trade fairs, business missions, advertisements and export promotion, etc.

(c) A SME Loan Guarantee Scheme was set up in 2001 and aimed to help SMEs secure loans from banks for (i) acquiring business installations and equipment, and (ii) meeting working capital needs of general business used. The amount of guarantee for an SME is 50% of the approved loan, subject to a maximum amount of HK$6m. The Scheme has been extended and expanded several times.

(d) In fact, another Special Loan Guarantee Scheme was set up in 2008 to help firms secure loans from banks for meeting general business needs to tide over the liquidity problem during the global financial crisis, with the Government acting as the guarantor. The loans should not be used for repaying, restructuring or repackaging other existing loans. The Government provides a guarantee of up to 80% of the approved loan. The maximum loan amount for each firm is HK$12m. Within this limit, a firm may obtain a revolving credit up to HK$6m. The maximum guarantee period for each loan is 60 months.
(e) In recent years, a “Small Entrepreneur Research Assistance Programme” was established, providing dollar-to-dollar matching grants up to HK$2m per project to help small start-ups to turn innovation and technology ideas into commercially viable products, processes or services. The funding ceiling increased to HK$6m in 2012.

(f) The Government also set up a “Dedicated Fund on Branding, Upgrading and Domestic Sales” of HK$1b in 6/2012. The Fund aims to provide funding support to assist firms in exploring and developing the mainland market through developing brands, upgrading and restructuring operations, and promoting domestic sales in the mainland. Funding will be provided on a matching basis, i.e. the Government will cover a maximum of 50% of the total approved project cost and the firm has to contribute no less than 50% in cash. The total cumulative funding ceiling per firm is HK$500,000.

3. Competition Policy

Hong Kong has been ranked number one “free economy” by Heritage Foundation for 21 years till 1/2015 and topped other “international competitiveness” rankings as well. The concept of “international competitiveness” is different from whether various markets in Hong Kong have been operating competitively. “International competitiveness” refers to whether goods and services produced in Hong Kong are competitive or not in the international market. However, the concern on whether various markets in Hong Kong, e.g. telecommunication, electricity, banking services, housing, labour, public transportation, supermarkets, gasoline, newspapers, beef, text books, etc. are competitive markets or not is similar to ask the question of whether goods and services in Hong Kong are trading at a fair and competitive price. This would have a direct bearing on consumer welfare. Competition policy can be considered as a very important industrial policy, aiming at promoting economic efficiency across all economic sectors.

If a market is perfectly competitive, there are many sellers and buyers. Market prices will be “fair” and cost would be the lowest. There would not be any abnormal profit at equilibrium. If a certain market is imperfect (e.g., monopoly, oligopoly); sellers would tend to restrict supply and raise prices, thus affecting welfare of consumers. It is largely the consensus of the public that
the government should be responsible for promoting competitive markets, in order to protect consumers’ welfare and promote economic efficiency.

There are competition laws or fair trade ordinances in many countries, e.g. US (1890), Japan (1945), UK (1948), EU (1957), Taiwan (1991), China (1995), Singapore, South Korea, India, Australia and Canada. A Competition Ordinance was only legislated in Hong Kong in 6/2012. Hong Kong’s Competition Commission was set up in 4/2013 and the Law has just been implemented in 12/2015.

(a) Development of Competition Policy under the Scheme of Control

Under free market philosophy, Hong Kong Government did not regulate operations and profits in most markets. However, as for the monopolies providing essential services to society, the Government implements a regulatory framework to restrict their profits. For example, in 1964, China Light and Power (CLP) signed the first “Scheme of Control” with the Government, which provided a 13.5% of “permitted rate of return” based on the “average net fixed assets” for 15 years. CLP is a monopolist supplying electricity to Kowloon and the New Territories, and the Government considered necessary to regulate its pricing and profit. The latest “Scheme of Control” was signed in 2008 and would be expired in 2017.

Similar schemes were widely adopted and applied to other electricity companies, public buses, telecommunication, gas company, airport services, etc. throughout 1980s. This Scheme was under strong criticism, as companies tended to expand assets unnecessarily for higher profits. Thus, consumers might be required to pay higher prices to support the new investment. As technology and market operation developed over time, the “Scheme of Control” framework was generally liberalized in 1990s to promote efficiency and consumers’ welfare.
Furthermore, due to unsatisfactory performance of some public bus services, the Government also granted two new licenses: Citybus (1991) and New World Bus (1998). New routes’ operating rights were granted by public tender instead. This is a good mechanism promoting a certain degree of competition among bus companies. For the existing routes, if the performance of a certain operator was not satisfactory, some of their routes would be taken out for public tendering. Indeed, all Schemes of Control, except electricity, were ended before the end of 1997.

(b) Liberalization of the Telecommunication Sector

Technological development reduced the cost of delivering telecommunication services in 1990s significantly. In 1993, the Government introduced a new “price-cap” scheme ((CPI-4%), the maximum for annual price adjustment) to regulate different kinds of telecommunication services. In 1995, three new licenses for domestic fixed-line telecommunication services were granted. Currently, the local fixed carried service market has been fully liberalized. There is no limit on the number of licenses issued. There is no specific requirement on network rollout or investment. As at 5/2015, there were 23 licenses permitted to provide local fixed carrier services.

On the other hand, the Hong Kong Telecommunication International Ltd (HKTInt) obtained its exclusive operating license for the provision of international telephone services in 1981 for 25 years. The Government would not regulate prices and charges. The license would be expired in 2006. In order to fully liberalize the IDD market, the Government and HKTInt reached an agreement in 1/1998, with the following terms:

(i) Starting 1/1/1999, opening up international services indirectly, e.g. permitting international Simple Resale;

(ii) Starting 1/1/2000, other operators could provide IDD services directly;

(iii) The Government provided a compensation of HK$6.7b for HKTInt to end the exclusive IDD license; and

(iv) HKT has been given more flexibility to adjust domestic prices.
Regarding the markets for mobile phone and internet services, the Government is aiming at promoting competition. There are no barriers for entry. Currently, there are four companies providing the services: namely Hong Kong Telecommunications, Hutchison Telephone Company, SmarTone and China Mobile. There have been some consolidations in the market in recent years, for example, China Mobile acquired People’s Telecommunications and SmarTone acquired New World Telecommunications.

Additionally, the 3G licenses held by four companies (HK Telecommunications, CSL, Hutchison Telephone and SmarTone) will be expired in 10/2016. The Office of the Communications Authority announced in 9/2014 that it would adopt a hybrid administratively-assigned cum market-based approach to re-assign the 3G Spectrum upon the expiry of the existing assignment. Under the hybrid approach, each of the four incumbent assignees would be offered a right of first refusal (RFR) to be re-assigned two-third of its existing holding. The remaining one-third and any Spectrum not taken by the incumbent assignees under the RFR would be re-assigned through auction. The policy objective is to promote more competition in the market. Existing operators provided strong arguments against this policy, suggesting that prices might increase sharply and services would be disrupted.
The Consumer Council, under its mandate, had been vigorously promoting consumer welfare and undertaking market studies to identify anti-competitive behaviours in various economic sectors since early 1990s. In 1997, Consumer Council published a report proposing the legislation of a comprehensive competition law in Hong Kong. In response to this proposal, the Government considered that competition was important for Hong Kong, but it would not be necessary to formulate a competition law. Instead, the Government set up a “Competition Policy Advisory Group” (COMPAG) in 12/1997, headed by the Financial Secretary. The major tasks undertaken by COMPAG were:

- Receiving and taking follow-up actions on competition-related complaints;
- Monitoring government departments to promote competition within their policy areas;
- Strengthening work of the “Trade Practices Division” of Consumer Council; and
- Releasing another report in 2003 on maintaining a competitive environment and tackling anti-competitive practices.

In the Legislative Council, there were heated motion debates regarding the introduction of a comprehensive competition law in 1993 and 1996. There were similar debates in recent years. However, representatives from business sectors had been against the policy vigorously.

In 11/2006, the Government launched a public consultation on the way forward for Hong Kong’s competition policy. Two consultation papers were issued by the Government in 11/2006 and 5/2008 on detailed proposals for a competition law, of which the public expressed general
support. The Competition Bill was tabled for Legislative Council’s consideration in 7/2010 and passed in 6/2012. The Competition Commission has been established in 2013. Guidelines were formulated in early 2015. The law has eventually been implemented in 12/2015.

Moreover, even before the legislation of the comprehensive Competition Ordinance in 2012, similar provisions have already been imposed to regulate the unfair competition in certain industries, particularly the telecommunication industry and broadcasting industry. Based on the Broadcasting Ordinance (legislated in 2000), TVB was determined as “abusing market power” against its artists and singers by the Communications Authority in 2013. Consequently, TVB agreed to remove certain “exclusionary clauses” from its contracts.

4. Concluding Remarks

SMEs’ policies are rather straightforward and well received by the business community and society. Regarding the competition policy, the Government adopted a more active role since the 1990s, which led to the implementation of a comprehensive Competition Ordinance in Hong Kong in 12/2015.

Generic (or neutral) industrial policies aim to promote competition and reduce market failure, and are generally consistent with both the Austrian School and mainstream views which explicitly recognise the presence of transaction costs and imperfect markets. These policies do not usually result in severe controversy in society (the Competition Ordinance was an exception). These provisions and supports are not sector-specific. Their benefits could enhance the long-term core competence of the entire economy.
VI. Industrial Policy on Four “Pillar” Industries

1. Introduction

Tung Che Haw’s Government introduced the concept of four “pillar” industries in late 1990s. As in 2013, their total GDP contribution was about 58%: (i) financial services (16.5%), (ii) tourism (5.0%), (iii) trading and logistics (23.9%), and (iv) professional services and other producers services (12.4%). Many industrial policies are geared towards the sustainability of these sectors.

Financial services’ contribution to GDP remained rather stable at about 16% between 2006 and 2013, except in 2007 (20.1%) mainly due to a very strong share market. But its employment share maintained between 5% and 6% only (there were many high income jobs). Tourism increased gradually from about 3% in 2006 to 5% in 2013, mainly due to the great influx of mainland tourists. Correspondingly, employment share increased from about 5% to 7% (these were labour intensive services).

Trading and logistics declined from about 26% of GDP in 2006 to 23.9% in 2013. Correspondingly, the employment share declined continuously from about 24% to 20.6% (losing competitiveness). Professional services were about 11% in 2006 and increased gradually to 12.4% in 2013, with its employment share increased from 12% to 13% as well. (What happened to Hong Kong’s property sector? Should property, including construction, be considered as a “pillar” industry for Hong Kong?)
### Value added Statistics of Four Key Industries and other Selected Industries

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Annual percentage change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$Bn in total</td>
<td>% share</td>
<td>$Bn in total</td>
<td>% share</td>
<td>$Bn in total</td>
</tr>
<tr>
<td><strong>Value added at current prices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Four Key Industries</em></td>
<td>1,014.1</td>
<td>58.4%</td>
<td>1,112.8</td>
<td>58.5%</td>
<td>1,166.8</td>
</tr>
<tr>
<td><em>Financial services</em></td>
<td>283.8</td>
<td>16.3%</td>
<td>305.3</td>
<td>16.1%</td>
<td>319.3</td>
</tr>
<tr>
<td><em>Tourism</em></td>
<td>74.6</td>
<td>4.3%</td>
<td>86.2</td>
<td>4.5%</td>
<td>94.6</td>
</tr>
<tr>
<td><em>Trading and logistics</em></td>
<td>439.6</td>
<td>25.3%</td>
<td>485.4</td>
<td>25.5%</td>
<td>495.4</td>
</tr>
<tr>
<td><em>Professional services and other producer services</em></td>
<td>216.1</td>
<td>12.4%</td>
<td>235.9</td>
<td>12.4%</td>
<td>257.6</td>
</tr>
<tr>
<td><strong>Other selected industries</strong></td>
<td>143.8</td>
<td>8.3%</td>
<td>161.2</td>
<td>8.5%</td>
<td>175.9</td>
</tr>
<tr>
<td><em>Cultural and creative industries</em></td>
<td>77.6</td>
<td>4.5%</td>
<td>89.6</td>
<td>4.7%</td>
<td>97.8</td>
</tr>
<tr>
<td><em>Medical services</em></td>
<td>26.1</td>
<td>1.5%</td>
<td>27.4</td>
<td>1.4%</td>
<td>29.5</td>
</tr>
<tr>
<td><em>Education services</em></td>
<td>17.5</td>
<td>1.0%</td>
<td>20.0</td>
<td>1.1%</td>
<td>22.6</td>
</tr>
<tr>
<td><em>Innovation and technology</em></td>
<td>11.8</td>
<td>0.7%</td>
<td>12.4</td>
<td>0.7%</td>
<td>13.4</td>
</tr>
<tr>
<td><em>Testing and certification services</em></td>
<td>5.2</td>
<td>0.3%</td>
<td>5.4</td>
<td>0.3%</td>
<td>5.8</td>
</tr>
<tr>
<td><em>Environmental industries</em></td>
<td>5.6</td>
<td>0.3%</td>
<td>6.5</td>
<td>0.3%</td>
<td>6.8</td>
</tr>
<tr>
<td><strong>Nominal GDP at basic prices</strong></td>
<td>1,737.3</td>
<td>100.0%</td>
<td>1,901.0</td>
<td>100.0%</td>
<td>2,013.0</td>
</tr>
</tbody>
</table>

Source: Census and Statistics Department
Employment Statistics of Four Key Industries and other Selected Industries

<table>
<thead>
<tr>
<th>Industry and Services</th>
<th>2010</th>
<th>% share in total</th>
<th>2011</th>
<th>% share in total</th>
<th>2012</th>
<th>% share in total</th>
<th>2013</th>
<th>% share in total</th>
<th>Annual percentage change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Four Key Industries</strong></td>
<td>1,670.1</td>
<td>48.0</td>
<td>1,706.0</td>
<td>47.7</td>
<td>1,727.6</td>
<td>47.2</td>
<td>1,764.2</td>
<td>47.3</td>
<td>2.1 1.3 2.1</td>
</tr>
<tr>
<td><strong>Financial services</strong></td>
<td>216.7</td>
<td>6.2</td>
<td>226.3</td>
<td>6.3</td>
<td>228.8</td>
<td>6.3</td>
<td>231.7</td>
<td>6.2</td>
<td>4.4 1.1 1.3</td>
</tr>
<tr>
<td><strong>Tourism</strong></td>
<td>215.1</td>
<td>6.2</td>
<td>235.9</td>
<td>6.6</td>
<td>250.9</td>
<td>6.9</td>
<td>269.7</td>
<td>7.2</td>
<td>9.7 6.3 7.5</td>
</tr>
<tr>
<td><strong>Trading and logistics</strong></td>
<td>778.2</td>
<td>22.4</td>
<td>774.4</td>
<td>21.6</td>
<td>764.9</td>
<td>20.9</td>
<td>767.2</td>
<td>20.6</td>
<td>-0.5 -1.2 0.3</td>
</tr>
<tr>
<td><strong>Professional services and other producer services</strong></td>
<td>460.1</td>
<td>13.2</td>
<td>469.4</td>
<td>13.1</td>
<td>483.0</td>
<td>13.2</td>
<td>495.6</td>
<td>13.3</td>
<td>2.0 2.9 2.6</td>
</tr>
<tr>
<td><strong>Other selected industries</strong></td>
<td>406.7</td>
<td>11.7</td>
<td>420.7</td>
<td>11.8</td>
<td>435.0</td>
<td>11.9</td>
<td>450.3</td>
<td>12.1</td>
<td>3.4 3.4 3.5</td>
</tr>
<tr>
<td><strong>Cultural and creative industries</strong></td>
<td>189.4</td>
<td>5.4</td>
<td>192.9</td>
<td>5.4</td>
<td>200.4</td>
<td>5.5</td>
<td>207.5</td>
<td>5.6</td>
<td>1.8 3.9 3.6</td>
</tr>
<tr>
<td><strong>Medical services</strong></td>
<td>73.5</td>
<td>2.1</td>
<td>76.3</td>
<td>2.1</td>
<td>79.0</td>
<td>2.2</td>
<td>82.1</td>
<td>2.2</td>
<td>3.8 3.5 4.0</td>
</tr>
<tr>
<td><strong>Education services</strong></td>
<td>66.5</td>
<td>1.9</td>
<td>70.7</td>
<td>2.0</td>
<td>73.1</td>
<td>2.0</td>
<td>74.9</td>
<td>2.0</td>
<td>6.3 3.4 2.5</td>
</tr>
<tr>
<td><strong>Innovation and technology</strong></td>
<td>28.8</td>
<td>0.8</td>
<td>29.3</td>
<td>0.8</td>
<td>30.2</td>
<td>0.8</td>
<td>32.0</td>
<td>0.9</td>
<td>1.5 3.3 5.8</td>
</tr>
<tr>
<td><strong>Testing and certification services</strong></td>
<td>12.4</td>
<td>0.4</td>
<td>13.1</td>
<td>0.4</td>
<td>12.8</td>
<td>0.3</td>
<td>13.1</td>
<td>0.4</td>
<td>5.8 -2.5 2.4</td>
</tr>
<tr>
<td><strong>Environmental industries</strong></td>
<td>36.1</td>
<td>1.0</td>
<td>38.4</td>
<td>1.1</td>
<td>39.5</td>
<td>1.1</td>
<td>40.7</td>
<td>1.1</td>
<td>6.3 3.1 2.9</td>
</tr>
<tr>
<td><strong>Total Employment</strong></td>
<td>3,478.6</td>
<td>100.0</td>
<td>3,579.6</td>
<td>100.0</td>
<td>3,657.1</td>
<td>100.0</td>
<td>3,728.5</td>
<td>100.0</td>
<td>2.9 2.2 2.0</td>
</tr>
</tbody>
</table>

Source: Census and Statistics Department

Regarding the specific industrial policy supporting the four “pillar” industries, we select the financial services and logistic services for further analysis.
2. Financial Industry

The financial sector accounted for about 16.5% of GDP. The major features of Hong Kong's financial industry (including commercial banking, investment banking, securities industry, insurance industry, wealth and fund management) are the following (by end-2014):

- 71 of World's top 100 banks operating in Hong Kong;
- About 300 foreign-owned financial institutions operating in Hong Kong;
- The world’s 13th largest banking centre in terms of external assets;
- 5th largest centre for forex trading;
- 6th stock market in terms of market capitalization;
- 2nd in terms of total equity funds raised (2nd in 2013);
- About US$2,300b under asset management (3rd in the world); and
- Top RMB offshore banking centre (accounted for about 70% of cross-border RMB transactions and deposits).
(a) “Core Competence” and Enhancement Policies

The major factors of “core competence” of Hong Kong’s financial services are the following and Hong Kong Government has been actively promoting their sustainability:

- A strong cluster of international and mainland firms, and other services providers;
- Strong links with high growth areas: the mainland and Asia;
- Free capital flows and highly liquid market;
- Rule of law;
- A sound, forward looking international standards and transparent regulatory regime;
- Highly educated financial professionals and easy entry of overseas professionals;
- A robust real-time interbank payment system in HK$, US$, Euro & RMB;
- Free press and free flow of information; and
- Excellent international transport connectivity.

Since 1997, many specific policies have been implemented by the Government to strengthen the competitiveness of the financial industry, including the implementation of CEPA, provision of infrastructure and policy to promote RMB business, strengthening the regulatory system, promotion of Islamic finance, adopting liberal policy to permit foreign financial professionals working in Hong Kong, enhancing financial education, protection of investors, etc.

(b) The Financial Services Development Council

Other than the long-standing regulatory system and advisory bodies for the financial sector, Hong Kong Government set up the Financial Services Development Council in early 2013, with the following objectives:

- Advising the government on strategies and measures to expand the scope of financial markets and enhance the competitiveness of Hong Kong as an international financial centre;
- Providing a channel for stakeholders to express views and champion the interests of the financial services industry;
• Supporting of the financial services industry in developing the core competence and knowledge of its practitioners; and
• Promoting Hong Kong as an international financial centre in the mainland and overseas.

The Council was established to promote the financial industry and published five policy reports in the first year, namely:

• *Strengthening Hong Kong as a Leading Global International Financial Centre*;
• *Proposals to Advance the Development of Hong Kong as an Offshore Renminbi Centre*;
• *Development and Reform of Mainland China’s Financial Sector and the Strengthening and Enhancement of Hong Kong’s Pivotal Role as a Financial Centre*;
• *Developing Hong Kong as a Capital Formation Centre for Real Estate Investment Trust*; and
• *Proposals on Legal and Regulatory Framework for Open-ended Investment Companies in Hong Kong*.

In the first report on “*Strengthening Hong Kong as a Leading Global International Financial Centre*”, the major business opportunities identified were: (i) capturing the mainland’s businesses; (ii) expanding asset management; and (iii) attracting companies from different countries listing in Hong Kong.

(c) The Securities and Futures Commission

The securities industry is a major sector of the financial industry and has great potential for further development. The Securities and Futures Commission (SFC) is the regulatory body for the stock and futures markets. The work and operation of SFC signify the industrial policy towards the industry. The mandates of SFC are:

• Developing and maintaining competitive, efficient, fair, orderly and transparent securities and futures markets in Hong Kong;
• Helping the public to understand the working of the market;
Providing protection to investing public;
Minimizing crime and misconduct in the market;
Reducing systemic risks in the industry; and
Assisting the government in maintaining financial stability.

According to the Securities and Futures Ordinance, SFC is empowered to:
License and supervise intermediaries, monitoring their compliance with relevant laws and conduct requirements in carrying out regulated activities;
Supervise market operators and enhance infrastructure;
Oversee regulations governing merger and acquisition of public companies;
Authorize offering documents and investment products for retail investors;
Investigate breaches of Ordinance and relevant codes, and take appropriate enforcement actions;
Co-operate with and provide assistance to local and overseas regulatory authorities, and
Help investors understand operation of markets, risks of investing and their rights and responsibilities.

SFC is one of the four regulatory bodies for the financial markets. Other than regulating securities and futures markets, SFC also supervises Hong Kong Exchanges and Clearing Ltd. Its subsidiary, the Stock Exchange of Hong Kong Ltd., is the frontline regulator of listing and related matters. However, the operation of SFC should not unduly hinder legitimate activities in the market, though wrongdoings should be detected early and potential risks be contained. The functions and operation of the SFC represent the Government’s industrial policy towards the securities sector.
3. Logistics Industry

Trading and Logistics accounted for 23.9% of GDP in 2013 (trading 20.6% and logistics by 3.3%), which was down from 26% in 2006. Total employment accounted for 20.6% in 2013, down from 24.3% in 2006. This is still the most important sector for Hong Kong, but there has been a clear declining trend in the last few years, mainly due to declining international trade and increasing regional competition. Total international trade rebounded very rapidly in 2010 (24% by value) and moderately in 2011 (11%). However, total trade was very weak subsequently, increased only by 2.8% in real terms in 2013, and 2.1% in 2014.

We would focus the subsequent analysis on the logistics sector (using 2013 statistics, the contribution of logistics industry was 5.3% (3.3% for the core activities) in GDP and 7.4% in employment) because it is the main driver for the trading activities. Its “industrial cluster” consists of three parts:

(i) Transport services — including air, water and land freight transports; and freight forwarding services;

(ii) Warehousing and distribution services — facing regional competition, high operating cost, insufficient land; and

(iii) Other high-value added services: information-technology platforms, e-commerce, regional supply and distribution center, maritime services, training, etc.
(a) “Core Competence” and Enhancement Policies

The “core competence” of the industry includes:

- Free port and efficient custom services;
- Excellent connectivity: sea, air and land;
- Good location: the Mainland and Asia are high growth areas;
- Strong government policy supports;
- Strong supporting services: finance, information technology, legal; and
- Diligent work force and flexible operating environment.

Hong Kong Government established or participate in many statutory bodies, infrastructure and other platforms to promote international trade which would benefit logistics directly:

- Export Credit Insurance Corporation in 1960;
- Trade Development Council (many overseas offices) and Hong Kong Productivity Council (with offices in mainland as well) in 1966;
- Many trade associations and chambers of commerce (AmCham, HKGCC, HKFI, etc), bilateral trade promotion platforms, APEC, Pan-PRD initiatives;
- The Government has set up many overseas offices in major international and mainland cities;
- Setting up co-operative arrangements with Guangdong and Shenzhen governments, CEPA, etc.;
- Establishing Industrial Parks, Science Park, data centers, testing & certification laboratories, Port Authority, HKAA, planning for logistic parks, etc;
- Strengthening connectivity with the mainland and the World: HK-ZH-M Bridge, Speed Rail Link, cross-border Road Links, sea links, aviation Links, building the 3rd Runway, etc.; and
- Upgrading custom services--GPS technology, other supply-chain technology, etc.
(b) Increasing Challenges

But Hong Kong’s logistics industry is facing many challenges, mainly from regional competition:

- High cost of operation in Hong Kong;
- Logistics is land-intensive operation, but land supply is very limited;
- Long lead-time for infrastructure constructions in Hong Kong: 3rd Runway, Container Terminal 10, etc;
- Rapid ports (Yantian, Nansha) and airports (2nd Runway in SZ Airport by 2011, 3rd Runway in GZ Airport by 2015) development in PRD, competing directly with Hong Kong; and
- Singapore and South Korea are gaining their competitiveness rapidly.

4. Concluding Remarks

Industrial policies for the “pillar” industries are usually better perceived, as the advisory bodies and consultative procedures have been well established. Major firms in the industry are well represented and lead the development of new policies under the Government’s support. These “pillar” industries have established their “clusters” and “core competence”. Their sustainability is enhanced by their self-learning ability and innovation capability.

However, there are still important areas where the Government could play a more active role, including training of adequate manpower, easing of importation of labour, provision of infrastructure support (e.g. transportation links), land provision (e.g. child-care centers, logistic parks, commercial premises, ), etc.
VII. Industrial Policy on Six “New” Industries

1. Introduction

In Donald Tsang’s 2009 Policy Address (Para 21) he proposed the development of six “new” industries. “Apart from the four pillar industries, the six industries are crucial to the development of our economy. At present, the private sector part of these six industries directly contributed about 7% to 8% of GDP, and employs around 350,000 workers, or about 10% of the total workforce.” The selection of these six industries was mainly based on inputs from various government departments, academic institutions, think tanks and business associations; their potential long-term contribution, comparative advantage and connections with the Pearl River Delta.

Over the years, the GDP contribution of the Six Industries did not record any significant increase, except the Cultural and Creative Industry. Their respective GDP contributions (the private sector side) in 2008 and 2013 were:

- Six Industries: 7.5% (2008); 9.1% (2013)
- Cultural and Creative: 4.0% (2008); 5.1% (2013)
- Medical: 1.4% (2008); 1.5% (2013)
- Education: 1.0% (2008); 1.2% (2013)
- Innovation and Technology: 0.6% (2008); 7% (2013)
- Testing and Certification Services: 0.3% (2008); 0.3% (2013)
- Environmental Services: 0.3% (2008); 0.3% (2013)

Among these Six Industries, there has been a lot of interest in the Innovation and Technology Industry in particular. Many academics and industry experts have long been advocating for the development of high-tech industry. Indeed, there were two important publications in 1997: (i)
“Made by Hong Kong” by Berger and Lester, and (ii) “Technology and Industrial Development in Hong Kong” by Kai-sun Kwong. They had very similar recommendations for promoting the development of technology industry in Hong Kong. However, according to official statistics, GDP contribution was only 0.7% in 2013, very little advancement in last 10 years.

Indeed, the HKSAR Government started the innovation and technology initiatives in 1997 and the Government further deepened them later. In 1997, the “Innovation and Technology Commission” was set up under the Communication and Technology Branch of Commerce and Economic Development Bureau, which was “responsible for spearheading Hong Kong’s drive to become a world-class, knowledge-based economy”. Its functions were:

- Formulating and implementing policies and measures to promote innovation and technology;
- Supporting applied research and development;
- Supporting technology transfers and applications;
- Promoting technology entrepreneurship;
- Promoting wider use of design;
- Facilitating provision of information technology infrastructure and development of human resources;
- Promoting international standards and conformity assessment services to underpin technology development and international trade;
- Working closely with partners in the government, industry, business, tertiary education and industrial support organizations; and
- Thus offering a range of infrastructure and funding support for applied R&D activities and design-related projects.

In the following, we would select two industries, namely the innovation and technology industry and the medical industry for the analysis, so that we could have better understanding about the development and limitations of these new industrial policies by the Government.
2. Innovation and Technology Industry

Since 1997, the HKSAR Government has been continued to promote the innovation and technology industry, by providing funding, land and other hardware; and policy support. Later all related efforts and programmes were into one of the six industries for promotion. All these years, the HKSAR Government provided more than HK$30b for the industry. However, the economic contribution continued to be at a very low level of 0.7% (there were comments alleging that the official estimation was too low and incorrect).

If Hong Kong’s innovation and technology industry could have produced competitive products, we should have recorded an increase of such products in our domestic exports statistics. When we examine our domestic exports statistics on high-tech products (as defined by the Census and Statistics Department), they declined from HK$21b in 2002 to only HK$7.5b in 2012. This has been a very disappointing development.

The HKSAR Government set up the “Communication and Technology Branch” under the “Commerce and Economic Development Bureau” in 1997. And the “Innovation and Technology Bureau was established in November 2015. Other than coordinating and enhancing existing activities promoted since 1997, it has been reported that the new Bureau would have the new objectives for “re-industrialization” and establishing Hong Kong as a “Smart City”.

Over the years, the HKSAR Government has been implementing many programmes and special funds to promote and support the industry, including the Science Park, Cyber Port, Hong Kong Applied Science and Technology Research Institute Company Limited, and many other special funds.

As examples, we would introduce two programmes, namely the Hong Kong Applied Science and Technology Research Institute Company Limited and the Applied Research Fund, in order to have a better understanding about their nature, results and issues involved in these government-led programmes. These two programmes were selected mainly due to the fact that they had been operating for a relatively long period of time and some official assessments had been undertaken.
(a) The “Hong Kong Applied Science and Technology Research Institute Company Limited”

In 1/2000, The HKSAR Government set up the Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI), with a government budget. The Institute selected and undertook applied research directly by itself. In 4/2006, ASTRI launched the “R&D Centre for Information and Communications Technologies”, by focusing on four technology areas, namely communications technology, consumer electronics, IC design and opto-electronics.

In 3/2007, the Audit Department of HKSAR Government criticized performance of ASTRI, e.g., administrative cost was very high (accounted for 45% of total expense), 60% of projects recouped only 5% or less of government’s direct funding. The Chief Executive Officer of ASTRI resigned under severe public criticism and the ASTRI restructured subsequently.

The Hong Kong Government established the “Hong Kong Jockey Club Institute of Chinese Medicine Limited” in 5/2001. Hong Kong Jockey Club donated HK$500m to set up the Institute as a subsidiary of ASTRI. It coordinated all related activities in and provided strategic support to scientific and evidence-based development programmes in Chinese Medicine. The Institute closed in 2011 and the advisory framework for promoting research in Chinese medicine was also restructured several times.

(b) The “Applied Research Fund”

The Applied Research Fund was set up in 1993, with an initial public fund of $750 million. The administrative arrangements of the Fund were altered several times. Originally, the Fund was managed by an official committee. Subsequently, private venture capital companies were engaged by the Government to select and manage the projects, expecting to improve the performance of the Fund. In 2003, the Government reviewed the operation of the Fund and presented the results for the consideration of the Legislative Council. The Council agreed to stop making any new investment projects by March 2005. In May 2012, there were still seven projects outstanding. According to the Government, there were two major reasons for the stoppage of the Fund.
Since the establishment of the Fund in 1993, the performance of the Fund had not been satisfactory. The Fund, through direct equity investment and lending, supported 50 projects with a total investment of $452 million by March 2004. Correspondingly, based on the recoupment value of investment in 26 completed projects and the assessed market value of the outstanding projects, the total estimated value would have been $235 million (resulting in a loss of 48%). Additionally, the total administrative cost accounted for another $102 million. On a broader perspective, it was also agreed that the Programme did not foster innovation and entrepreneurship successfully.

Additionally, venture capital had developed rapidly in Hong Kong. It was estimated that the total amount of private venture capital invested in Hong Kong’s technology companies was around $4,267 million by the end of 2002, while comparing with a total investment value of only $231 million by the Fund. It was quite obvious that there had not been a shortage of private venture capital fund in Hong Kong for financially-viable technology projects.

3. Medical Industry

Medical services in Hong Kong have been renowned for its high standards and professionalism. With its up-to-date medical technology and equipment, Hong Kong’s healthcare sector is able to provide the public with quality medical services, and has the potential for further advancement. The private sector side of the medical industry was identified as a growth industry by the Government in 2008, with potential for export earnings. Subsequently, major policy developments include the followings have been implemented:

- Four sites, Wong Chuk Hang, TKO, Tai Po and Lantau, were designated for private hospital, including Chinese medicine services in 2010;
- Providing more land for private medical services;
- Providing 70 additional places for medical doctor degree programmes and 40 for nursing programmes;
- Hospital Authority re-opened its nursing schools, providing training of 200 additional Registered Nurses annually;
• Allowing more renowned Chinese medicine practitioners from the Mainland to join clinical teaching and research programmes in Hong Kong;
• Approved expansion plan of several private hospitals;
• A certain number of Hong Kong doctors operating in Guangdong under CEPA;
• The University of Hong Kong commenced a new hospital in Shenzhen, with cooperation with Shenzhen Government; and
• A certain number of overseas doctors were allowed to practice in Hong Kong.

More importantly, an increasing number of mainlanders gave birth in Hong Kong. The total number of births in Hong Kong increased from 48,219 in 2001 to 94,000 in 2011. Births by mainlanders (both parents were not Hong Kong citizens) were less than 1,000 in mid-2000s, which increased to about 35,000 in 2011. The number increased further to over 45,000 in 2012.

The “zero-quota policy” implemented in 1st January 2013 exerted a great impact on the private medical industry. Furthermore, in the first Policy Address by Leung Chun Ying in 2012, he rejected the policy to develop medical services as an economic sector in Hong Kong.
Regionally, Singapore, Taiwan and Thailand are all developing their health industry for export earnings. They have cost advantage (for example, Thailand’s cost was about 50% and Taiwan’s cost was about 70% of that of Hong Kong for the comprehensive medical checkup) and achieved high medical standards as well (many doctors were trained in the US).

Chinese medicine is another major area of medical development. The Government allocated a lot of resources to promote the Chinese medicine industry. Several commissions were set up to promote education, research and medicine development. Though more people in Hong Kong are aware of the merits of Chinese medicine, the manufacturing of Chinese medicine has been developing very slowly.

4. Concluding Remarks

The impact of the promotion of new industries for Hong Kong has been doubtful. Except the Cultural and Creative Industry, other five industries recorded little advancement in their contribution to GDP over time (in relative terms). Particularly, there has been no advancement in domestic exports of high-tech products and Chinese medicine. Many specific Funds set up since 1997 recorded poor performance. There was an absence of sustainability for many new industrial policies (education, medical, and innovation and technology sectors), mainly due to the absence of sufficient policy analysis and lacking of social consensus.

Indeed there are many limitations on Government’s direct intervention. Without perfect knowledge, heavy transaction costs will be incurred in acquiring the necessary information to intervene successfully. Government is under pressure and facing rent seeking from interest groups with political influence. Let’s ask the following questions and see whether one can provide satisfactory answers.

- Could we have clearly defined objectives for industrial policy for society (short/medium/long term)?
- Could we clearly identify specific market failures?
- Could we clearly specify types and options of relevant government policies for specific market failure? Are we sure to what extent the specific market failures could be resolved?
- Could we clearly define quantitative targets (GDP, employment, tax, environmental targets, and stability)?
• Can the government eliminate uncertainties and have greater ability to predict future market development?

• What are the necessary factors for effective planning?

• What are the necessary factors for effective implementation of an industrial policy (coordination among various government departments, entrepreneurship, markets)?

• How could we arrive at public consensus on certain industrial policy?

• How could the sustainability issue of industrial policy be resolved (affecting by terms of the government in every 4 to 5 years, funding requirements)?

• Do we need an effective monitoring system and a performance appraisal mechanism for industrial policy?

• Could we identify and measure the opportunity cost of a certain industrial policy?

• Do we need exit strategies for unsuccessful industry policy? Would there be any optimal adjustment mechanisms over time?

• How could we evaluate the success or failure of each of these new industries promoted by the government?

• Based on Porter’s Theory—the government should examine the probability of success of the new industry based on the theory of “industrial cluster”. Whether a “cluster” would be successfully established (5 years? 10 years?), given regional competition?

• Based on London’s experience—the government should identify “market failure” and ask the question whether the government can effectively resolve “market failure”. The London government adopted a comprehensive “Key Performance Indicators”.

• Based on New York’s experience—the government should focus on efficient allocation of limited resources. Selecting new industries and technologies may be risky,

• Based on Singapore’s experience—the government should focus on developing only a limited number of new industries and enhance overall productivity.

• Based on Taiwan’s experience—the government should provide quantitative targets for GDP contribution, additional employment, investment, etc., for periodic assessment of each newly promoted industry.
II. Hong Kong’s Economic Prospects

According to the Chief Secretary Carrie Lam (Wen Wei Po, 3/12/2015, A15), the five main strategies adopted by the Government to enhance Hong Kong’s competitiveness are: (i) strengthening economic performance, (ii) investing in infrastructures, (iii) expanding the talent pool, (iv) increasing land supply and (v) building a city with quality life for the people.

Neutral industrial policies and policies aiming at enhancing the “pillar” industries have generally been well perceived by the public and better implemented by the Hong Kong Government. However, there are still important areas where the Government could play a more active role, including training of adequate manpower, provision of infrastructure support and land provision. The promotion of new industries is a respectable attempt and an economic experiment undertaken by the HKSAR Government to promote economic performance. But there are many theoretical uncertainties and policy challenges. In the following, we would provide a brief discussion about major factors affecting Hong Kong’s future economic prospects.

1. Population Structure and Aging

According to the estimation by the Census and Statistics Department in 2015, the Hong Kong population projection (excluding foreign household maids) would be 6.91m in 2014, 7.36m in 2024, 7.64m in 2044 and 7.18m in 2064. The population will peak around 2044 and then decline. Additionally, the proportion of elderly (age 65 and above) would reach 32% of the population by 2041.

Correspondingly, the labour force projection would be 3.60m in 2014, 3.55m in 2024, 3.39m in 2044 and 3.11m in 2064. The total labour force will decline within the next 10 years. What are the implications on GDP, productivity, wages, economic structure, labour participation and importation, etc? We do not know yet. This could be the most important factor affecting Hong Kong’s future economic development.
2. Slower Economic Growth

In the last 35 years, Hong Kong’s economy slowed down continuously: 1981 to 1990 at 6.6%, 1991 to 2000 at 5.1%, 2001 to 2010 at 4.0% and 2011 to 2015 at 2.7% on average in real terms. Hong Kong was hard hit by many external factors (mostly financial), of which Hong Kong did not have any control. The financial and trading sectors are very open. Hong Kong’s economy rebounded rapidly in 2000, 2004 to 2007, 2010 and 2011, with 6% to 7% real growth rate (high by international standards). Hong Kong has been becoming a mature economy: with low population growth, slowdown in investment, stable consumption, high social inequality and affecting by more frequent external shocks. Additionally, the quality improvement in a service economy, to some extent, is difficult to be recorded by the GDP statistical framework.

According to the 2014 report published by the “Working Group on Long-term Fiscal Planning” of the HKSAR Government, the average long-term GDP real growth rate of Hong Kong would be 2.8% for the next 30 years. This estimate has fully taken into account of the Hong Kong’s future economic and social development, and other major factors including the global economic situation, Mainland-Hong Kong integration, economic restructuring, population structure, productivity changes, immigration, aging, etc. However, the current economic structure and development have led to the deterioration in income inequity. It is the responsibility of the government to initiate new fiscal measures and social policies to mitigate this pressing social problem.
The Financial Secretary, John Tsang, also announced in 9/2015 that 2% to 4% real growth would be a “new normal” for Hong Kong, given Hong Kong as a mature economy. However, the accumulated fiscal reserves of over HK$802b in 6/2015 (with another HK$800b net assets by the Exchange Fund) was very high by international standards and could be used during bad times.

3. Mainland-Hong Kong Economic Integration

The four “pillar” industries of Hong Kong accounted for about 60% of GDP. The construction and property sector accounted for another 10%. The public sector accounted for 20% as well. These are the most important economic activities in Hong Kong. The government should make sure that they could sustain and prosper, and maintain their comparative advantage (other than the four “pillar” industries, other services are also exportable: major property developers, hotel operators, universities, MTR, electricity companies, telecommunications, gas company, HKIA, Port operators, etc.).

As for the new industries, no doubt that the HKSAR Government would initiate some more new industrial policies over time, probably with supports from the mainland government as well. Hong Kong would continue to have comparative advantage in developing high-end services, e.g. education, medical, designing, etc. However, as for high-tech manufacturing, Hong Kong suffers seriously from the lack of technology talents, high labour cost, high land cost, absence of a military-base manufacturing, absence of heavy industries, small domestic market, strong neighboring rivals, etc. It is expected that the contribution of high-tech manufacturing in Hong Kong would only be marginal, even in the long term.
High-tech manufacturing industries developed well in Singapore, South Korea and Taiwan (Sweden and Israel as well). They all have a very strong military industry and heavy industries (because of national security requirement) which have formed the basis for further development of high-tech industry commercially. As allies, the US government is willing to transfer military technology to them too. Unless the Mainland (or other countries) would transfer high-tech and military industries to Hong Kong, otherwise it would be very difficult for Hong Kong to develop high-tech manufacturing industry by ourselves (attaining a meaningful production scale) successfully, given the regional competition. For example, even though some academics in Hong Kong Polytechnic University attempted to produce an electric car a few years ago with some success, it is clear that we do not have the market environment to develop a car manufacturing industry in Hong Kong.

In the next 20 years, we are still expecting moderately high growth for China; average at 5% to 6% real GDP growth annually. It would become the largest economy of the world sooner than expected, particularly under the “purchasing-power-parity” terms. With over US$15,000 per capita GDP, the increasing middle class population could easily be over 500 million people. Further market liberalization and RMB liberalization will continue to propel economic and social development.
Hong Kong has been providing services to the entire Pearl River Delta for a long time and Hong Kong’s economy would integrate further with the PRD (over 60m population) under further liberalization of service activities in the Mainland. But any new policy for integration should be evaluated in details for the benefit of Hong Kong in mind (in terms of GDP, employment, tax revenue, social stability and quality of life), while taking the likely impact on the Mainland into account as well. Politically, the local sentiment and concerns should also be addressed very carefully, before the implementation of any new policies.
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