



## Research Article

# Missing Transformational Place Leadership-Why High-Tech Industries are not Developed in Hong Kong

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**Abstract:** This paper adopts a place leadership perspective to examine the failed efforts of developing high-tech industries in Hong Kong. It demonstrates that it is challenging to change from transactional to transformational leadership and argues that the failure of developing high-tech industries in Hong Kong is partially attributable to the lack of transformational political and business leaderships. The political leaders' ineffectiveness in developing high-tech industries in Hong Kong is also attributable to the regional/national/international institutional structural forces that have created both opportunities and challenges. This study contributes to the discussion on the critical value of transformational place leadership for creating new local/regional economic growth path and the embeddedness of place leadership in local/regional/national political and economic institutions.

**Keywords:** place leadership, transformational leadership, institutions, high-tech industries, Hong Kong

**JEL Codes:** O14, O18, O25, R11, R58

## 1. Introduction

In recent years, the turmoil at Hong Kong has attracted worldwide attention. Many among the young generation have felt frustrated about the political situation. Meanwhile, economic problems such as increasing income gaps (Wong, 2018) and housing prices (Wong & Ho, 2017), and lack of high-paid jobs have made the problems worse. On economic development, the issue relating to how new industries emerge and how new local/regional development paths are created is among the most intriguing and challenging questions in economic geography and regional studies, and traditional theories have emphasized the constraining and enabling impacts of local/regional institutions. Recently, there has been a growing awareness of the importance of *place leadership*, which is in alignment with the increasing recognition of the significance of *agency and actors* in current research (MacKinnon et al., 2009; Martin & Sunley, 2006). Research on place leadership has been (re-)energized both theoretically and empirically (Collinge et al., 2010; Grillitsch & Sotarauta, 2020; Kristensen et al., 2023; Rietmann, 2023; Stimson et al., 2009). It has been argued that a multi-scalar, multi-actor, and multi-disciplinary approach is needed to articulate the relationship between place leadership and local/regional economic development.

However, most empirical studies have focused on the successful cases where place leadership has been shown to

be effective, while research on failed leadership in local/regional development has rarely been explored (Kristensen et al., 2023; Rietmann, 2023; Sotarauta & Beer, 2017; Stimson et al., 2009). This paper seeks to fill such a gap in extant research by examining the failed efforts of the leadership in Hong Kong in developing the high-tech industries.

Hong Kong is among the four Asian Tigers that have achieved great economic success since the end of the World War II (WWII) and has become one of the most economically prosperous economies. In 2023, its GDP per capita reached almost \$51,000, the second highest among the four Asian Tigers, only after Singapore (\$87,884), while higher than that for both South Korea (\$33,147) and Taiwan (\$32,490). However, Hong Kong's economy is heavily reliant on the tertiary sector which accounts for more than 90 percent of its GDP (Census and Statistics Department, 2019), while manufacturing contributes to about 1%. In comparison, the respective percentages of manufacturing and service sectors for the other three Tigers are 39% and 59% for South Korea, 26% and 74% for Singapore, and 37.8% and 60.8% for Taiwan. All the other three Asian Tigers have developed successful high-tech manufacturing industries (hereafter, high-tech industries) through different strategies. Their success in developing such high-tech manufacturing industries has been attributable to their developmental state (Amsden, 1989; Evans, 2012; Yeung, 2000, 2014, 2016).

What happened to high-tech industries in Hong Kong? Many studies have documented efforts made by the Hong Kong government, particularly for the period after 1997, to promote the development of an innovative high-tech industry in the territory (Baark & Sharif, 2006a; 2006b; 2008; Baark & So, 2006; Hobday, 1995; Jessop & Sum, 2000; Mok, 2005; Wang, 2018; Sharif & Baark, 2008; Yeh, 2013; Yeh & Ng, 1994). Governmental leaders and many scholars of Hong Kong have repeatedly recognized the importance of high-tech industries, and a number of government-sponsored programs and projects have been launched. Nevertheless, such efforts have largely failed (CAE & HKAES, 2017; Zheng, 2019).

Hong Kong's deindustrialization during the Colonial Period was clearly related to its lack of political leadership under the British control, though business entrepreneurship was strong. The political leadership in Hong Kong probably was the closest to what Bass (1985) characterized as the *laissez-faire leadership*, or *nonleadership*, in industrial policies, or what has been characterized as *non-selective intervention* approach (Ngo, 2000, p. 32) and Hong Kong colonial government has limited its roles in providing basic infrastructure and social services, while keeping a free hand on directing industrial development.

Given the rich literature on Hong Kong's development during the colonial period, we will deconstruct the history for Hong Kong's development after its return to China. This is the period that many have had high hope for Hong Kong due to the new political leadership within the "one country, two systems" arrangement within China (Evans, 2012; Yeung, 2000). Nevertheless, Hong Kong has failed to grow its manufacturing in general and high-tech industries in particular. Instead, it has become increasingly reliant on service-related industries, particularly those associated with financial services, property development, and *entrepôt*-related economies. Partially as the result of the deindustrialization in Hong Kong and the increasing inequality, Hong Kong has been experiencing periodical financial crisis, housing bubbles, and political instabilities. Hong Kong has become the worldwide focus on the violent protests during June-December 2019 against the Hong Kong Special Administrative Region (HKSAR) government and China's central government. Without going to too much detail, there is no question that Hong Kong's efforts to develop its high-tech industries are unsuccessful. How to explain such surprising results, given the successful experiences of other Asian Newly Industrialized Economies (NIEs) such as Singapore, South Korea and Taiwan, as well as Japan? This study adopts the place leadership perspective and reexamines the issues of deindustrialization during the post-colonial period. How could Hong Kong's leaderships have failed to cultivate the high-tech industries, despite its rich endowment of great assets in human resources, great universities, deep pockets from government and the business communities, the booming economy of mainland China, and the successful efforts of developmental states of nearby countries?

Traditional research has focused on the structural forces, particularly from the institutional and the system perspectives. Market failures (Bleda & Del Rio, 2013; Martin & Scott, 2000), government failures (Datta-Chaudhuri, 1990), and system failures (Aghion et al., 2009; Bleda & Del Rio, 2013; Dodgson et al., 2011) have been commonly cited as the major contributors to such problems. Through a study of Hong Kong's experience, we argue that place leaderships, embedded in local, regional, national and international institutional forces, provide valuable lens to re-examine the developmental trajectories of both successful and failed experiences of various places. The aspirations and actions taken that have by place leaders as well as structural forces such as the political, economic, cultural and physical settings, and their interactions are essential in explaining urban/regional economic development (Hammami et al.,

2021). We cannot focus on one side without examining the other one.

Our analyses of the post-colonial period of Hong Kong's economy reveal that the lack of consistent *transformational leadership* can help explain why the development of high-tech industries has not been successful. Local place leadership is embedded in local/regional/national/international political-economic institutions and has experienced a couple of "turns" in the history of Hong Kong.

Due to the complicated nature of the research questions, we adopt a mixed/hybrid analytic approach for dissecting the historical trajectories of Hong Kong in developing its high-tech industries. Data are primarily drawn from governmental policy documents, chief executive's annual policy addresses, official statistics, scholarly publications, and industrial and news reports. Inspired by the critical realism perspective, we adopt the triangulation approach that has become increasingly popular among social sciences and organizational research. The approach mixes qualitative and quantitative methods in practices. (Olsen, 2004; Downward & Mearman, 2007; Yeung, 1997). "Qualitative methods such as interactive interviews and ethnography are necessary to abstract the causal mechanisms of which quantitative/statistical methods are oblivious. Quantitative methods, on the other hand, are particularly useful to establish the empirical regularities between objects. are also useful in drawing attention to the external and contingent relations between objects (Yeung, 1997, p. 57)". "Triangulation, in particular its methodological form, can do much to improve the validity and reliability of data collected (Yeung, 1997, p. 64)". He further offered the following observation "what is necessary in the process of triangulation is to compare and contrast different sources of findings if they are addressing the same phenomenon. Alternatively, if different methods are used to investigate different facets of the same phenomenon, the resultant findings tend to be complementary" (Yeung, 1997, p. 65). Such an approach offers similar power in analyses and flexibility without sacrificing the rigors in traditional quantitative modelling, popular among economists. As recognized by scholars, the modern (forced) separation of the discipline of economics from other social sciences must be recognized as quite misguided. Indeed, this separation merely makes it difficult for economics to advance in pace with other branches of social science (Lawson, 2003, p. 162). Our research offers a case for practicing triangulation in studies of urban and regional economics.

The rest of the paper is structured as follows. Section 2 reviews the current literature on place leadership, institutions, and local/regional economic development. Sections 3 examines Hong Kong's economic development history and Hong Kong government's efforts to develop high-tech industries. Sections 4-7 offer analyses of Hong Kong's failures in developing the high-tech industries for the four sub-periods under different Chief Executives after its return to China in 1997. We argue that the shortage of transformational political and business leaderships, in addition to institutional factors, made significant contributions to Hong Kong's failed experiences of developing high-tech manufacturing. Further, the so-called "embedded autonomy" (Evans, 2012; Yeung, 2000) are useful to explain Hong Kong's lack of transformative leaderships.

## 2. Place leadership, institutions and local/regional economic development

Examining new path creations for local/regional economic development is a classic topic for economic geographers and regional analysts. Many theories following evolutionary economic geography (EEG) and regional studies have been developed including industrial districts, industrial clusters, and regional innovation systems, where concepts such as lock-in, path dependence, and trust, etc. have become the key building blocks. Proponents of the new *actors-centered* approaches argue that the traditional structuralism approaches have focused too much on the constraining impacts of structural forces on local/regional developments (MacKinnon et al., 2009; Martin & Sunley, 2006). They have convincingly pointed out that those *structure-centered* theories have given way more weight to concepts such as stability, continuities, and equilibrium. Nevertheless, local/regional development is in continuous evolution where changes, adaptability and dynamics are the norm. Consequently, the structure-centered theories are unable to explain how new local/regional development paths are created within an environment constrained by structural forces. "One approach to tackle this issue is by focusing on the role of leadership in regional development and by bringing 'people' back into the core of urban and regional development studies" (Collinge et al., 2010; Stimson et al., 2009).

Research on place leadership has generated exciting, insightful and innovative models which have the potential to unlock the secrets of local/regional path creation and diversification (Asad et al., 2023). There exist various leaderships.

Burns (1978) first introduced the concepts of *transformational and transactional leadership* in his treatment of political leadership (Asad et al., 2021). The difference between transactional and transformational leadership “is in terms of what leaders and followers offer each other: Transformational leaders offer a purpose that transcends short-term goals and focuses on higher ordered intrinsic needs (Asif et al., 2021). Transactional leaders, in contrast, focus on the proper exchange of resources” (Judge & Piccodo, 2004, p. 755). Bass (1985) extended Burn’s original conceptualization and recognized the third type of leadership: *nonleadership*, or *laissez-faire leadership*, which refers to “the avoidance of leadership: leaders avoid making decision, hesitate in taking action, and are more absent when needed” (Judge & Piccodo, 2004, p. 756).

The literature on leadership has so far focused on transactional and transformational leadership, and in particular transformational leadership has been proven to be extremely popular (Asad et al., 2021). Economic geographers and regional analysts have picked up such concepts and investigated place leadership and local/regional development. Sotarauta and Beer (2017, p. 212) define place-based leaders as individuals, and groups of individuals who tend to possess a greater range and depth of assets including commitment to advancing the region than other actors. “Place-based leaders often, but not always, work to create such sets of regional structures and circumstances that increase the likelihood of innovative entrepreneurs moving to unknown terrains; they aim to construct opportunity spaces for entrepreneurs” (Grillitsch & Sotarauta, 2020). Place leadership is defined as the capabilities of local leaders in maintaining and changing its social/political/economic structures.

Scholars in place leaderships have further argued that place leadership is not just limited to political leadership, but also includes leadership from other sources such as business, various social and non-governmental organizations such as media (opinion-makers), influential educational and entertaining figures who can mobilizing local and extra-local resources, have significant influence on local/regional development strategies, and have both informal and/or formal influence on local communities. Together place leaders consists of a set of actors whose actions have significant and strategic impacts on local discussion, formulation and execution of development strategies. Such a net of place leaders together creates place leadership.

**Table 1.** Phases in HK government policies and support

Period: chief executive	Time	Actors	Key actions	Type of place leadership
British colonial period	1840 to 1997	Lands department, Hong Kong Productivity council	<ul style="list-style-type: none"> <li>• Building industrial estates</li> <li>• Promoting productivity management</li> </ul>	Laissez-faire to transactional
Return to chinese sovereignty: Tung chee-hwa	1997 to 2003	Industry and trade department	<ul style="list-style-type: none"> <li>• Building cyberport</li> <li>• Building Hong Kong Science &amp; Technology Parks HKSTP</li> <li>• Creating innovation and technology commission</li> <li>• Established innovation and technology fund ITF (HK \$5 billion)</li> <li>• Establishing Hong Kong applied science &amp; technology research institute</li> </ul>	Transformational
Building infrastructure for key industries: Donald Tsang	2003 to 2012	Innovation and technology commission	<ul style="list-style-type: none"> <li>• Support for “Innovation and technology” industry</li> <li>• Set up five Research and Development (R&amp;D) centers in selected focus areas</li> <li>• Expansion of HKSTP</li> </ul>	Transactional
Business as usual: C.Y. Leung	2012 to 2017	Innovation and technology commission	<ul style="list-style-type: none"> <li>• Additional HK \$5 billion refurbishment for ITF</li> </ul>	Laissez-faire
Integration with China: Carrie Lam	2017 to 2022	Innovation and technology department	<ul style="list-style-type: none"> <li>• Established the innovation and technology bureau</li> <li>• Developed plans for the Hong Kong-Shenzhen innovation and technology park</li> </ul>	Attempted transformational

Place leadership may change over time and the dynamic nature of leaderships is related to changes of their personal characteristics and organizational/institutional environment at local, regional, national, and global institutions. Leaderships are embedded in such contextual environments. Amsden (1989) and others have provided rich insights on

the roles of developmental states in economic development including South Korea (SK), Taiwan (TW) and Singapore (SG), among others to address “market failure”, “systems failure” as well as of “government failure”. Evans (2012) and Yeung (2000) have developed the concepts “embedded autonomy” in their studies of such Asian miracles. In his own analyses of Hong Kong’s economic history up to the 1998 Asian Financial Crisis, Yeung (2000) convincingly argued that its failure to industrialization could be attributable to the neoliberalism related non-intervention policies adopted by the colonial government. The lack of experience and leadership in “governing the market” among HK’s civil servants in the pre-1997 period, unlike their counterparts in SK, TW, and SG, was the main reason for their continual failure (and reluctance?) to intervene in the market and “get the price wrong” (Yeung, 2000). Consequently, Hong Kong’s leadership had failed to provide institutional support for industrialization through quota, technological upgrading and outward investment. He also showed that Hong Kong needed a proactive government to provide “institutional fix” given the increasing competition from other newly industrialized economies (Table 1).

### **3. Return to Chinese sovereignty, 1997-2003: Crippled transformational political leadership and transactional business leadership during the Tung Chee-hwa period**

#### **3.1 *Temporary transformational political leadership for the new era after return***

Hong Kong returned to China in 1997, and the new leadership was expected to play more active roles in promoting a new road of industrialization with a focus on high-tech manufacturing, because governments in other Asian new economies and China had experienced tremendous success under an authoritative government. The new political leadership did show a clear shift towards more active engagement in industrial policies, while facing the immediate effects of the 1997 Asian Financial Crisis and a busted property market. To a considerable extent, the political leadership became *transformational*. The first Hong Kong Special Administrative Region (HKSAR) Chief Executive Mr. Tung Chee-hwa made many efforts to change the direction of Hong Kong’s economy, in contrast to the colonial government. He had adopted the vision proposed by the Massachusetts Institute of Technology (MIT) group with the aim to promote local high-tech manufacturing in Hong Kong—a vision that was also reflected in the policies pursued by the central government in Beijing (Berger & Lester, 1997). In his first Policy Address in 1997, he set up the following goals:

“The SAR Government encourages enterprises to develop into higher value-added activities. We must develop a quality environment that will help to retain our qualified professionals and to attract talent from all over the world... Innovation... will always be important for Hong Kong. We have set up the Industry Support Fund and Applied Research Fund to encourage innovation and give support to the development of new industries... We stand ready to inject up to \$500 million into the Applied Research Fund, specifically to support the commercialization of research in information technology and other high technology fields... Improving our existing arrangements alone may be insufficient. My aim is to make Hong Kong an innovation center not just for ourselves, but for South China and the region... We may need to do more to stimulate the exchange of ideas between our university researchers, our businessmen and industrialists, and our customers... We also need to tap the talents and the results of scientific research in the Mainland... We will start to develop a science park at Pak Shek Kok. Land will be available to commence phase I in 1998; a site for a second industrial technology center in Kowloon Tong has been earmarked; a site for a second industrial technology center in Kowloon Tong has been earmarked to meet the changing operational requirements of local and international companies, we are commissioning a study into setting up a business park”.

Consequently, the Chief Executive’s Commission on Innovation and Technology (ITC) was appointed in March 1998 and issued its first report soon after with a vision statement “innovation and technology are vital for the future prosperity of Hong Kong”. The second and final report by ITC (1999, p. 5-7) made eight recommendations:

- Coordination of the government’s policy functions,
- Merging of the Hong Kong Science Park, Hong Kong Industrial Estates Corporation and the Hong Kong Industrial Technology Center,
- Investment in education and attracting overseas talent,
- Relaxation of immigration restriction on talent from the Mainland,

- Expansion of the government's incubator program,
- Closer ties between academia and industry,
- Exploration of the feasibility of a co-investment scheme providing government venture capital on a matching basis with private funds,
- Construction of the new Science Park near the Chinese University of Hong Kong.

Many recommendations were then acted upon. For example, the government took the initiative to plan and undertake construction of the new Science Park near the Chinese University of Hong Kong. In 2001, the three organizations including Hong Kong Industrial Estates Corporation (HKIEC), Hong Kong Industrial Technology Center (HKITC), and the Hong Kong Science Park Company were merged to form the Hong Kong Science and Technology Parks Corporation, with the first phase of Hong Kong Science and Technology Parks Corporation (HKSTP) opening in 2002. Another activity following ICT's recommendations was the creation of the Innovation and Technology Fund (ITF) in 1999, to replace the existing Industrial Support Fund and Services Support Fund. The ITF fund was provided with an endowment of HK \$5 billion and supported 10,754 projects amounting to a total funding of HK \$17 billion between 2000 and 2019.

Mr. Tung Chee-hwa also recognized the needs of high-tech firms to recruit overseas talents since supply from local universities was insufficient. In 2001, the HKSAR government announced an Admission of Mainland Professionals Scheme to encourage the immigration of Mainland professionals in finance and information technology to Hong Kong. However, during the first two years, only a little more than 200 applications were approved. The major obstacle for local firms was the restriction requiring potential local employers to document that a local professional could not fill the post, which was difficult to prove and time consuming. Meanwhile, many restrictions also applied to Mainland applicants: they were not allowed to bring their family with them to Hong Kong, and Mainland students who graduated from Hong Kong universities had to return the Mainland before they could benefit from the scheme. Clearly such restrictions were introduced due to pressure from local professionals who were afraid that more Mainland immigrants would make the labor market more competitive (Baark & So, 2006, p. 116). The scheme proved to be ineffective. As the result, the program was replaced by the "Admission Scheme for Mainland Talents and Professionals" in July 2003, which relaxed many of the requirements including allowing applicants to bring their family to Hong Kong. As the result, more Mainland talents and professionals have been recruited through this revised scheme. Between 2003 and 2017, the average annual approved applications were 7,445 cases, with a total of about 111,000 (CEIC, 2019).

A third initiative was the establishment of a new Growth Enterprise Market in November 1999 to provide more fund-raising channels for emerging high-tech industries. By July 2019, 384 companies were listed, with a total market capitalization of HK \$128,650 million (equivalent to US \$16.4 billion). Keep in mind, by August 2002, only 152 companies were listed on the Growth Enterprise Market (GEM), with a total market capitalization of 8 billion US dollars. With lackluster growth compared to other similar markets, it is difficult to conclude that Hong Kong's GEM has been particularly successful (Li, 2023).

### ***3.2 Fragmented political leadership in Hong Kong during Tung Chee-hwa's period***

The political leadership not only includes the Chief-Executive, but also include other fractions of Hong Kong's political institutions. To begin with, Hong Kong was in shortage of experienced political leadership with development state tradition during the nearly 100 years of control under the British noninterference policies. Second, the problem of lacking new experienced political leaders for the administration during the post-1997 era was worsened by the 1997 Asian Financial Crisis. Tung's government was hampered with the perception that it could not deal with economic issues. Particularly, the property-related business interests as well as owners of properties were reluctant to cooperate with Mr. Tung on many issues, though Tung's administration was saved by tremendous help from the Central Government. With Mr. Zhu Rongji as the Premier, the central government offered strong psychological and final back up for Hong Kong, though eventually the problem was solved by Hong Kong itself. In addition, within the "one country, two systems" arrangement, political leaders in Hong Kong seem to be in an awkward position. On the one hand, the Hong Kong Chief Executive is appointed by the central government, in consultation with local business interests in Hong Kong. The legitimacy and authority came with the approval from the central government and local political leaders need to be loyal to the central government, upholding the "one country, two systems" arrangement. On the other hand, they had to be responsive to demands of local groups with different interests, which had become increasingly

vocal and active in pursuing democracy, including direct election of the Chief Executive and members of the Legislative Council (LegCo). For Beijing, the local demands for immediate “Two Direct Elections” posed a challenge, though it did promise a gradual adoption of the direct election system over time. The central government has been concerned that Hong Kong is subject to the separationist movement as well as the anti-Beijing attitudes adopted by the pro-democracy parties. Beijing is afraid of losing control of Hong Kong, should a direct election system be adopted at once. It chose to side with the dominant business interest groups to ensure that its influence in Hong Kong’s politics is secured. Such an arrangement creates a context that impedes the local political leaders such as the Chief Executive from being distant from the finance and property developer groups. Without support from these groups, it is simply almost impossible to push any ambitious plans to develop high-tech manufacturing, even though Hong Kong has rich history of business entrepreneurship.

Third, Tung’s lack of political experience could be further demonstrated by his immature handling of shortage of affordable housing in Hong Kong. Before 1997, Hong Kong’s property market had created one of the biggest bubbles in Asia with the expectation its Return would help the economic growth in Hong Kong. Consequently, it became one of the least affordable markets in Asia, even around the world. With precipitating housing prices after 1997, both commercial and private property developers, owners with support from the pro-democracy members of LegCo sabotaged the plan to develop a large number of affordable apartment units for low-income residents. Such events clearly showed the transactional nature for both political and business leaderships during the post-crisis period of Tung’s administration.

LegCo’s other 30 members are indirectly elected functional constituencies that represent various business sectors in society. Obviously, most of these representatives defend vested interests and are fundamentally conservative transactional business leadership. This created a challenge for *transformational* political leadership and relevant policies. The growth of such transactional business leadership with conflicted interests, along with the inexperienced political leaders, has led to many contradictions in the policies that were designed to promote high-tech manufacturing.

### 3.3 *The case of the cyberport*

The most glaring example of the influence of vested interests was the Cyberport project. The Hong Kong Government in March 1999 announced plans to build Cyberport, a US \$1.76 billion technology park in Pokfulam, in collaboration with the Pacific Century Cyber-Works (PCCW) which was controlled by Richard Li, son of Hong Kong’s wealthiest man Li Ka-shing (Vines, 2017).

The aim of Cyberport was to create a strategic cluster of leading information technology (IT) and service companies in Hong Kong in the shortest possible time, at a total cost of HK \$13 billion. The project chose to locate at Telegraph Bay on the west coast of Hong Kong Island, which is a high-end real estate area, and included a government offer of land for private property development by PCCW. The project suffered from many problems: the location is not close to any major universities in Hong Kong; rents were still expensive for small local start-ups even after subsidies; lack of affordable housing for the workers in the nearby areas, though expensive housing was built as part of the project in proximity (Baark & So, 2006). In the end Cyberport was hardly able to create an innovative cluster in Hong Kong and its impacts has been limited, though it had funded over 320 startup companies by 2016. From the very beginning, the project was full of controversy. The government argued that, on account of the need to move fast, there was no need for a formal open tender before the project was awarded to Richard Li. Moreover, Hong Kong did not have a serious shortage of such advanced office space for IT firms, since such space was available at Times Square on Hong Kong Island and Harbor City in Kowloon, both of which were certified by the World Teleport Associations as “World Teleport Properties”.

The project was expected to create 12,000 jobs in Hong Kong, while about 400 jobs would be generated in the construction industry. With the first phase completed in 2002, Cyberport was expected to create demands for support services such as accounting, legal, and other back-office functions (Pun & Lee, 2002, p. 9). However, with the global economic slowdown and the technology bubble bursting after 2000, Cyberport had great difficulties attracting foreign investment and ended up in competition for existing commercial tenants in Central and Quarry Bay. This led to complaints from the Real Estate Developers Association of Hong Kong: the subsidized rent offered by Cyberport has put downward pressure on office rentals in Hong Kong. This case clearly shows the impact of the powerful property developers’ influence on political leaders’ efforts to develop the high-tech industries in Hong Kong: namely, the preferred way to support high tech industries is to construct new rental space which is subsidized to help industries deal

with the exorbitant price of rent in the city. Thus, in many people's eyes, Cyberport was simply a disguised property development project. Richard Li has made tremendous amount of profits through the nearby high-end residential property development, while the business hub has so far been able to generate limited commercial success in terms of launching high technology, fast growth unicorn firms.

#### 4. Transactional political leadership under CE Donald Tsang

CE Donald Tsang became the Chief Executive after Tung, and he pushed the government policies back towards the *transactional place leadership* style, with routine expansion of the real estate located in the Hong Kong Science and Technology Park and to support the "Innovation and Technology" industry. Mr. Tsang proposed the concept of "*progressive development*" which means that "overall progress rather than economic development alone: it emphasizes sustainable, balanced and diversified development". To achieve this goal, Mr. Tsang promised that "he would promote economic development by pushing ahead with large-scale infrastructure projects, enhancing Hong Kong's role as a global financial center, promoting culture and creative industries, developing human capital and attracting talent from around the world". Chu and So (2013) even argue that Tsang did not have an economic policy for Hong Kong, though Donald Tsang's period may represent the best era after 1997 supported by both sides of political parties and central government. But he ignored long-term land and housing development, causing a housing bubble later.

The problem of deindustrialization was realized by Tsang and the central government. In 2004, the Hong Kong SAR government and the Ministry of Science and Technology (MOST) signed the "Agreement between the Mainland and Hong Kong for the establishment of a Technology Cooperation Committee", in order "to promote scientific and technological exchanges and cooperation between the Mainland and Hong Kong, including the exchange of scientific research talents, cooperative development of applied research projects, and technology transfer and commercialization".

The Innovation and Technology Fund had served to support development of innovative technologies, with nearly 60% of ITF funding going to the Innovation and Technology Support Program (ITSP), which supports research and development projects undertaken by designated local public universities, research institutes or R&D Centers. In 2006, five R&D centers were set up by the Hong Kong government to serve specific sectors of the economy, including individual R&D Centers for automotive parts and accessory system, information and communication technologies, logistics and supply chain management enabling technologies, nanotechnology and advanced materials and textiles and clothing, respectively. These R&D centers do engage in some research, but much of their R&D activities are outsourced to project teams at universities and/or firms, and the output and effectiveness of the centers have not been evaluated by independent authorities. Judging by available data, the impact does not appear impressive; for example, the Automotive Platforms and Application Systems (APAS) R&D Centre established under the Hong Kong Productivity Centre has only produced 37 patents during more than a decade of operation since 2006.

Following his reelection in 2007, Mr. Tsang put forward a five-year blueprint in his 2007-2008 policy address. He emphasized ten mega infrastructural projects. They included those such as the Guangzhou-Shenzhen-Hong Kong Express Rail Link and the Hong Kong-Zhuhai-Macao Bridge, both went into operations a few years later, though the process was not without disputes with opposition from major investors and developers from Hong Kong. However, he did not include any new measures/programs for high-tech industry. Instead, he emphasized the need to reinforce Hong Kong's position as a financial center. He proposed and implemented a number of detailed plans including facilitating Mainland enterprises and investors to participate in Hong Kong's market, attracting more overseas enterprises to list in Hong Kong, enhancing the capability of Hong Kong's financial system to handle Renminbi (RMB) denominated transactions, among many others. The only issue related to manufacturing development in his first policy address was about restructuring Hong Kong's enterprises operating in the Pearl River Delta (PRD). In 2008, the World Financial Crisis hit Hong Kong extremely hard, and its GDP declined by more than 2% in 2009, though it swiftly turned back to expansion with a growth rate of almost 7% in 2010. In his second policy address amid the Financial Crisis, Mr. Tsang re-emphasized the importance of reinforcing Hong Kong's position as a financial center and its integration with the PRD. Regarding high-tech industry development, he did promise to strengthen scientific research. It is interesting to note that in his speech in this part, he introduced the case related to DuPont.

"We will also reinforce our intermediary role to promote technological co-operation between the Mainland and



the rest of the world. In May this year, thanks to joint efforts with Shenzhen, DuPont decided to establish the Global Thin Film Photovoltaic Business/R&D Centre in the Hong Kong Science Park, and to set up production facilities in Shenzhen”.

Note that the Business/R&D Center was set up in the Science Park on the Hong Kong side, while the manufacturing facility is located in Shenzhen: such an arrangement did not help high-tech manufacturing in Hong Kong as such. Interestingly, in the same policy address, Mr. Tsang also talked about how to promote the development of creative industries. These programs were hardly able to support the development of high-tech manufacturing in the territory.

In February 2012, Tsang was discovered to have unusual connections with a business developer in Shenzhen from whom he rented high-end apartments at low price. On 17 February 2017, the jury found Tsang guilty on one charge of misconduct in public office over the high-end apartment rental, and later sentenced him to a 20-month imprisonment. The case tainted Hong Kong’s image of being one of the cleanest governments around the world and clearly revealed his transactional, even destructive, political leadership.

Interestingly, Hong Kong has developed a number of successful startups (Lee, 2018; Dowejko et al., 2014). In 2015, the HKSAR government even claimed that it has become the fifth hottest spot for startups. Successful examples include WeLab, the territory’s first “unicorn”—a startup company valued at over US \$1 billion. Other successful unicorns include GoGoVan in van hiring and SenseTime in artificial intelligence service for B2B. Nevertheless, among the many high-tech start-ups in Hong Kong, there are no prominent ones as those in mainland China or in nearby Asian Newly Industrialized Economies. In comparison, the top ten billionaires in Hong Kong have long been dominated by those in property development and none of them were seriously engaged in high-tech industries. Meanwhile, some start-ups originating from Hong Kong such as Da Jiang Innovation Science and Technology Co. Ltd. (DJI), which in a short span of time has become a leading producer of drones, occupying 70% of the world market, left Hong Kong. According to reports, due to lack of support from Hong Kong’s political and business leaderships, Mr. Wang registered his company in Shenzhen in 2006 and quickly became the largest drone manufacturer around the world, although the project started with Hong Kong University of Science and Technology when Mr. Wang started his venture as a graduate student (Zheng, 2019). DJL’s experience highlights the structural weaknesses of Hong Kong’s institutions for high-tech industries such as lack of supplier chain that can provide the elements for making drones and financial support, together with the prohibitive costs of land for manufacturing. It also demonstrates the transactional political and business leaderships’ inability to nurture high-tech start-ups, despite the high-quality R&D facilities and top universities in Asia. Hong Kong is rich in entrepreneurship, but in shortage of transformational political and business leaderships.

## **5. Business as usual, 2012-2017: Continued transactional political leadership under Chun-ying Leung**

The following five-year period under Chief Executive Leung witnessed even less engagement in the promotion of high-tech industries, reverting to a basic *laissez-faire place leadership* style. The Innovation and Technology Fund was refurbished with HK \$5 billion more for its endowment since disbursement of project funding during more than a decade had reduced its original HK \$5 billion. In 2015, after years of struggle between pro-government and pro-democracy factions in LegCo, the Innovation and Technology Bureau was set up with the former CEO of the Hong Kong Cyberport, Nicholas Yang as Secretary of the Bureau. However, this bureau was not ranked high in the Government’s administrative hierarchy, and therefore hardly managed more progress than supervision of existing units for promotion of information technology and innovation. Indeed, in some people’s critical view, it was “rapidly becoming a bad joke” (Vines, 2017).

The problem of a deteriorating environment became further realized by the civilian and political Leaders. They were aware of Hong Kong’s lack of high-paid jobs in high-tech industries and are concerned of Hong Kong’s sustainable development in the long run. Chinese Academy of Engineering (CAE) and Hong Kong Academy of Engineering Sciences (HKAEC) jointly conducted a study, entitled “*Policy Study on the Integrative Development of Innovation and Technology Guangdong-Hong Kong-Macao Greater Bay Area*” (CAE-HKAES, 2017). The study recognized the urgency for Hong Kong to restructure its economy and warned that without a coherent policy and wholehearted

commitment from the HKSAR Government, it is running the risk of being marginalized and relegated to the rank of a “second-tier” city. It made many recommendations for transforming Hong Kong into a knowledge-based economy, including the proposal to develop the Hong Kong/Shenzhen Innovation and Technology Park at the Lok Ma Chau River Loop, the development of which was agreed upon by the Hong Kong and Shenzhen governments in early 2017. The recommendations were taken seriously by Leung’s government, and his 2017 policy address adopted a number of measures recommended by the study. But Leung did not have time to implement the programs, since he chose not to run for reelection for the Chief Executive position.

At the time, the Chinese national government adopted its 12<sup>th</sup> Five Year Plan (2011-2015), which included a dedicated chapter on Hong Kong and Macao, outlining a series of regional development strategies that provided opportunities for Hong Kong to develop links with the Mainland. China emphasized the integration of Hong Kong as well as Macao into the PRD to build a world class megalopolis with the aim to create a global manufacturing, finance, trading, shipping, and innovation center. This also signaled China’s efforts to promote its “Belt and Road Program”, where Hong Kong is positioned to play a vital role in providing finance/producer services, taking advantage of its Asian Financial Center. The political leaders in Hong Kong appeared to have been fascinated by the rising high-tech manufacturing in the Guangdong Province, but merely saw this as an opportunity to leverage the link between these high-tech industries and Hong Kong’s professional services and financial sector (Cheng, 2018). The emerging ecosystem for high-tech industries including electronics, telecommunications and software in Shenzhen presented many high-tech entrepreneurs in Hong Kong with a dilemma: either to set up a business firm in high-cost Hong Kong without industrial infrastructure, or to migrate to Shenzhen, similar to what DJL had decided to do. The key constraint has remained that the rapidly rising housing and rental prices in Hong Kong were not addressed substantively by either Mr. Donald Tsang or Mr. C.Y. Leung. This problem is highly significant since high real estate prices have made it extremely difficult to develop high-tech manufacturing that relies on factory space. Between 1999 and 2018, Hong Kong’s average housing price has increased by 350%, while the GDP per capita barely doubled, from \$22,000 to \$40,000. As the result, homeowners have benefitted from the booming housing market along with the finance and property developers, but younger generations have become increasingly unhappy due to the decreasing affordability of housing. The so-called Median Multiple (MM) ratio of the median house price by the median gross [before tax] annual household income increased from 12 in 2010 to 21 in 2018, implying that a medium income household need to spend 21 years of income to buy a median priced housing unit in Hong Kong. This has been the highest MM around the world for nine consecutive years (Yiu, 2019). In comparison, the second least affordable city, Vancouver, just showed a MM of 12. The housing price in Hong Kong is outrageous and since both land price and prices for rentals follows the general trend of real estate prices, it is extremely costly to establish manufacturing units in Hong Kong.

The political leaders’ efforts of developing high-tech manufacturing have been constrained by the real estate market: trying to be transformational has run against the interests of homeowners and the finance and property developers. It is an inherent conflict which is hard to deal with: improving housing affordability to develop high-tech manufacturing while appealing to the interests of homeowners and the finance/property developers for more growth in housing price (Wissink et al., 2017). In the end, the problems caused by unaffordable housing has been associated with multiple demonstrations, political crises, and radicalization of the younger generations in Hong Kong, notably during the Umbrella Movement in 2014, and certainly also influencing recent protests in 2019 and 2020 (Augustin-Jean & Cheung, 2018), while Hong Kong’s political and business leaders wasted another four years with little success in developing high-tech industries.

## **6. Integration with China after 2017: Failed transformational political leadership**

Chief Executive Carrie Lam, who took over the government in mid-2017, took a new turn towards *transformational leadership* with a series of initiatives to streamline policy coordination, promote R&D, and exploit opportunities to integrate Hong Kong’s development of high-tech industries with the adjacent Greater Bay Area in the Mainland so that Hong Kong could be reindustrialized. Meanwhile, she set about address the housing affordability issue, among many others that are critical for Hong Kong’s Long-term sustainable development. She further demonstrated her commitment towards long-term development when she has tried extremely hard to navigate the turmoil that has plagued Hong Kong

since June 2019, and eventually led to the National Security Law imposed on Hong Kong by the PRC leadership in 2020. All are incredibly challenging for the political leaderships and average citizens in Hong Kong, and although she demonstrated the nature of a transformational leadership, her positions are not necessarily well received by some residents in Hong Kong. In her address at Hong Kong's Federation of Trade Unions, she made the following comments:

- I hope to promote Hong Kong's re-industrialization. I have proposed that through the application of innovation and technology, high-end and creative production processes can be retained in Hong Kong, and the cooperation between R&D institutions and production departments has been promoted to inject momentum into re-industrialization.

- To promote innovation, science and technology, and even re-industrialization, it is necessary to have policy measures in multiple areas. The government will show greater determination and confidence in innovation and technological development, give full play to the role of "facilitator" and "promoter". In terms of hardware, we will advance the "Hong Kong-Shenzhen Innovation and Technology Park" project in the Hetao area of Lok Ma Chau as soon as possible and complete the expansion of the Hong Kong Science and Technology Park as soon as possible. In terms of software, we will nurture talents for the innovation industry through education, and we will strategically attract internationally renowned institutions to settle in Hong Kong, train innovation talents for Hong Kong, and allow local start-ups to learn "best practices" in the industry. In terms of taxation, we are preparing to implement additional tax deductions to encourage companies to invest in research and development. Therefore, there will be no "counting". What I promised will be done, including the two-tiered profits tax. There is no need to wait for this year's Policy Address. Preparations are currently under way. The Government recently established the Innovation, Technology and Reindustrialization Committee. On the other hand, we will continue to strengthen support for Small and Medium-sized Enterprises (SMEs).

More importantly, Carrie Lam has tried hard to implement what she promised, though not all initiatives have been successful. In 2017, she appointed a Steering Committee on Innovation and Technology under her personal leadership to coordinate inter-departmental collaboration to speed up the development process of innovation and technology in Hong Kong. As she promised, she did not wait till the first Policy Address for 2018 to promote the "reindustrialization of Hong Kong". Her support for R&D and "Innovation and Technology" occupied a prominent place (HKSAR Government, 2017, p. 23-27). One promise was to double the ratio of gross investment in R&D/GDP from the current level of 0.7% to 1.5% over the following five years, with additional government expenditures providing approximately half of this figure. Associated with this goal was an initiative to introduce a 300% tax deduction scheme for business R&D expenditures; although this scheme may encourage more firms to invest in R&D, it is uncertain whether it will be the most cost-effective approach to promoting high technology (Noked, 2019). Many other policies have addressed issues such as university-industry linkages, improving financial support for entrepreneurial startups, and attracting talented researchers, engineers and other professionals to Hong Kong. To capitalize on the fast growth of innovative capabilities in high tech in the Greater Bay Area and in Shenzhen in particular, the policy address has accelerated the plans for creation of the "Hong Kong-Shenzhen Innovation and Technology Park" at the Lok Ma Chau Loop on the border with Shenzhen. This is another construction project designed to assist the "Innovation and Technology Industry".

This policy address indicated growing awareness of the problems created by income inequality and the negative effects of real estate costs in Hong Kong, but it did nothing more than a relaunch of the plans to develop more public housing, though her proposal to delink the price of such public housing from the market price was well received by the community.

The document also addressed the need for the Government to connect with young people with a few projects like setting up scholarships or internships. Unfortunately, these issues have reemerged in connection with protests against the extradition legislation in the summer of 2019 and the National Security Law in July 2020 in the middle of the COVID-19 pandemics. Lam has also initiated many ambitious projects, including the large land reclamation project, affordable housing, and the Smart City initiative, among many others. Nevertheless, many of the projects have been disrupted by the political turmoil and the COVID-19 pandemics.

## 7. Discussion and conclusions

Adopting a place leadership perspective, this paper demonstrates since the return of Hong Kong to the Mainland

in 1997, political and business leaderships in Hong Kong have primarily been transactional in nature, although transformational political leadership was present briefly during the early years of the first Chief Executive Tung Chee-hwa after Hong Kong's return to China 1997 and the the period under Chief Executive Carrie Lam. Such leaderships are strongly associated with Hong Kong's continuous increasing reliance on financial and property development, among other service components. Small and medium enterprises (SME)-based manufacturing in Hong Kong has largely moved to the PRD and Mainland and recent local leaders' efforts of developing high-tech manufacturing have failed. It is argued that lack of *transformational leadership as well as institutional rigidities* are the root causes for such a situation and Hong Kong has been locked into services.

Our analyses have revealed that Hong Kong's lack of *transformational leadership* is the results of multiple political and economic structural forces at the local/regional/international scales, in particularly related to Hong Kong's "embedded autonomy" (Evans, 2012; Yeung, 2000). The historical positioning of Hong Kong as a British colony has made it hard to cultivate *transformational leadership*, which has been made more difficult by the dominant forces of the service-focused business communities. China's opening and reforms since the late 1970s and its efforts to promote Hong Kong's deep integration with the PRD have offered an easier "spatial fix" for struggling SME-based manufacturing in Hong Kong. Such actions merely have contributed to Hong Kong's continuous dependence on service. Furthermore, the "one country, two systems" political arrangement has put Hong Kong's political leaders in a challenging position with the need to appeal to the interests of both various local forces and the central government. For much of the time after Hong Kong's return to China, we observe a lack of *transformational leadership*. Even when policy announcements appear to demonstrate such leadership, the initiatives are stunted by structural constraints and vested interests in Hong Kong. Hong Kong's efforts to restructure its service-concentrated economy and develop high-tech manufacturing have been unsuccessful.

This study adds insights to the discourse on place leadership and local/regional development and shows the value of *transformational leadership* in restructuring the local economy. However, nurturing *transformational leadership* is a difficult and long-term process. Local leaderships are embedded in the political and economic institutions at multiple scales, and they shape and are shaped by such structural forces simultaneously. Meanwhile, we should not overemphasize the importance of leadership, while downplaying the impacts of local/extra institutional forces which have been discussed extensively in the literature. What is needed in research is by *bringing people back while not forgetting the institutions*. It is critical to understand the rich dynamic processes among place leadership, local/extra-local institutions and local/regional economic development.

Empirically, this study contributes to the current academic discussion on place leadership and local/regional economic development by examining a failed case, while most current studies have focused on successful ones. It is argued that both successful and unsuccessful cases offer equal values to such discussion. Indeed, there is a need to study more failed cases, which are more common than successful ones.

Hong Kong is at a critical point of economic and political development, which has been clearly demonstrated by the recent turmoil. Without *transformational leaderships*, Hong Kong's future becomes increasingly challenging. The increasing opening of China will enhance its capabilities in finance, trade and other producer services. Particularly, Shanghai has started extremely ambitious programs to build a national and international finance/service center and the new program on the Hainan Free Trade Port presents another major source of competition with Hong Kong. More trading and investment transactions will be made between China the rest of the World directly. Hong Kong is running the risk of its roles being reduced and even being left out in the long term. Its roles in China's dealing with the world will be reduced. How could Hong Kong's economic future be sustained? This is an issue that needs to be seriously reexamined by both the central and Hong Kong governments and Hong Kong's whole community including businesses and residents. It is argued that it is time for the central government to offer more help to build *transformational leadership* in Hong Kong and encourage the finance and service business communities in Hong Kong to be more cooperative with Hong Kong's political leadership and direct more capital to develop local high-tech manufacturing. The recommendations made by the MIT report and CAE-HKAES deserve more serious discussion by all parties involved in guiding the development of Hong Kong's industrial future. With the implementation of the National Security Law, Hong Kong needs to be careful to deal with the "one country, two systems" arrangement. The Hong Kong government, residents and the central government need time to future smooth out their relationships without scarifying Hong Kong's traditional strengths that have achieved its status as Asia's center in finance and import-export related services.

In summary, we have argued that both actors and institutional forces are indispensable in understanding Hong Kong's economic trajectories in history. Both political and business leaderships are critical in understanding Hong Kong's history and its unusually imbalanced economic structure which has shifted from the early entrepôt related functionalities to its current overreliance on a bio-polar services-heavy structure which consists of a small portion of labors on finance, insurance, and real estates with high pays and a majority stuck in low-paid relating and tourism-related industries. The political leadership in Hong Kong has become increasingly fragmented, partially due to the experimental "one country, two systems" framework, while the business leadership has become increasingly self-interest centered. Big businesses have taken advantage of their historical significance in Hong Kong's economy and the need/ (trust?) of the central government to form political alliance to ensure political and economic stability. Together, lacking transformational leadership, the immature "one country, two systems" political design, its geographical proximity with China, and the opening of China in the late 1980s offered a temporary a "spatial fix" to its deep economic structural problems. However, recent large-scale protests have demonstrated the severity of such deep economic structural problems, in addition to many other issues including political and judicial independence and freedom. Solving the problems depends on the emerging transformational political and business leaderships working together and reforming its political and administrative structures. Without such transformational leadership and deep structural reforms of its political, administrative, economic, educational institutions, Hong Kong's future is uncertain with lots of risks. This paper unfortunately could not provide the clear answers for many complicated issues around Hong Kong, which are beyond the scope of the current project and deserve more research in the future.

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## Conflict of interest

The authors declare no competing financial interest.

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