

GLOBAL ENTREPRENEURSHIP MONITOR

**Crea-preneur
+
Develo-preneur**

**HONG KONG
+
SHENZHEN**

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Report 2016
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GLOBAL ENTREPRENEURSHIP MONITOR

Report by
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HONG KONG and SHENZHEN Report 2016

STUDY CONSORTIUM

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EVENT SPONSOR

KPMG (HK) / 深圳市宣傳文化事業發展專項基金 / HKX Tech Startup Platform

Hong Kong, February, 2017

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Cover Design

Under Production Limited

Cover Photo

Jim Li

Zyxeos30/Getty Images

Publisher

Under Production Limited

Unit A25, 3/F, Lead On Industrial Building, 18 Ng Fong Street, San Po Kong, Kowloon, Hong Kong

Tel: 3111-2033

Fax: 3175-3903

E-mail: info.underproduction@gmail.com

Website: <http://www.underproductionhk.com>

Distributor

SUP Publishing Logistics (HK) Limited

3/F, C & C Building, 36 Ting Lai Road, Tai Po, N.T., Hong Kong

Tel: 2150-2100

Fax: 2407-3062 / 2764-2418

E-mail: info@suplogistics.com.hk

Website: <http://www.suplogistics.com.hk>

Printer

Suncolor Printing Company Limited

Room 11, 7/F Fullagar Industrial Bldg., 234 Aberdeen Main Road, Hong Kong

Tel: (852) 2873-4036

Fax: (852) 2555-6566

E-mail: suncolor@biznetvigator.com

Website: <http://www.gaahk.org.hk>

January 2017, First Edition

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Printed and published in Hong Kong

ISBN: 978-988-77784-5-5

Price: HKD 98.00

Executive Summary

Prevalence Rates of Entrepreneurial Activity

All types of entrepreneurial activities recorded an increase in both cities, which is a sign of a growing economy and of the revival of entrepreneurial spirit of Hong Kong and Shenzhen.

In mid-2016, 9.44% of Hong Kong adult population was engaging in early stage entrepreneurial activities of any kind. This represents a large increase from 3.64% reported in 2009 and significantly reverses the previously recorded slump in entrepreneurial activity of Hong Kong resulting from the global economic crisis. This is driven by the nascent entrepreneurial activity of Hong Kong adult population, which grew **+206%** since 2009. In Shenzhen, 16.04% reported nascent or new entrepreneurial activities under way, which represents a staggering **+234%** change compared with statistics from 2009, when the early-stage entrepreneurship rates in the general population were at 4.8%. Contrary to Hong Kong, this growth is driven by baby businesses that were set up in the city within last 3.5 years. Additionally, Shenzhen has recorded a dramatic change in the established business prevalence rates of **+398%**.

One interpretation of these results may be that while entrepreneurial activities have been on the rise for a few years now in Shenzhen, the intensified interest in starting-up in Hong Kong is a fairly new phenomenon.

Attitudes

These positive changes in early stage entrepreneurship rates of Hong Kong and Shenzhen were not limited to early entrepreneurship rates only. In general, we observed a major shift in attitudes and entrepreneurial intentions. In particular, perceived opportunities in Hong Kong grew to 56.8%, which represents an increase by staggering **+294%** comparing with the 2009 numbers.

Interestingly, in Shenzhen the same proportion of individuals who declared they possessed necessary skills and knowledge to do so (35.8%), also reported their intention to start a business in the next two years (36%). One explanation may be that the opportunities emerging from the economy are much more salient than the fear of failure.

Successful entrepreneurs are also regaining their high status and are promoted by local media in Shenzhen and Hong Kong. In Shenzhen, respondents were reporting a culture that is very supportive of entrepreneurship, to a greater extent than in Hong Kong.

Cultural conditioning and attitudes towards entrepreneurship, perception of own skills, and exposure to entrepreneurship practices had positive impact on peoples' intention to start businesses. Comparing to 2009, the entrepreneurial intentions in Hong Kong population grew from 7.3% to 19.7% in 2016, which represents an impressive increase of **+170%**. Similarly, in Shenzhen the intentions grew from 17.6% to 36%, and increase of **+105%**.

Motives

Almost $\frac{3}{4}$ of entrepreneurs in Hong Kong stated they were motivated to launch their businesses by the pursuit of opportunity and desired to increase their income or the level of independence in their work. This is the highest proportion reported in all economies in the study, and in the innovation-driven economies in particular. In Shenzhen, this proportion oscillated around 65% of all early-stage entrepreneurship.

Gender

Similarly to most worldwide economies, entrepreneurship in Hong Kong and Shenzhen is driven by male entrepreneurs. In Hong Kong, for every female entrepreneur, there were two male early-stage entrepreneurs. In Shenzhen, there were 2 female entrepreneurs for every 3 male early-stage entrepreneurs. In general, Hong Kong and Shenzhen men are still much more confident than women about their skills and knowledge mastery for starting a business.

However, in opposition to findings from many other economies, Hong Kong and Shenzhen women perceive almost the same level of opportunities for starting a business than their male counterparts and they are more likely to start businesses out of opportunity rather than necessity as opposing to men. Also, the total early-stage entrepreneurial activity for females recorded growth of **+197%**, surpassing the pre-recession levels. A similar growth pattern was observed in Shenzhen females and the growth in early-stage entrepreneurial activity prevalence rates was even higher than in Hong Kong.

In summary, women in Hong Kong and Shenzhen were still less likely to start businesses in 2016, but when they did, their decision was much more opportunity-driven as they felt better equipped with recognizing opportunities for entrepreneurship. Female startup rates grew faster than for males and showed a sign of reversing the general preconception that entrepreneurship is a gentlemen's affair.

Age

In the pre-recession global economy, new and nascent entrepreneurs were younger, with the highest incidence rates occurring in groups 25 to 34 years old. The global recession changed many professional careers and pushed people towards entrepreneurship at a later stage of their lives. While in 2009 the largest group of early-stage entrepreneurs from Hong Kong was between 24 to 34 years old, in 2016, the group aged 35 to 44 took the lead. Similarly in Shenzhen, while in 2009 starting-up was the focus of youngsters, often aged 18 to 34, this time around older groups in the general population, aged from 25 to 34 and 35 to 44, became more entrepreneurial than in 2009.

Nonetheless, Shenzhen established business owners and early-stage entrepreneurs were much younger than the Hong Kong ones. One interpretation could be that Shenzhen's economic strength has only emerged in the past 20 years; therefore the city did not have sufficient time to groom long-term, older owners-managers of established businesses.

Education

On average, Hong Kong-based individuals with secondary education were 1.1 times more likely and people with post-secondary education were 1.34 times more likely to start a new venture than an average person in mid-2016. These two groups were the principal drivers of the increase in early-stage entrepreneurship rates in Hong Kong. Established businesses in Hong Kong were principally owned and managed by individuals with secondary education.

In Shenzhen, early-stage entrepreneurship activities were dominated by individuals with higher levels of education; individuals with graduate experience were 1.3 times more likely to start businesses in Shenzhen than the average. In contrast, Shenzhen's established businesses fell into the domain of those with some secondary education. These findings represent a clear shift in the nature of entrepreneurial activities in Shenzhen, promoting its transformation from efficiency- to innovation-driven economy.

Income

In Hong Kong, the early-stage entrepreneurship prevalence rates of the wealthiest individuals were ranked the third highest among the innovation-driven economies, with 17.7% of high earners from the adult population being engaged in nascent or new start-up activities. Shenzhen also recorded the highest early-stage entrepreneurship rates among the highest income earners. More specifically, Hong Kong and Shenzhen ranked as the Top 2 economies, innovation-driven or otherwise, where the top third of income earners were almost 5 times (Shenzhen) and 4 times (Hong Kong) more likely to engage in early-stage entrepreneurship than individuals from the bottom income group.

Team Size & Origins

Hong Kong was in the Top 3 innovation-driven economies with the largest early-stage teams defined as current and expected owners in the firm, with an average of 3 owners per firm. In a similar vein, in Shenzhen, the early-stage teams were the largest among economies in the study, with an average of 3.53 co-founders per early-stage venture.

One interesting observation is that there were fewer family-originated co-owners in nascent than established businesses in Shenzhen and Hong Kong. The differences between the origins of interpersonal connections for business formation may be explained by the changing face of local businesses. In the past, they were often a family affair, ensuring the livelihood to multiple generations, but currently, they tend to focus more on skill complementarity between the co-founders instead.

Industry Sectors

Overall, Hong Kong and Shenzhen economies are undergoing a positive transformation. Local businesses put more emphasis on business-oriented services and transforming sectors than before at the expense of consumer-related sectors. This pattern of change is aligned with the structural composition of other innovation-driven economies.

More specifically, Hong Kong early-stage businesses are developing more retail trade, hotels, and restaurants, personal/ consumer service activities, and information and communication services than its well-established businesses. We also note a large shift away from wholesale trade and professional services. In Shenzhen, we observed a similar pattern of change in ICT and retail trade, hotels, and restaurants, with a shift away from wholesale trade, manufacturing, and administrative services.

Market Impact

While both cities recorded an increase in their overall activities with low, moderate, and high impact on the economy, in Hong Kong the share of low impact ventures grew faster than the share of high impact ventures. In Shenzhen, it was the reverse – the share of high impact ventures grew faster than the share of low impact ventures.

Technology & Innovation

The share of early-stage entrepreneurs active in technology sectors almost quadrupled in Hong Kong as comparing to 2009, but this was not enough to counterbalance the perceptions of the local customer maturity. In consequence, although the perceptions of the competitive landscape and technological advancement seem to be improving, entrepreneurs reduced their overall assessment of their market impact. In contrast, in Shenzhen early-stage entrepreneurs recorded the highest proportion of ventures active in technology sectors than in any other economy in the study. As much as 17.2% reported their businesses being high to moderately advanced in technology terms, seven times higher than in 2009.

Job Creation Expectations

From the perspective of entrepreneurial prevalence rates, high growth expectation early-stage entrepreneurial activity increased in Hong Kong and Shenzhen in recent years. In fact, Shenzhen has recorded the highest prevalence rate of early-stage entrepreneurial activity among adult population expecting to employ 20+ persons in the next five years of all economies in the study and Hong Kong took a high 4th position among innovation-driven economies.

While high job creation expectations were on the rise in both Hong Kong and Shenzhen, in Hong Kong high-expectations early-stage entrepreneurship grew faster than the overall entrepreneurial activity. In contrast, while Shenzhen recorded stronger growth in the overall entrepreneurial activity, its high job creation expectation businesses were developing at a slower pace than less ambitious businesses.

Internationalization

Hong Kong economy has always been internationally oriented. A small domestic market and brokering opportunities between Mainland China and the rest of the World forged the city into an international trading port. Not surprisingly, Hong Kong ranked very high in the percentage of its businesses with more than 50% of revenue coming from outside of the domestic market. International new ventures are on their path to becoming the quintessential part of entrepreneurial activity in

Hong Kong. For established businesses, the share of domestic-driven firms did not change. In Shenzhen, the share of early-stage and established firms with strong international orientation is lower than in Hong Kong and it has decreased since 2009 by -35%. With the development of the Chinese economy, Shenzhen businesses gained better access to local customers and were able to concentrate more on their local market.

Non-financial Support

Overall, the private organizations of Hong Kong and Shenzhen are valued by a larger share of entrepreneurs than the public ones. One reason might be that there are fewer public support organizations available to the entrepreneurs and their undertakings are more constrained because of public financing of their activities. As a result, in comparison to the booming private sector, they may appear less competitive with their stringent criteria to the entrepreneurs seeking for support but also bearing higher entry barriers because of higher demand for their services. Nevertheless, the share of entrepreneurs actually looking for the public support is still higher than of those seeking private backing. In parallel, Shenzhen entrepreneurs have developed a stronger sense of appreciation for the ongoing initiatives than their Hong Kong counterparts. Specifically, 47% of entrepreneurs in Shenzhen find the private support helpful to their businesses and 45% share this view on public support organizations.

Financial Support

In terms of financial support, Hong Kong early-stage firms have lower capital requirements than their Shenzhen counterparts, which may be related to the lower technological intensity of Hong Kong firms. Most of this funding comes from the entrepreneurs' own savings; 92% of nascent entrepreneurs declare using their savings to support the development of their businesses. These findings may explain why entrepreneurial activities are so closely related to the high income levels of entrepreneurs in both cities. Not surprisingly, public funding plays an essential role for start-ups with founders having limited financial resources. The role of the family in financing new ventures is still significant in Shenzhen, but not so much in Hong Kong. Banks are also more supportive of start-ups in Shenzhen than in Hong Kong and so are venture capitalists, which could be explained by higher prevalence

of start-ups with profound market impact. In Hong Kong on the other hand, crowdfunding is more prevalent as the source of capital for early-stage businesses, a sign of a more established product innovation.

Informal Investors

The proportion of informal investors among the adult populations of Hong Kong and Shenzhen grew significantly compared with 2009. In mid-2016, the share of adults making informal investments in new businesses increased to 6.5% in Hong Kong (+151% increase) and to a staggering 20.5% in Shenzhen (+442% increase). At the same time, the average amount of the investment in Hong Kong increased as well, to US\$ 70,565 in Hong Kong (+43% increase) and slightly declined in Shenzhen from US\$ 80,556 to US\$ 76,112 in 2016 (-6% decrease). This decrease is expected for Shenzhen considering that over 1/5th of the adult population declares investing in start-ups. Perhaps the most important finding was about the informal investment sizes for both cities: Hong Kong and Shenzhen informal investors are one of the most generous among all economies in the study.

We have also recorded a dramatic change in the investment patterns for Shenzhen. While in 2009 individuals were principally investing the family members, in 2016 the investment preferences were aligned with the ones of Hong Kong: friends and neighbors being the first choice. Interestingly, strangers with good ideas also became a viable investment choice in Hong Kong and Shenzhen alike, paving the way for establishing a strong business angel culture in both cities. The similarity of profiles may also suggest then the evolving breed of new angel investors could successfully work on cross-border deals and cooperation, strengthening the ties between the two ecosystems.

Entrepreneurial Exits

The principal reason for discontinuation is still the lack of profitability of the business or personal reasons, just like in other economies in the study. Surprisingly, the share of exits related to the opportunity to sell declined in both cities in comparison to the 2009 statistics. Successful exits are not yet a viable option in either city. However, we have also recorded a decline in exits related to the inability to secure the funding; it became easier for entrepreneurs from Hong Kong and Shenzhen to finance

their businesses. A major shift in Shenzhen's reasons for exit has also been noted. In 2009 reasons for exit in Shenzhen were quite different than in Hong Kong; in 2016 these differences almost disappeared.

Entrepreneurial Employee Activity

For Hong Kong, 4.1% of adults from our sample reported they have been engaging in intrapreneurship in the past three years, a share comparable to the average rate within the innovation-driven economies. In Shenzhen, the intrapreneurship prevalence rate was higher than in Hong Kong and above the efficiency-driven economies average: 4.86% within the general population. These findings provide support to our initial observation of the overall entrepreneurial culture prevailing in Shenzhen.

Entrepreneurial Framework Conditions

Hong Kong has a good reputation as an entrepreneurship hub among its experts. Overall, in comparison to other innovation-driven economies, it is perceived as an economy with little government bureaucracy and low taxes, with supportive government programs and policies in general, that is characterized by a robust physical infrastructure and by sound professional and commercial services available to entrepreneurs. Within these categories, Hong Kong scores well above the innovation-driven economies average. Also, the financial environment related to entrepreneurial activity has been performing above the average, which is positive development for Hong Kong entrepreneurs.

Conversely, there are two areas in which the local ecosystem is deemed to underperform in comparison to other innovation-driven economies: in providing entrepreneurial education at primary and secondary school levels and in its capacity to transfer R&D between established and new businesses as well as between the industry, academia, and public research institutes.

Comparing to previous years, the evaluation of the entrepreneurial conditions framework by Hong Kong experts recorded the most salient and positive changes in the assessment of government's efforts to improve entrepreneurship in Hong Kong. In contrast, education and training of new generations of entrepreneurs has also received more negative reviews than in 2009. In particular, the entrepreneurial education at primary and secondary

school levels received the lowest assessment score out of all categories of the entrepreneurial framework and recorded a -19% drop comparing to 2009 figures.

Overall, two major strengths of Hong Kong emerged from the analysis:

1. Commercial and Service Infrastructure
2. Government Policies

We have also uncovered three constraints on their way to significant improvement as evaluated by the experts in the study:

1. Capacity for Entrepreneurship
2. Financial Support for Entrepreneurship
3. Access to Physical Infrastructure

Finally, two additional constraints have been identified as creating obstacles to Hong Kong's entrepreneurship in general:

1. Social and Cultural Norms
2. Labor Costs, Access, and Regulations

What differentiates Hong Kong from Shenzhen? While Hong Kong possesses access to global markets and the economic maturity of pursuing the opportunities for development, Shenzhen has more of the innovative spirit and "can do" attitude driving the entrepreneurial mindset that Hong Kong used to have in the past. According to experts, Shenzhen also outperforms Hong Kong with its supply chain integration advantage and with better access to Mainland market for acquiring talent, funding, and customers.

In the expert's view, if the two cities joined forces in formation of complementary advantages, it would strengthen the international and Mainland competitiveness for both. Their resources and strengths combined, the Hong Kong-Shenzhen duo would be unstoppable in the eyes of our experts. We see this as a first step towards the development of the Hong Kong-Shenzhen megalopolis.

Shenzhen is one of the most active entrepreneurial cities in Mainland China. In our latest GEM study, its environment for entrepreneurship is more highly assessed by the interviewed experts, as compared with all previous studies. And compared with other innovation-oriented economies, Shenzhen is characterized by having strong government support to entrepreneurship, by being a society with a strong entrepreneurial spirit in general, by possessing strong physical infrastructure, and by an ever-improving professional and commercial services for entrepreneurs. In addition, Shenzhen's assessment scores are far higher than the average level of innovation-oriented economies in almost all entrepreneurial framework conditions.

In the eyes of the interviewed Shenzhen experts, Shenzhen is physical infrastructure and related services, and tax-related government services and so on, as compared with Hong Kong. The former condition is mainly about the serious shortage of land space in Shenzhen, while the later condition mainly refers to the city's rather burdensome taxation procedure.

Compared with previous years, the most remarkable and positive change on the experts' assessment of Shenzhen is seen in the condition of funding support. They think that the abundant availability of funding is one of the catalysts to entrepreneurial activities in Shenzhen. Interviewed experts also have more positive assessment than previous years in the aspect of government policies and government projects. Particularly, the condition of transparent policies and the condition of support to small and medium-sized businesses are even more positively assessed. At the same time, experts are more concerned about issues such as the prohibitively high entrepreneurial costs due to high startup costs and rents, and the insufficient provision of entrepreneurial education and training at tertiary institutions.

Overall, we analyzed that the major strengths of Shenzhen are:

1. Cultural and social norms
2. Research and development transfer
3. Government policies

And according to the assessment of experts in the study, we discovered three constraints to entrepreneurial activities:

1. High-standing entrepreneurial costs due to high property prices and costs
2. Ineffective intellectual property protection
3. Taxation policies

According to the interviewed Shenzhen experts, the major strengths of Hong Kong versus Shenzhen lie in: intellectual property and legal protection, with a high degree of rule of law; government-involved basic research (with outcomes to be provided to businesses) and clearer support systems for businesses; communication and exchange with the international community; and labors' high levels of commitment and quality. The major strengths of Shenzhen versus Hong Kong are: a well-developed industrial chain; a passion for innovation, the ability for speedy innovation, and advanced concepts in entrepreneurship and innovation; well-developed high-technology industries; and a close connection with Mainland China.

Shenzhen experts think that Hong Kong and Shenzhen should strengthen exchange and cooperation with each other. Riding on their respective strengths, they can join forces to build a world-class megalopolis that is on par with London and New York. The joint integrated development of Shenzhen and Hong Kong will not only achieve win-win outcomes, but also contribute significantly to the country and the world.

Foreword

By Professor Kalok CHAN

Dean - Business School, The Chinese University of Hong Kong

China opened its door to the world 40 years ago and has undergone industrialization at an unprecedented pace. By the year 2020, analysts predict China will take the top spot in the list of the world's largest economies by gross domestic product (GDP), both outright and measured in terms of purchasing power parity. However, despite this outstanding growth, one should still keep in mind the difficulties China has had to overcome to reach this level of achievement and the challenges China will face in the future.

Economic development of this scale is never an easy task. The 2007 global financial crisis started in the United States and swept the world causing havoc. The economic principles and capitalist systems that seemed to work so well in the past have been severely tested. To overcome the significant fallout and to restore societies, many countries have promoted and integrated innovation and entrepreneurship as a core part of education and government policies. In particular, China has made innovation and entrepreneurship a national priority.

In the previous GEM Hong Kong and Shenzhen Report published in 2009, its researchers outlined a poor performance for the level of interest and activities in entrepreneurship.

Over the past seven years, the Shenzhen and Hong Kong governments and communities have been devoting more and more interest towards the promotion of technology and business venturing. It is pleasing to see in this 2016 Report that these efforts are paying off.

When comparing the figures in 2009 and 2016, the data suggests that there has been a quantum leap for the level of interest and willingness to take on risk and to invest in the future despite its uncertainty. The specific measures clearly show that the citizens of Hong Kong and Shenzhen have been active in entrepreneurship and innovation. Together with its expert views, the Report can be a very valuable reference for education, business and policy makers.

This study is a collaboration among institutes that have devoted themselves to teaching and research of innovation and entrepreneurship including The Chinese University of Hong Kong, Hong Kong Baptist University, University of Hong Kong, and Shenzhen Academy of Social Sciences. I would like to thank Prof. Kevin Au, Prof. Xufei Ma, Dr. Marta Dowejko, Prof. Michael Young, Prof. Simon Lam, Prof. Yanfeng Zheng, and Prof. Weili Wang. They together with their colleagues have put in a tremendous effort to raise funds and to complete the study.

This academic endeavor would not be possible without the support from the community. HKX work with us on continuous research, Savantas Institute provided sponsorship and advice and KPMG has given venue and logistical support for the GEM conference. I would like to express our sincere gratitude for their kind assistance. On behalf of the participating institutes, I would also like to thank the respondents and experts who contributed their time and knowledge towards the study. They have helped the researchers to gain an insightful view of the community and the entrepreneurship ecosystem.

Lastly, entrepreneurship and innovation can provide many solutions for new initiatives and societal issues such as the creative capitalism, a reduction of inequity and the "One Belt, One Road" initiative. As such, we hope to see more works of this kind in the future.

Foreword

By Regina IP

Chairperson of Savantas Policy Institute, Legislative Councillor

It has been widely acknowledged that entrepreneurship is an important driver of economic development. Entrepreneurial activities spur growth, create jobs and spark innovation. Being entrepreneurs is not just about running their own companies. In Schumpeter's view, entrepreneurs are agents of innovation who bring new ideas to the market. *The 2007 Economic Report of the President* (of the United States) defines entrepreneurship as "developing new ways of doing business and making risky investments to implement them". It points out that entrepreneurship involves taking risk; but when companies compete through entrepreneurship and innovation, the economy as a whole benefits from the efficiency gains. Both large and small businesses can innovate. It is no wonder that China's 13th Five Year Plan places strong emphasis on mass entrepreneurship and innovation as a main theme of our national economic development strategy.

Hong Kong has long prided itself on its entrepreneurial spirit. In the post war period, our entrepreneurs played a key role in Hong Kong's industrialization, creating an economic miracle that placed Hong Kong on the pantheon of Four Asian Tigers. This spirit seems to have declined since the 1980s. The rapid growth of the property and financial sectors has crowded out many other riskier economic activities. Fortunately the tide has turned over the past few years. After the 2008 financial crisis, the city has seen a greater awareness of the importance of entrepreneurship and innovation. The government has stepped up its support. The ecosystem has also changed for the better. Private incubators are mushrooming. According to the latest Invest Hong Kong survey, the number of local co-work space, incubator and accelerator locations increased from 3 in 2010 to 48 in 2016. 5,618 workstations were available and 1,926 start-ups registered in these locations, both up by 24% from 2015.

Despite the encouraging signs, we should pay attention to quality in addition to quantity. We need to promote high-growth, high-impact entrepreneurship that effectively drives economic development. Among other factors, technology plays a crucial role in accelerating the growth and magnifying the impact of start-up ventures.

Our neighbouring city Shenzhen has transformed itself to a hotspot for technology-based entrepreneurial activities over the past decade. High R&D investment and a wide variety of policy support measures have laid fertile ground for high-tech entrepreneurship. Shenzhen is home to tech giants Huawei, ZTE and Tencent. Many more companies are making their start there. The contribution of entrepreneurial activities to Shenzhen's economic growth is evident. In 2014, the GDP per capita of Nanshan District, Shenzhen's tech hub, rose to 308,700 yuan, overtaking Hong Kong.

Hong Kong and Shenzhen can make further progress in spurring high-growth entrepreneurship by complementing each other. DJI is a case in point. This world's leading consumer drone manufacturer, now headquartered in Shenzhen, was founded by a Mainland engineering graduate in Hong Kong University of Science and Technology. This success story demonstrates what can be achieved with Hong Kong's world-class tertiary institutions and Shenzhen's strong manufacturing base. For years, Savantas Policy Institute has been one of the advocates for cooperation between the two cities in promoting innovation and entrepreneurship. The prospects for collaboration have received a boost with the announcement of the Hong Kong/Shenzhen Innovation and Technology Park in Lok Ma Chau Loop. The Global Entrepreneurship Monitor 2016: Hong Kong & Shenzhen Report, jointly conducted by scholars and experts from both cities, is a timely effort to inform future collaboration. The study provides a multifaceted analysis of the entrepreneurial landscape in Hong Kong and Shenzhen, shedding light on potential areas of cooperation between the two cities to increase their competitiveness on the international arena.

As pointed out by this report, developments such as Internet-of-Things, Smart City and Fintech offer a lot of opportunities for collaboration. To improve the synergy between the two cities, we should step up efforts in promoting joint research and development and facilitating cultural and personnel exchange. I hope the useful pointers provided by this study can contribute to development of high-growth, high-impact entrepreneurship in both cities.

Acknowledgments

By Professor Xufei MA

Director - Center for Entrepreneurship, The Chinese University of Hong Kong

On behalf of the Center for Entrepreneurship of the Chinese University of Hong Kong, I would like to thank many people and organizations for their contributions, support, and assistance in this survey project.

Our thanks will be given to those respondents who provided us answers, without which we cannot see our final product, the GEM Hong Kong and Shenzhen Report 2016. It usually took up about more than 20-40 minutes to complete each telephone interview. Given that time is the most valuable resource in today's fast-moving world, we are truly grateful for the patience and generosity they displayed during the whole interview process.

In February 2017 we held a news conference to release the summary of our study's findings, which had become an important part of the publication of the GEM 2016 Global Report at the Annual General Meeting held in Kuala Lumpur, Malaysia. That said, we appreciate the collaboration with hundreds of scholars from around the world in the GEM Consortium, whose collective effort led to the Global Report. The news conference was a great success. We thank the conference panelists, participants, and the event sponsor KPMG.

The study itself is an impressive journey with a genuine entrepreneurial spirit. Since 2009, when the last GEM Report was released, substantial changes have taken place in the entrepreneurial eco-system in both Hong Kong and Shen Zhen. Professor Kevin Au, the former Director of CUHK Center for Entrepreneurship, identified this unique research opportunity, initiated this entrepreneurial journey, and led this cross-border and inter-institutional project. Now we can safely say that we have successfully captured the opportunity.

We thank the colleagues and co-investigators of this project. Particularly, apart from the GEM findings (constituting Part 1 of this booklet), we also have the honor to have several researchers and practitioners to make observations on the findings and write up their insights (Part 2 of this booklet). Their insights have added new perspectives to our understanding that our previous GEM reports do not have. I am truly glad for their input.

Additionally, the excellent research assistance and the administrative work provided by our colleagues from the Center for Entrepreneurship deserve special thanks. Funding is always a challenge for projects like this, but we feel very fortunate to receive financial support provided by Savantas Policy Institute.

Finally, I sincerely thank the strong support from Pro-Vice-Chancellor of The Chinese University of Hong Kong Professor Fanny M.C. Cheung and the Dean of the Business School Prof. Kalok Chan, without which the completion of this Report would definitely be a mission impossible. We very much appreciate your continuing faith in us.

| Table of Contents

<u>Executive Summary</u>	3
<u>Foreword by Prof. Kalok Chan</u>	9
<u>Foreword by Regina Ip</u>	10
<u>Acknowledgements</u>	11
<u>Table of Contents</u>	12

Part I: **Hong Kong &** **Shenzhen** **Report 2016**

<u>Chapter 1: Global Entrepreneurship Monitor 2016: Hong Kong & Shenzhen Report</u>	13
---	----

Part II: Insight Based on GEM **Hong Kong & Shenzhen** **Report 2016 Findings**

<u>Chapter 2: Status and Background Analysis of Entrepreneurial Activities in Shenzhen</u>	110
<u>Chapter 3: The Entrepreneurial Mindset: Lessons about Hong Kong</u>	121
<u>Chapter 4: Intrapreneurship</u>	127
<u>Chapter 5: Immigrants Entrepreneurship Study</u>	135
<u>Chapter 6: Encore Entrepreneurship and Silver Venturing</u>	146
<u>Chapter 7: Entrepreneurship Education in Hong Kong</u>	153
<u>Chapter 8: Entrepreneurship in APEC and Hong Kong</u>	161
<u>Discussion & Way Forward</u>	170

Part I:

Global Entrepreneurship Monitor 2016: Hong Kong & Shenzhen Report

<u>List of Tables & Figures</u>	17
-------------------------------------	----

<u>List of Appendixes</u>	18
---------------------------	----

<u>Background of the Study</u>	19
--------------------------------	----

<u>Entrepreneurial Boom of Early 2010s</u>	21
--	----

<u>Definitions of Entrepreneurship</u>	22
--	----

<u>Social, cultural, political and economic context</u>	23
---	----

<u>Social values towards entrepreneurship</u>	24
---	----

<u>Individual attributes</u>	24
------------------------------	----

<u>Entrepreneurial Activity</u>	24
---------------------------------	----

<u>How GEM Measures Entrepreneurship?</u>	26
---	----

<u>Findings from Adult Population Survey</u>	27
--	----

<u>Entrepreneurial Prevalence Rates</u>	27
---	----

<u>Attitudes towards entrepreneurship: how people feel about starting business?</u>	32
---	----

<u>Entrepreneurial Motives: Opportunity vs. Necessity</u>	37
---	----

<u>Characteristics of Entrepreneurs</u>	42
Gender	42
Age	45
Education	49
Income	53
<u>Characteristics of Ventures</u>	55
Entrepreneurial Teams	55
Industry Sector Participation	58
Job Creation Expectations	62
Overall Market Impact	63
Technology & Product-Market Innovation	66
Internationalization	68
<u>Support for Nascent Entrepreneurship</u>	70
Non-financial support from public and private stakeholders	70
Financial Support	73
Informal Investors	76
<u>Entrepreneurial Exits</u>	80
<u>Entrepreneurial Employee Activity (EEA)</u>	82

Findings on Entrepreneurial Framework Conditions in Hong Kong

<u>Method & Sample</u>	84
<u>General Perception of Hong Kong's Entrepreneurial Ecosystem</u>	86
<u>Changes in the Hong Kong Ecosystem</u>	87
<u>Strengths and Weaknesses of the Hong Kong Entrepreneurial Ecosystem</u>	89
<u>Hong Kong vs. Shenzhen: What's the Difference?</u>	92
<u>Expert Recommendations for Hong Kong</u>	94
<u>Hong Kong & Shenzhen Cooperation Areas</u>	96

<u>Conclusions</u>	98
--------------------	----

<u>References</u>	102
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<u>Appendix 1:</u>	
<u>List of National Experts in Hong Kong and Shenzhen</u>	103

<u>Appendix 2:</u>	
<u>Hong Kong Responses to National Expert Questionnaire</u>	107

List of Tables & Figures

Table 1.1:	Economies participating in GEM 2016 cycle	20
Figure 1.1:	Average TEA in countries that experienced post-global crisis recession	21
Figure 1.2:	The GEM Conceptual Framework	23
Table 1.2:	Social, cultural, political and economic context and economic development phases	24
Figure 1.3:	The entrepreneurial process and GEM operational definitions	25
Figure 2.1:	Longitudinal Analysis of Nascent, New and Established Business Activity in the Hong Kong and Shenzhen Adult Population	29
Table 2.1:	Comparison of Entrepreneurship Rates in Adult Populations of Hong Kong, Shenzhen, and Selected Economies in 2016	30
Table 2.2:	Entrepreneurial Process Prevalence Rates – Longitudinal Comparison for Hong Kong, Shenzhen	30
Figure 2.2:	Total Early-Stage Entrepreneurial Activity in the Adult Population in 66 Economies	31
Table 2.3:	Entrepreneurial Process Prevalence Rates – Longitudinal Comparison for China	32
Figure 2.3:	Perceived Opportunities, Capabilities and Fear of Failure in Starting a Business as Percentage of Respondents in Hong Kong and Shenzhen	33, 34
Figure 2.4:	Cultural conditions for Entrepreneurship as Percentage of Agreeing Respondents in Hong Kong and Shenzhen	34, 35
Table 2.4:	Percent of Adult Population Reporting Levels of Entrepreneurial Activities and Their Exposure to Entrepreneurship in Hong Kong	35
Figure 2.5:	Longitudinal Analysis of the Percentage of Individuals with Entrepreneurial Intentions in Adult Population of Hong Kong and Shenzhen	36, 37
Table 2.5:	Opportunity versus Necessity Entrepreneurship Rates in the Adult Population	38, 39
Figure 2.6:	Longitudinal Analysis of the Proportion of Necessity-driven Motives among Total Entrepreneurial Activity (TEA) in Selected Economies	40
Figure 2.7:	Cross-country Comparison of Motives for Entrepreneurship among Total Entrepreneurial Activity (TEA)	41
Figure 2.8:	Longitudinal Analysis of the Ratio of Opportunity to Necessity-driven Motives for Entrepreneurship among Adult Population in Selected Economies	41
Figure 2.9:	Total Early Stage Entrepreneurship Rates in Adult Male and Female Population in Selected Economies	42
Figure 2.10:	Entrepreneurial Attitudes in Adult Male and Female Population in Selected Economies	43
Figure 2.11:	Change in Ratio of Opportunity to Necessity Total Early-Stage Entrepreneurial Activities in Adult Males and Females of Hong Kong, Shenzhen and China	44
Table 2.6:	Total Early Stage Entrepreneurship Rates in Adult Male and Female Population in Hong Kong, Shenzhen, and China 2002-2016	45
Figure 2.12:	Cross-country Comparison of Entrepreneurship Prevalence by Age Groups	46
Figure 2.13:	Longitudinal of Age Distribution of Entrepreneurship Activities in Hong Kong and Shenzhen	47, 48
Figure 2.14:	Cross-country Comparison of Entrepreneurship Prevalence by Level of Education	49, 50
Figure 2.15:	Longitudinal Analysis of Education Levels in Entrepreneurship Activities	51, 52
Figure 2.16:	Longitudinal Analysis of Income Levels and Entrepreneurship Activities in Hong Kong and Shenzhen	53, 54
Figure 2.17:	Cross-country Comparison of Entrepreneurship Rates in Top Third to Bottom Third Income Groups in 2016	55
Figure 2.18:	Cross-country Comparison of Average Number of Owners in Early-stage and Established Firms in 2016	56
Figure 2.19:	Origins of Owner Teams in Nascent and Established Businesses in Hong Kong and Shenzhen	57

Figure 2.20: Cross-country Comparison of Industry Sector Composition in Early-stage and Established Firms in 2016	59
Figure 2.21: Industry sector distribution of early-stage and established businesses of Hong Kong and Shenzhen	60
Table 2.7: Cross-country Comparison of High Job Expectations Entrepreneurship Rates in the Adult Population	61
Figure 2.22: Cross-Country Comparison of Percentage of Entrepreneurs Expecting to Create 10+ Jobs in the Next Five Years	62
Figure 2.23: Cross-Country Comparison of Market Impact of Entrepreneurial Activities	64
Figure 2.24: Longitudinal Analysis of Market Impact of Entrepreneurial Activities in Hong Kong	65
Figure 2.25: Longitudinal Analysis of Technological Advancement and Market-Product Innovation of Entrepreneurial Activities in Hong Kong and Shenzhen	67
Figure 2.26: Cross-Country Comparison of Internationalization of Entrepreneurial Activities	68
Figure 2.27: Longitudinal Analysis of Internationalization of Entrepreneurial Activities in Hong Kong and Shenzhen	69
Figure 2.28: Perceptions of Public and Private Non-Financial Support to Nascent Businesses in Hong Kong and Shenzhen	71, 72
Figure 2.29: Founding Requirements and Sources for Nascent Businesses in HK and SZ	74, 75
Figure 2.30: Longitudinal Comparison of Informal Investment Prevalence Rates and Amounts in Hong Kong and Shenzhen	77
Figure 2.31: Cross-country Comparison of Informal Investment Prevalence Rates and Amounts	78
Figure 2.32: Characteristics of Informal Investments in Hong Kong and Shenzhen	78, 79
Table 2.8: Longitudinal Comparison of Entrepreneurial Exit Rates in the Adult Population in China, Hong Kong, and Shenzhen	80
Figure 2.33: Cross-country Comparison of Exit Prevalence Rates and Reasons behind Exits	81
Figure 2.34: Cross-country Comparison of Employee Entrepreneurial Activity Prevalence Rates	83
Table 3.1: Expert Roles in the Hong Kong and Shenzhen Entrepreneurship Ecosystems	84
Figure 3.1: Overall Assessment of the Hong Kong Entrepreneurial Framework in Comparison to Other Economies	86
Figure 3.2: Longitudinal Assessment of the Hong Kong Entrepreneurial Framework by Hong Kong Experts	88
Figure 3.3: Expert Assessment of Hong Kong's Entrepreneurial Framework Strengths and Weaknesses	90
Figure 3.4: Longitudinal Analysis of Strengths and Weaknesses in Hong Kong's Entrepreneurial Conditions Framework	91
Figure 3.5: Top 10 cited advantages of Hong Kong and Shenzhen in the Eyes of Hong Kong and Shenzhen Experts	92, 93
Table 3.2: Recommendations on the Improvement of Entrepreneurial Framework Made by National Experts	95
Figure 3.6: Top 10 cited Collaboration Opportunities between Hong Kong and Shenzhen in the Eyes of Hong Kong and Shenzhen Experts	97

| List of Appendixes

Appendix 1: List of National Experts for Hong Kong and Shenzhen

Appendix 2: Hong Kong Responses to National Expert Questionnaire

Background of The Study

The last time we measured the intensity of start-up activities in Hong Kong and Shenzhen was in 2009. Since then, both cities have experienced a tremendous growth in their entrepreneurship support ecosystems. In just five years, over 15 acceleration programmes and over 40 co-working spaces opened their doors in Hong Kong only, providing a long-needed support to local entrepreneurial undertakings. How did these changes impact local population in their pursuit of new opportunities? We are about to find out.

The following report provides a detailed analysis of the current status of entrepreneurship in Hong Kong and Shenzhen. It compares the results with past indicators for both ecosystems and provides an international benchmark with 65 economies worldwide. This report is a part of a global initiative, Global Entrepreneurship Monitor, which is a not-for-profit research consortium launched in 1999. Since then, Global Entrepreneurship Monitor has gained the reputation of the most reliable comparative entrepreneurship study in the world.

The GEM study now represents between 70% and 75% of the world's population and approximately 90% of the world's GDP. Only a few areas of the globe are not represented such as certain countries in mid/central Asia, a few countries in South East Asian and some from West and Central Africa.

The economies that participated in the 2016 GEM cycle are shown in Table 1.1. Since 2008 (Bosma et al., 2009), GEM has followed the World Economic Forum's typology of countries, based on Porter's (Porter et al., 2002) definitions of economic development levels: factor-driven, efficiency-driven and innovation-driven economies.

GEM is different from most current studies on entrepreneurship in that it does not just look at businesses but also at individuals between the ages of 18 and 64 years from a demographically representative portion of the population. GEM looks at individuals,

their attributes, aspirations, attitudes, perceptions and intentions.

Every year, national teams making up the international research group, collect new data from the Adult Population Survey (APS) and National Expert Survey (NES). Since GEM maintains the highest standards and methodological consistency of data collection from year to year, the results can be compared across economies and can be used to study changes of country-level entrepreneurial activities across years.

The 2016 GEM Global Report summarizing the findings from 66 economies worldwide has been published on February 6, 2017 and is available at www.gemconsortium.org. Working with harmonized GEM international country-level data as well as economy-specific findings, each team from the 66 economies/ regions has also committed to publish local reports. Ours encompasses Hong Kong and Shenzhen as the 66th economy to the analysis its main focus.

In a true entrepreneurial spirit, we have bootstrapped resources to conduct and publish this study. It represents a joint effort of the Chinese University of Hong Kong, Hong Kong Baptist University, the University of Hong Kong, Shenzhen Academy of Social Sciences, and Savantas Policy Research Institute. This is the sixth edition of Global Entrepreneurship Monitor reports, previously championed by The Chinese University of Hong Kong, and a fourth study comparing the entrepreneurial activities of Hong Kong and Shenzhen in cooperation with Shenzhen Academy of Social Sciences.

	Factor-driven Economies	Efficiency-driven Economies	Innovation-driven Economies
Africa	Burkina Faso, Cameroon	Egypt, Jordan, Lebanon ² , Morocco, South Africa	
Asia & Oceania	India, Iran ¹ , Kazakhstan ¹	China ² , Malaysia ² , Indonesia, Thailand, Turkey, Saudi Arabia ² , Shenzhen ²	Australia, Hong Kong , Israel, Qatar, South Korea, Taiwan, United Arab Emirates
Latin America & Caribbean		Argentina ² , Belize, Brazil, Chile ² , Colombia, Ecuador, El Salvador, Jamaica, Guatemala, Mexico ² , Panama ² , Peru, Uruguay ²	Puerto Rico
European Union		Bulgaria, Croatia ² , Hungary ² , Latvia ² , Poland ² , Slovakia ²	Austria, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Slovenia, Spain, Sweden, United Kingdom
Non-European Union	Russian Federation ¹	Georgia, Macedonia	Switzerland
North America			Canada, United States
Number of economies	6	33	27

¹ In transition to efficiency-driven economies

² CN & SL are in transition to innovation-driven economies according to WEF classification

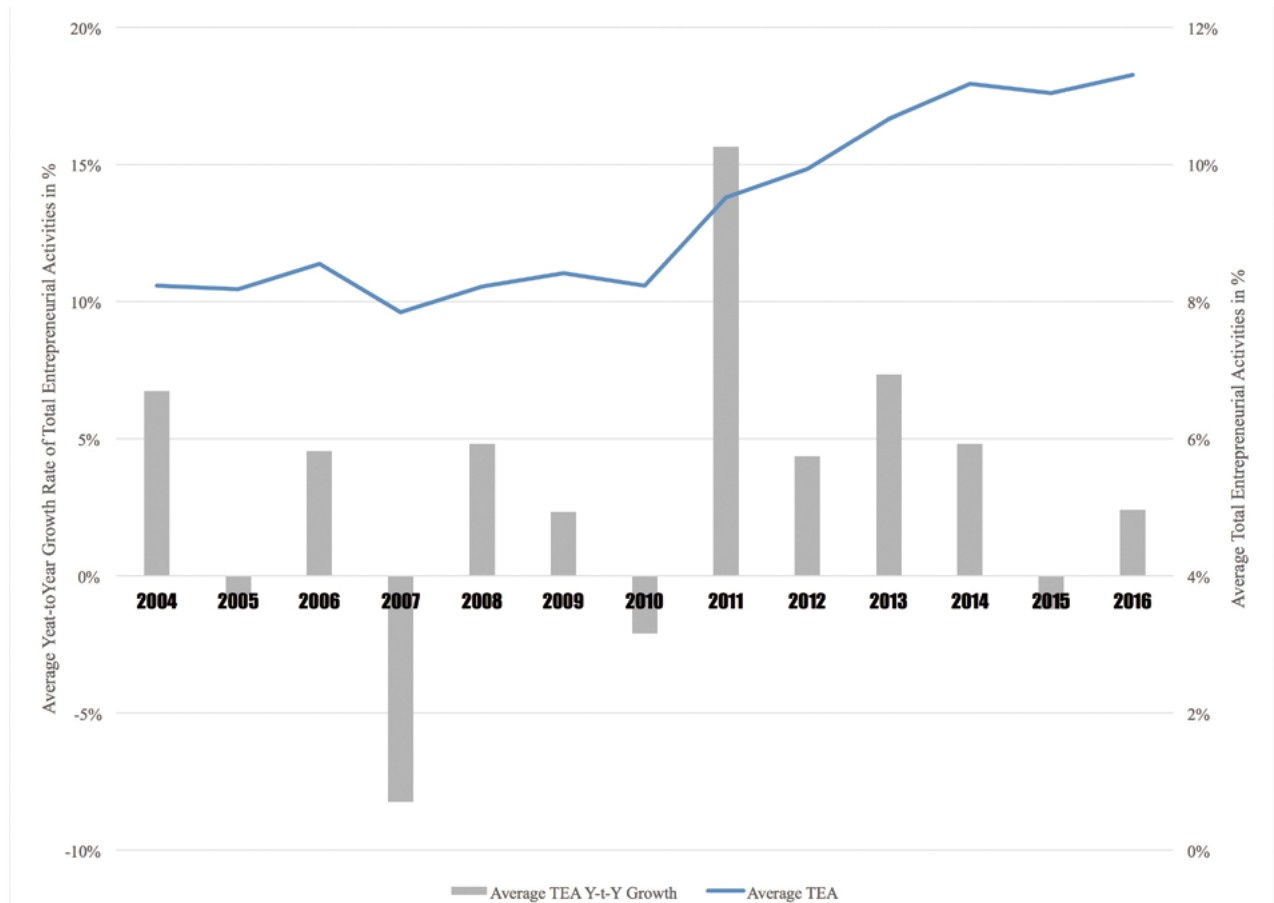
Source: GEM 2016

● Table 1.1: Economies participating in GEM 2016 cycle

In this edition, we focus on the level and characteristics of entrepreneurial activities and on informal investment in Hong Kong and Shenzhen. Comparing to previous years, this study also measures the intensity of intrapreneurship, or entrepreneurial activities originating in well-established businesses.

Data collection was conducted from April to November 2016 and it encompasses two major components. The first one involved phone interviews with over 4,000 individuals from both cities to evaluate the intensity and types of entrepreneurship in general population. The second component, involving 76 expert interviews, was included to assess the entrepreneurial policies and inner workings of support ecosystems of Hong Kong and Shenzhen in stimulating the start-up activities in general.

Entrepreneurial Boom of Early 2010s



Source: GEM 2004-2016

● Figure 1.1: Average TEA in countries that experienced post-global crisis recession

The global financial crisis of 2008-09 and the subsequent great recession saw many employees lose their jobs and many businesses close down. Indeed, economic crisis and recession negatively impacted potential business income and wealth of individuals, limiting the capital available to start new businesses. At the same time, such economic conditions restricted opportunities available within the established or declining business structures and pushed people to look for new opportunities outside of their usual frames of reference. Opportunity or necessity, both motives for entrepreneurship became salient in times of worldwide economic struggle. May there be a silver lining to the financial crisis we experienced few years ago?

We would like to think so. When jobs and income from established businesses become limited, many people

turn to entrepreneurship, even if just temporarily. Data from Global Entrepreneurship Monitor for years 2004-2016 provides support to this argument. In countries touched by global recession, the total entrepreneurship activity rates are on the rise since 2011. Past years saw a significant increase in entrepreneurship rates in economies such as United Kingdom, USA, or Singapore. On average, in countries that underwent the recession, the TEA rates were higher by +18.5% in 2011 than they were in 2008. Conversely, in countries that did not experience the recession, the average TEA increased by 5.9% in the same period. Figure 1.1 provides the average TEA rates and their year-to-year growth for countries that experienced the post-crisis recession.

A second tsunami, this time a positive one, was the rising of entrepreneurial spirit in different regions around the World. We saw an explosion of entrepreneurship stories in the media over the last few years. TV shows, movies, magazines, and events were established to a degree we have never seen before. Reality TV shows such as “Shark Tank” or “Dragons’ Den”, TV series and movies such as “Silicon Valley”, “The Social Network”, or “Jobs”, caught the attention of many and established the position of entrepreneurs in the popular culture.

The wave of entrepreneurial activity has also reached Hong Kong and Shenzhen. We saw a tremendous growth in the support systems available to entrepreneurs, with the number of start-up stakeholders tripling in years 2009-2014 (Dowejko, Au & Shen, 2014). Multiple new stakeholder groups, such as corporate acceleration programs, co-working spaces, business angel groups or crowd-funding platforms, have embraced their roles in nurturing local startups. For instance, Kickstarter have recently opened its Hong Kong branch to facilitate the access to funding for local new ventures. According to the company, even without official Kickstarter’s presence in the city until mid-2016, Hong Kong grew to rank as one of the top backers of its projects around the world, with an average pledge of US\$ 575 per informal individual supporter and over 17,000 projects backed since the platform launched in 2009 (Knott, 2016). Universities and government bodies have also revamped their programs

as well and have put more emphasis on knowledge and innovation transfer activities to encourage new cohorts of entrepreneurs to enter the scene (Dowejko & Au, 2015).

All these activities paid off and the local entrepreneurial spirit is on the rise. According to a recent study from InvestHK that measured start-up activities among tenants of Hong Kong’s co-working spaces, the number of start-ups using co-working services grew by 46% in just one year, from 2014 to 2015 (StartMeUpHK, 2016).

Similar trend prevails in Mainland China. In 2015, leaders in Beijing committed to rebalancing the Chinese economy and strengthening its innovation and entrepreneurship components. They see these as long-term means to improving economy’s mechanisms for risk mitigation and moving it from investment-driven to innovation-driven. As a result, revamped tax policies for small and medium-sized enterprises were rolled out in support of new business activities (Cary & Ren, 2015).

Such overwhelming support for entrepreneurship is not coincidental; evidence from multiple countries shows start-ups impact the economy in multiple ways. They provide jobs, generate wealth, develop intellectual property, and are main creators of innovation. To this end, focusing on entrepreneurship and relevant policies to stimulate it becomes highly relevant to the future economic growth of the region.

Definitions of Entrepreneurship

Since its inception, the GEM survey was conceptualized to explore the interdependency between entrepreneurship and economic development. During last 17 years, this conceptual framework and the basic definitions have evolved gradually without compromising the comparability of the collected information, but bringing more clarity to assumed relationships. This process was supported by the work of a number of researchers who, using GEM data, contributed to building an entrepreneurship paradigm (Autio & Acs, 2010; Levie & Autio, 2008, 2011; McMullen et al., 2008).

The starting definition for entrepreneurship still remains valid, being:

“any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business” (Reynolds, et al., 1999, p. 3).

The three questions which originally opened the way to the GEM survey were formulated as follows:

- Does the level of entrepreneurial activity vary between countries, and if so, to what extent?
- Does the level of entrepreneurial activity affect a country's rate of economic growth and prosperity?
- What makes a country entrepreneurial and what factors influence entrepreneurial activity?

In order to answer these questions, GEM had to depart from the conventional approach of thinking about national economic growth. This led to the development of a new conceptual framework, which has seen a series of adjustments since its inception in 1999.

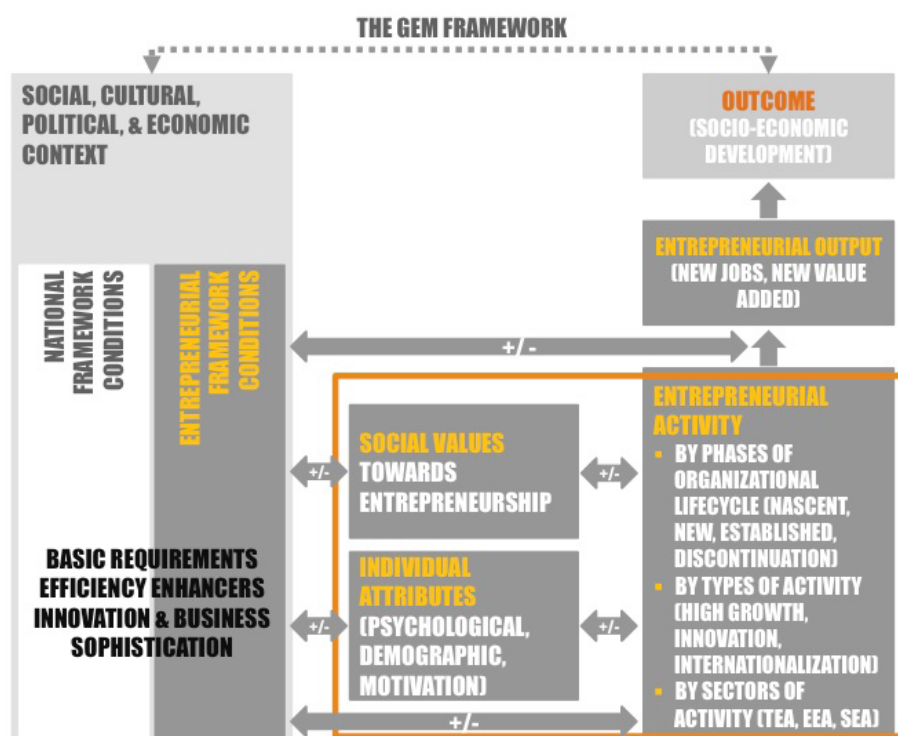
The most recent GEM conceptual framework (Figure 1.2), in contrast to conventional model of national economic growth that emphasizes the primary role of large established firms and supporting role of SMEs, relies on the basic assumption that national economic growth is the result of the personal capabilities of individuals, wherever they are located (regardless of the size of businesses or if they are self-employed), to identify and seize opportunities, and that this process takes place in interaction with the environment (social, cultural and political) in which these individuals are located.

The components of the revised GEM Conceptual Framework are:

Social, Cultural, Political And Economic Context

As in the previous GEM models, this is defined according to the twelve pillars of competitiveness derived from the World Economic Forum's Global Competitiveness Index, and the nine components of GEM's Entrepreneurial Framework Conditions (see Table 1.2). These will affect countries differently, depending on the stage of economic development at which the countries are, i.e. although all of the pillars will be important to each economy, the pillars of competitiveness which are of most importance to a factor-driven economy will differ from those that will be most important in an efficiency-driven economy.

It is important to note that all components of the environment in which women and men act entrepreneurially (or cannot act proactively and innovatively) are mutually dependent. This dependency demands a holistic approach not only in research but also in designing appropriate policies for building a supportive environment in which entrepreneurial behavior can flourish.



Source: GEM 2016

● Figure 1.2: The GEM Conceptual Framework

	From other available sources	From GEM National Expert Surveys (NES)
Economic development phases	National Framework Conditions, based on World Economic Forum pillars for profiling economic development phases	Entrepreneurial Framework Conditions
Basic requirements – key to resource-driven economies	• Institutions • Infrastructure • Macroeconomic stability • Health and primary education	• Entrepreneurial finance • Government policy • Government entrepreneurship programs • R&D transfer • Internal market openness • Physical infrastructure for entrepreneurship • Commercial and legal infrastructure for entrepreneurship • Cultural and social norms
Efficiency enhancers – key to efficiency-driven economies	• Higher education and training • Goods market efficiency • Labor market efficiency • Financial market sophistication • Technological readiness • Market size	
Innovation and sophistication factors – key for innovation-driven economies	• Business sophistication • Innovation	

● Table 1.2: Social, cultural, political and economic context and economic development phases

Source: GEM 2016

Social values towards entrepreneurship

This includes aspects such as the extent to which society values entrepreneurship as a good career choice; whether entrepreneurs have high societal status; and the extent to which media attention to entrepreneurship is contributing to the development of a positive entrepreneurial culture.

Individual attributes

This includes different demographic factors (such as gender, age, education); psychological factors (including perceived capabilities, perceived opportunities, fear of failure); and motivational aspects (necessity versus opportunity based ventures, improvement-driven ventures).

Entrepreneurial Activity

This is defined according to the phases of the life cycle of entrepreneurial ventures (nascent, new business, established business, discontinuation); according to type of activity (high growth, innovation, internationalization); and sector of activity (Total Early-stage Entrepreneurial Activity – TEA and Employee Entrepreneurial Activity – EEA).

In all the conceptual frameworks, the basic assumption has remained unchanged – namely, that entrepreneurial activity *is an output of the interaction of an individual's perception of an opportunity and capacity (motivation and skills) to act upon this opportunity, and the distinct conditions of the environment in which the individual is located.*

The GEM survey of entrepreneurship (based on individuals) complements other major business creation surveys by providing unique information on individuals (attributes, values, activities) and their interaction with the environment in practicing entrepreneurial behavior (pro-activeness, innovativeness and responsible choices).

It is clear, therefore, that GEM continues to focus on contributing to global economic development through surveying / researching entrepreneurship, which helps to improve research-based education and research-based formulation of public policies in the field of entrepreneurship. In order to achieve this, GEM has three key objectives:

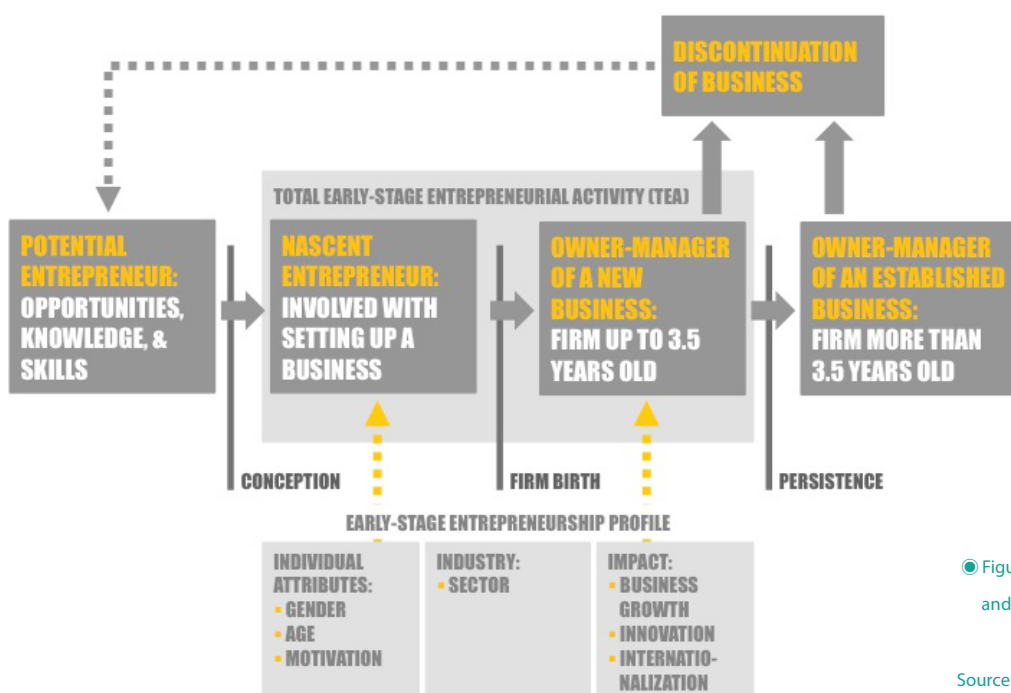
- to determine the extent to which entrepreneurial activity influences economic growth within individual economies;
- to identify factors which encourage and/or hinder entrepreneurial activity (especially the relationships between national entrepreneurship conditions,

social values, personal attributes and entrepreneurial activity); and

- to guide the formulation of effective and targeted policies aimed at enhancing entrepreneurial capacity within individual countries.

Over the years, GEM surveys have confirmed that the level of entrepreneurial activity varies among countries at a fairly constant rate. A crucial point confirmed by GEM research is that it takes time and consistency in policy interventions in order to enhance and develop the factors which contribute to entrepreneurial activity. Surveys also confirmed that entrepreneurial activity, in different forms (nascent, start-up, employee entrepreneurship), is positively correlated with economic growth, but that this relationship differs according to phases of economic development (Acs & Amorós, 2008).

GEM's role as one of the world's leading research consortia concerned with improving the understanding of the relationships between entrepreneurship and national development is confirmed by recent policy interventions around the world. These are focused on components of the GEM conceptual framework: environment (entrepreneurial framework conditions), individual capacity for identifying and exploiting opportunities, and society's capacity to develop an entrepreneurial culture.



● Figure 1.3: The entrepreneurial process and GEM operational definitions

Source: GEM Global Report 2014

How GEM Measures Entrepreneurship?

GEM measures individual participation across multiple phases of the entrepreneurial process, providing insights into the level of engagement in each stage. This is important because societies may have varying levels of participation at different points in this process; however, a healthy entrepreneurial society needs people active in all phases. For example, in order to have start-ups in a society, there must be potential entrepreneurs. Later in the process, people that have started businesses must have the ability and the support to enable them to sustain their businesses into maturity. Figure 1.3 presents an overview of the entrepreneurial process and the GEM operational definitions.

GEM's multi-phase measures of entrepreneurship are given below:

- *Potential entrepreneurs* – those that see opportunities in their environments, have the capabilities to start businesses and are undeterred by fear of failure.
- *Intentional entrepreneurs* – those who intend to start a business in the future (in the next three years). It is an additional measure of entrepreneurial activity offered outside of the standard entrepreneurial process shown above in Figure 1.3.
- *Nascent entrepreneurs* – those who have taken steps to start a new business, but have not yet paid salaries or wages for more than three months.
- *New entrepreneurs* – those who are running new businesses that have been in operation for between 3 months and 42 months.
- *Established business owners* – those who are running a mature business, in operation for more than 42 months.
- *Discontinued entrepreneurs* – those who, for whatever reason, have exited from running a business in the past year.
- *Intrapreneurs* – those who develop new initiatives for their respective employers. It is an additional measure of entrepreneurial activity offered outside of the standard entrepreneurial process shown above.

GEM's individual-level focus enables a more comprehensive account of business activity than firm-level measures of formally registered businesses. In other words, GEM captures both informal and formal activity. This is important because in many societies, the majority of entrepreneurs operate in the informal sphere. In addition, GEM's emphasis on individuals provides an insight into who these entrepreneurs are: for example, their demographic profiles, their motivations for

starting ventures, and the ambitions they have for their businesses. GEM also assesses broader societal attitudes about entrepreneurship, which can indicate the extent to which people are engaged in or willing to participate in entrepreneurial activity, and the level of societal support for their efforts. The GEM database allows for the exploration of individual or business characteristics, as well as the causes and consequences of new business creation.

A primary measure of entrepreneurship used by GEM is the Total Early-Stage Entrepreneurial Activity (TEA) rate. *TEA indicates the prevalence of individuals engaged in nascent entrepreneurship and new firm ownership in the adult (18 - 64 years of age) population.* As such, it captures the level of dynamic early-stage entrepreneurial activity in a country.

Every person engaged in any behavior related to new business creation, no matter how modest, contributes to the national level of entrepreneurship. However, entrepreneurs can differ in their profiles and impact. For this reason, GEM provides a range of indicators that describe the unique, multifaceted pattern exhibited in each society. It is therefore important to consider not just the number of entrepreneurs in an economy, but other aspects such as the level of employment they create, their growth ambitions, and the extent to which groups such as youth and women are participating in entrepreneurial activity.

Findings from Adult Population Survey

Entrepreneurial Prevalence Rates

In mid-2016, 9.44% of Hong Kong adult population was engaging in early stage entrepreneurial activities of any kind¹. This represents a large increase from 3.64% reported in 2009 and significantly reverses the previously recorded slump in entrepreneurial activity of Hong Kong resulting from the global economic crisis.²

Figure 2.1 shows a longitudinal analysis of nascent, new, and established business activity, breaking down the early stage entrepreneurship rates into its two phases: nascent (in the process of starting up, less than three months old) and new (3 to 42 months old businesses)³.

The figure reveals that all types of entrepreneurial activities recorded an increase in both cities, which is a sign of a growing economy and of the revival of entrepreneurial spirit of Hong Kong and Shenzhen.⁴

These numbers for Hong Kong were higher than in the United Kingdom, South Korea, or Taiwan, but slightly lower than in Israel or United States, as Table 2.1 and Figure 2.2 depict. Overall, Hong Kong exhibits slightly higher than the average early entrepreneurship rates for a developed, innovation-driven economy. This is driven by the nascent entrepreneurial activity of Hong Kong adult population, which grew +206% since 2009. Baby businesses, or new businesses that are 3 to 42 months old, are also on the rise, but to a lesser extent. The prevalence rates of established business also increased from 2009 to 2016.



In general, developed, innovation-driven economies exhibit slightly lower entrepreneurship rates than developing economies for two main reasons. First, there are more stable career options for skilled individuals in developed economies, so the necessity-driven entrepreneurship is less prevalent, giving priority to opportunity-driven start-up activities. This effectively lowers the global entrepreneurship rates. Second, in developed countries, we observe an increased role of large firms in catering to the economic development and innovation in general. Specifically, employees in larger businesses may engage in intrapreneurship – aiming to develop new initiatives within existing business entities.

For Shenzhen, its early entrepreneurship rates are higher than the average within the efficiency-driven category, in particular when compared to the early-stage entrepreneurship statistics from China in general. In Shenzhen, 16.04% reported nascent or new entrepreneurial activities under way, which represents a staggering **+234%** change in comparison to statistics from 2009, when the early-stage entrepreneurship rates in the general population were at 4.8%. Contrary to Hong Kong, this growth is driven by baby businesses that were set up in the city within last 3.5 years, although nascent businesses are also on the rise. Additionally, Shenzhen has recorded a dramatic change in the established business prevalence rates of **+398%**.

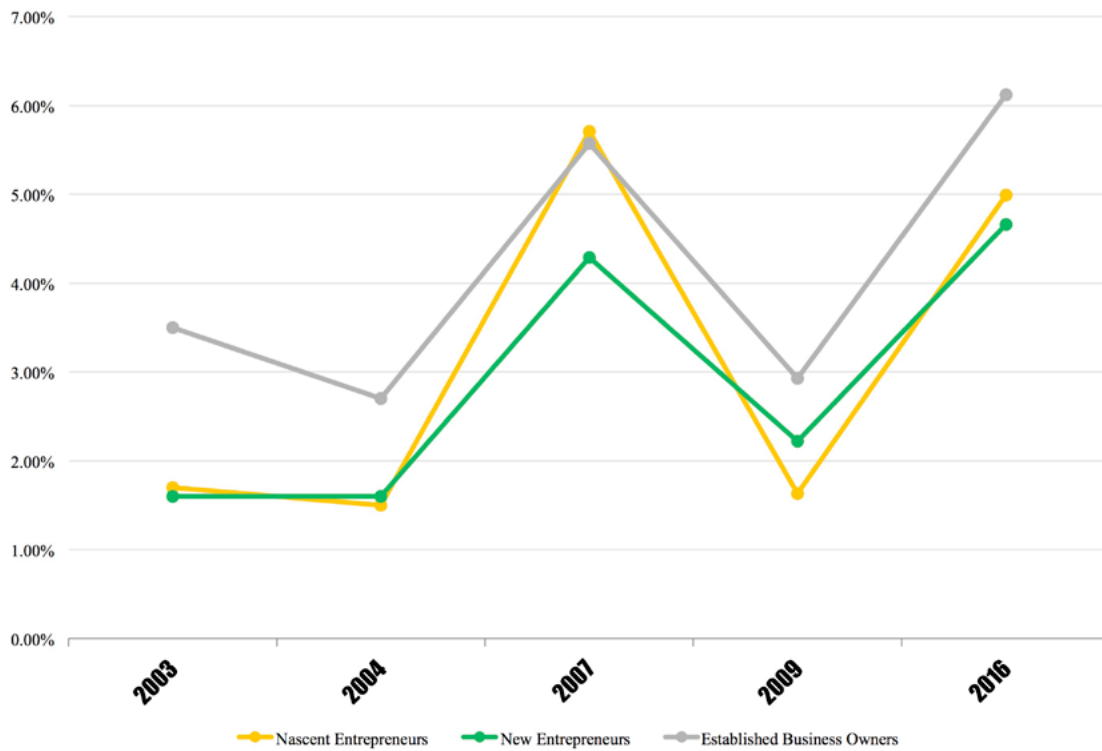
One interpretation of these results may be that while entrepreneurial activities have been on the rise for few years now in Shenzhen, the intensified interest in starting-up in Hong Kong is a fairly new phenomenon.

¹ Data for the study was collected between April and November 2016.

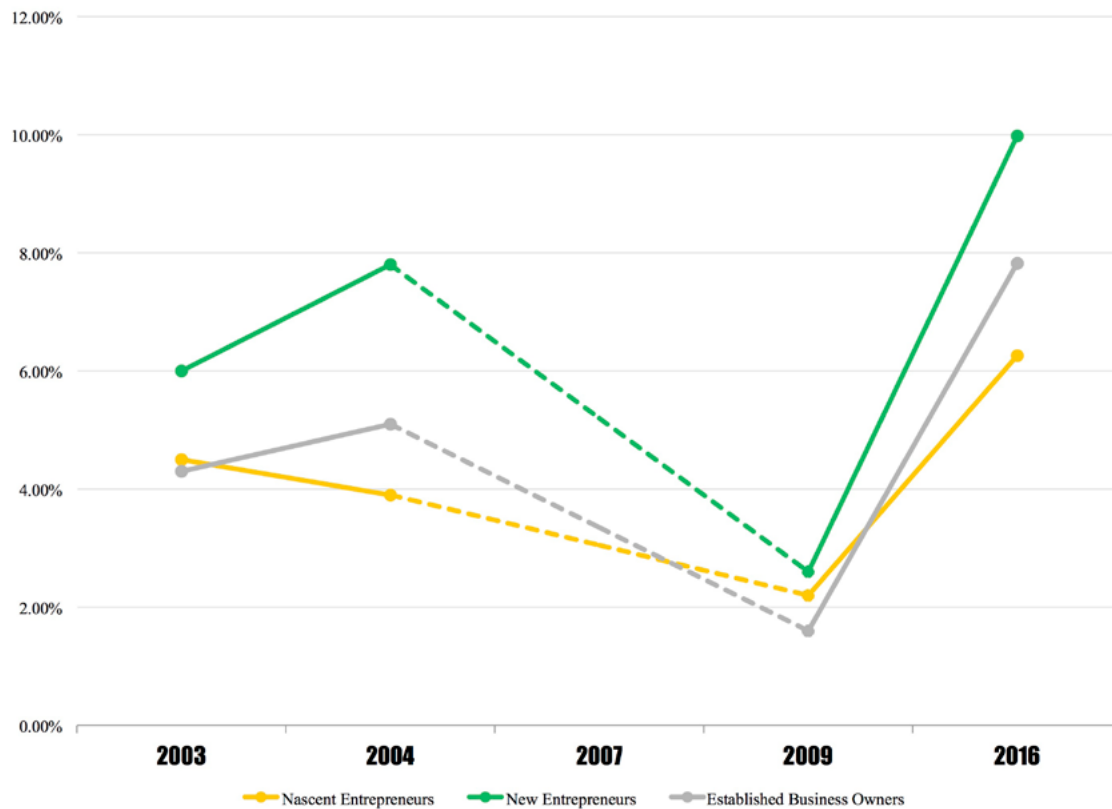
² All data in the study originates from the analysis of the collected sample of the general population and is subject to sampling error. The statistics are estimates of the true proportion of the population involved in entrepreneurship. For instance, we can be 95 percent confident that between 8.79 and 10.09 percent of Hong Kong's adult population are involved in the early stage entrepreneurial activity. Similar confidence intervals apply to other statistics in this report.

³ Early stage entrepreneurial activities were measured by grouping nascent and new entrepreneurs. Since one individual can be both – new and nascent entrepreneur at the same time, this rate is slightly lower than the sum of separate new and nascent indicators.

A. Hong Kong (as % of adult population 18-64 year olds)



B. Shenzhen⁴ (as % of adult population 18-64 year olds)



⁴ No data was collected for Shenzhen in 2007 as the dotted line represents.

Figure 2.1: Longitudinal Analysis of Nascent, New and Established Business Activity in the Hong Kong and Shenzhen Adult Population

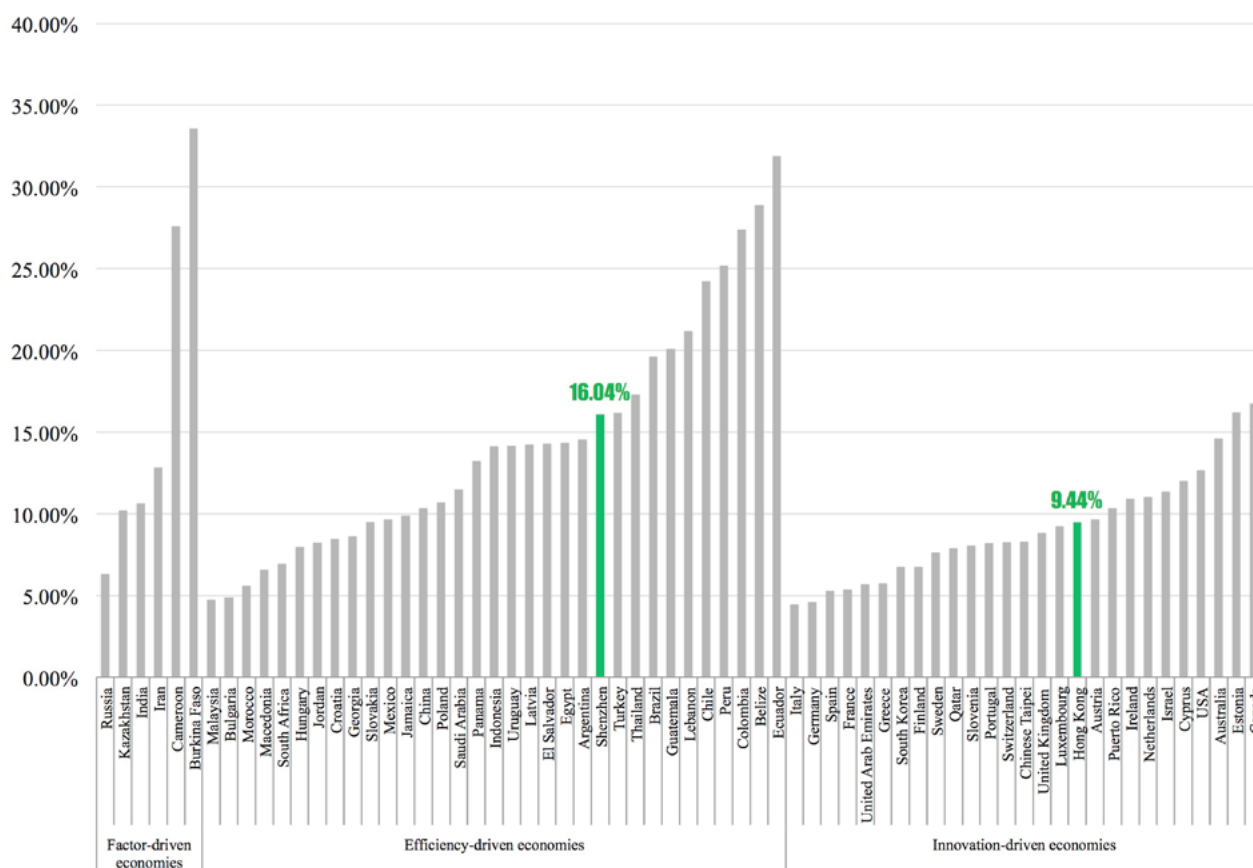
Source: GEM 2003-2016

Participating Economy ⁵	Nascent Entrepreneurial Activity - %	New Entrepreneurial Activity - %	Total Early Stage Entrepreneurial Activity - %	Established Business Owners - %	Overall Entrepreneurial Activity - %	2015 GDP Per Capita - in US\$ PPP
	(1)	(2)	(3)	(4)	(5)	(6)
Hong Kong	4.99%	4.66%	9.44%	6.12%	15.30%	56,719
Shenzhen	6.26%	9.98%	16.04%	7.82%	23.38%	25,038
China	4.45%	6.09%	10.29%	7.49%	17.51%	14,239
Israel	7.04%	4.45%	11.31%	4.04%	15.04%	35,432
South Korea	3.70%	3.04%	6.69%	6.55%	13.04%	34,549
Chinese Taipei	3.64%	4.65%	8.24%	7.74%	15.59%	46,833
United Kingdom	5.16%	3.73%	8.80%	6.05%	14.57%	41,325
United States	8.88%	4.00%	12.63%	9.22%	20.99%	55,837
Efficiency-driven economies (mean)	7.95%	6.53%	14.16%	8.61%	22.25%	N/A
Innovation-driven economies (mean)	5.59%	3.68%	9.07%	6.68%	15.37%	N/A

⁵ In each economy, at least 2,000 respondents were asked about their entrepreneurial activities. The percentages are estimates of the true proportion and, therefore, subject to sampling error.

● Table 2.1: Comparison of Entrepreneurship Rates in Adult Populations of Hong Kong, Shenzhen, and Selected Economies in 2016.

Source: GEM 2016



● Figure 2.2: Total Early-Stage Entrepreneurial Activity in the Adult Population in 66 Economies

Source: GEM 2016

These positive changes in early stage entrepreneurship rates of Hong Kong and Shenzhen were not limited to early entrepreneurship rates only. In general, we observed a major shift in attitudes, entrepreneurial intentions, firm births, and overall persistence in entrepreneurial activity. In Hong Kong, the percentage of adults who declare they will start a business within next three years increased a staggering **+170%**, from 7.3% in 2009 to 19.7% in 2016. The overall business activity rose by **+134%** in the same period. Respondents also reported an increase, from 1.1% in 2009 to 2.4% in 2016 in businesses that were closed down, which was half percentage point higher than the innovation-driven economies average. This increased churn in all types of activities may be the sign of the adult population accepting more entrepreneurial risk in general and displaying more readiness to engage in entrepreneurship.

Similar patterns were observed in Shenzhen. Here, the share of population declaring their willingness to start a business in the next 3 years increased by **+104%**, from 17.6% to 36% of adult population. The overall business activity rose by **+265%**, almost double of Hong Kong growth. The number of declared exists from discontinued businesses also increased to 4.72% in 2016 from 2.5% in 2009, placing Shenzhen one percentage point above the exit average of efficiency-driven economies.

In comparison, in the same period in China, while the entrepreneurial intentions continued to rise, we observed a decline in entrepreneurial activities and firm persistence. Fewer businesses were being set up between 2009 and 2016, but also fewer were being closed down – a possible sign of economy that is on its way to sustainable development from efficiency-driven to innovation-driven economy.

Hong Kong Sample	2016	2009	2007	% change 2009-2016
Firm Conception				
Potential Entrepreneurs	32.38%	18.87%	32.20%	+71.60%
Intentional Entrepreneurs	19.67%	7.28%	9.53%	+170.19%
Firm Birth				
Nascent Entrepreneurs	4.99%	1.63%	5.71%	+206.13%
New Entrepreneurs	4.66%	2.22%	4.29%	+109.91%
Total Early Stage Entrepreneurs	9.44%	3.64%	9.95%	+159.34%
Firm Persistence				
Established Business Owners	6.12%	2.93%	5.57%	+108.87%
Discontinued Entrepreneurs (wind down)	2.40%	1.1%	3.5%	+118.18%
Entrepreneurship vs Intrapreneurship				
Overall Entrepreneurial Activity	15.30%	6.53%	15.52%	+134.30%
Intrapreneurs	4.11%	N/A	N/A	Not observed

Shenzhen Sample ⁶	2016	2009	2004	% change 2009-2016
Firm Conception				
Potential Entrepreneurs	35.83%	28.3%	45.0%	+26.61%
Intentional Entrepreneurs	36.00%	17.6%	29.3%	+104.55%
Firm Birth				
Nascent Entrepreneurs	6.26%	2.2%	3.9%	+184.55%
New Entrepreneurs	9.98%	2.6%	7.8%	+283.85%
Total Early Stage Entrepreneurs	16.04%	4.8%	11.5%	+234.17%
Firm Persistence				
Established Business Owners	7.82%	1.6%	5.1%	+388.75%
Discontinued Entrepreneurs (wind down)	4.72%	2.5%	4.9%	+88.8%
Entrepreneurship vs Intrapreneurship				
Overall Entrepreneurial Activity	23.38%	6.4%	16.6%	+265.31%
Intrapreneurs	4.86%	N/A	N/A	Not observed

⁶ No data has been collected in 2007 for Shenzhen

China Sample	2016	2009	2007	% change 2009-2016
Firm Conception				
Potential Entrepreneurs	29.8%	25.3%	32.2%	+17.8%
Intentional Entrepreneurs	26.4%	22.6%	31.5%	+16.8%
Firm Birth				
Nascent Entrepreneurs	4.4%	7.4%	6.9%	-40.5%
New Entrepreneurs	6.1%	11.8%	10.0%	-48.3%
Total Early Stage Entrepreneurs	10.3%	18.8%	16.4%	-45.2%
Firm Persistence				
Established Business Owners	7.5%	17.2%	8.4%	-56.4%
Discontinued Entrepreneurs (wind down)	2.5%	4.3%	6.1%	-41.9%
Entrepreneurship vs Intrapreneurship				
Overall Entrepreneurial Activity	17.5%	36.0%	24.8%	-51.4%
Intrapreneurs	1.2%	N/A	N/A	Not observed

● Table 2.3: Entrepreneurial Process Prevalence Rates –
Longitudinal Comparison for China

Source: GEM 2004-2016

Attitudes towards entrepreneurship: how people feel about starting business?

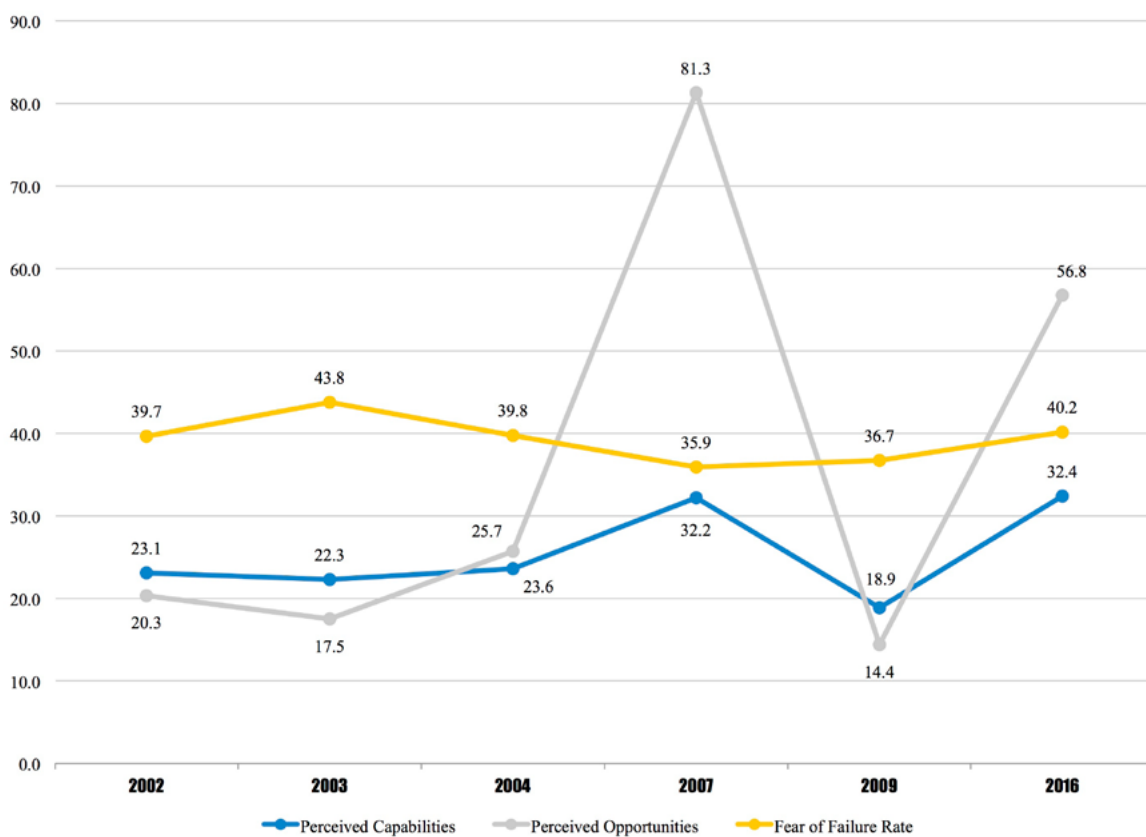
What makes people start their businesses in the first place? It is a mixture of circumstances, experience, and attitudes. Potential entrepreneurs assess whether any opportunities exists, evaluate their own skillset and weight it against their fear of failure. Their choices can be deeply influenced by the overall desirability and high status of entrepreneurial careers in their culture. When being an entrepreneur is a highly esteemed career choice, we are more likely to embark on this path and choose it over other careers. Their final step towards the entrepreneurial career can be induced by the overall media attention to entrepreneurship and the startup prevalence rates amongst their peers and within their own families. From this, entrepreneurial intentions are born.

All these positive influences were present in Hong Kong in mid-2016. While the culturally-bound fear of startup failure remained stable throughout the years, compared with 2009 figures, perceived opportunities and capabilities of individuals were on the rise. In particular, perceived opportunities grew to 56.8%, which represents an increase by staggering **+294%** comparing with the 2009 numbers. In comparison, in China the percentage of adult population who believe there will be good conditions to start a business in the next 6 months oscillated around 37% in the same period. Also, adults in Hong Kong regained confidence in their skills to start a business (32% of the adult population), with a **+72%** increase in adults reporting they possess required knowledge and skills to start a business. Respondents in China reported similar levels of confidence in their own skills; 29.8% of adults reported having required knowledge and capabilities to launch a business. Overall, the proportion of intentional entrepreneurs to potential entrepreneurs was of 61% in Hong Kong. Figure 2.3 provides data for Hong Kong and Shenzhen.

In Shenzhen, the fear of failure is slightly increasing. 2009, it grew by +29% in the general population. People seem to become more cautious about starting their businesses. However, they also see more opportunities around them, with the share of population going up from 31.2% in 2009 to 77.6% in 2016. This places Shenzhen amongst the economies with the highest percentage of adult population optimistic about start-up conditions in their economy within next six month. Only Saudi Arabia and Sweden recorded higher levels of optimism. Interestingly, in Shenzhen the same proportion of individuals who declared they possessed necessary skills and knowledge to do so (35.8%), also reported their

intention to start a business in the next two years (36%). This is quite unusual and only two other economies have recorded such phenomenon – Egypt and the Chinese Taipei – and it puts these findings in a stark contrast with an increasing fear of failure. One explanation may be that the opportunities emerging from the economy are much more salient than the fear of failure.

A. Hong Kong (as % of adult population 18-64 year olds)



B. Shenzhen (% of adult population)

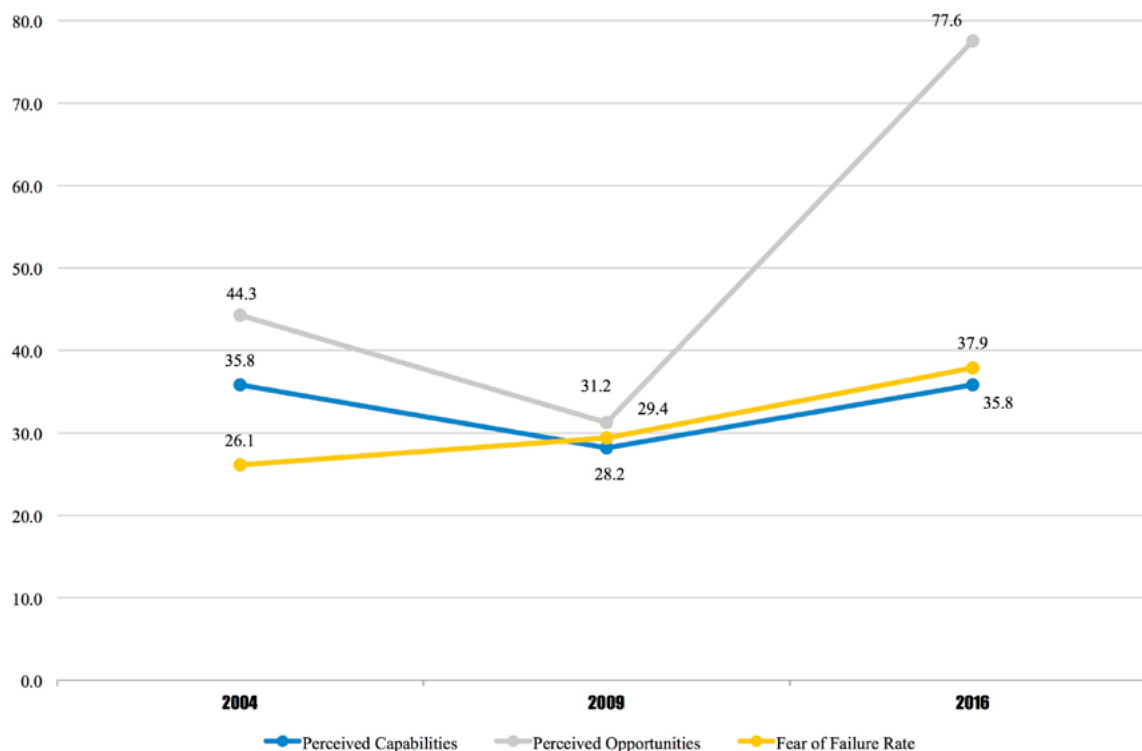
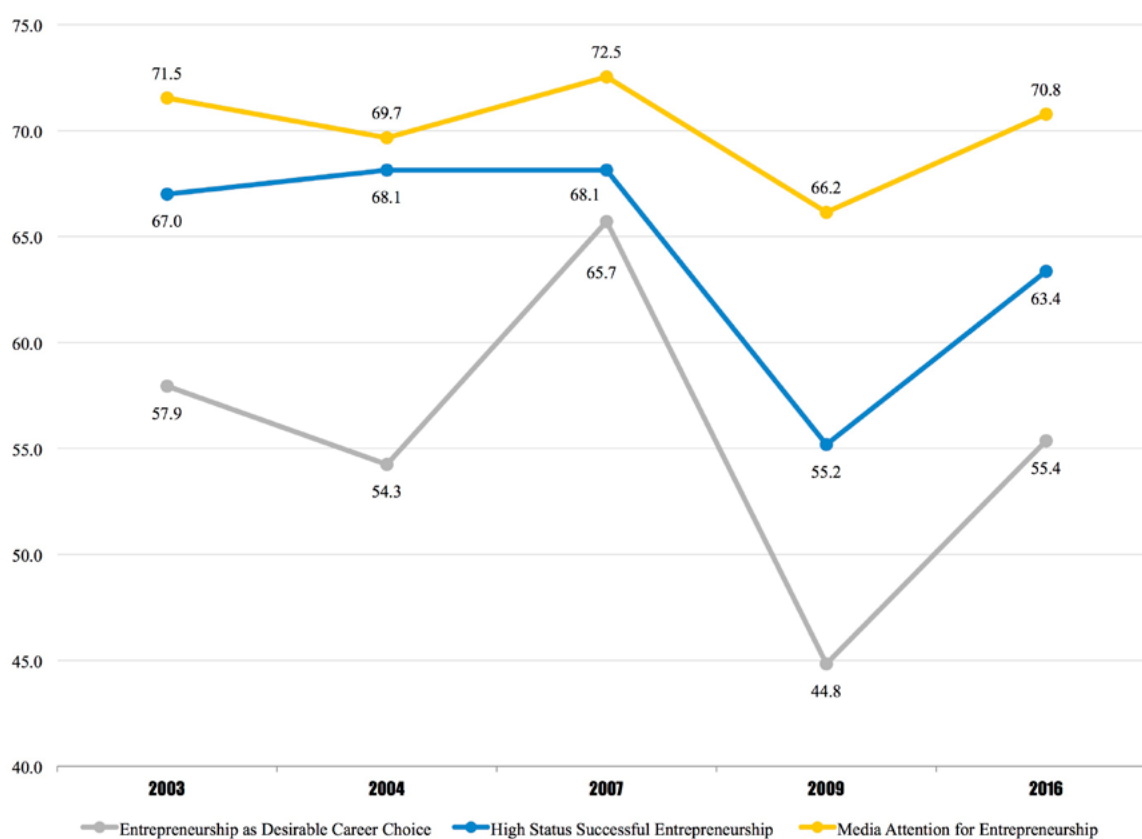


Figure 2.3: Perceived Opportunities, Capabilities and Fear of Failure in Starting a Business as Percentage of Respondents in Hong Kong and Shenzhen

Source: GEM 2003-2016

A. Hong Kong (% of adult population)



B. Shenzhen (% of adult population)

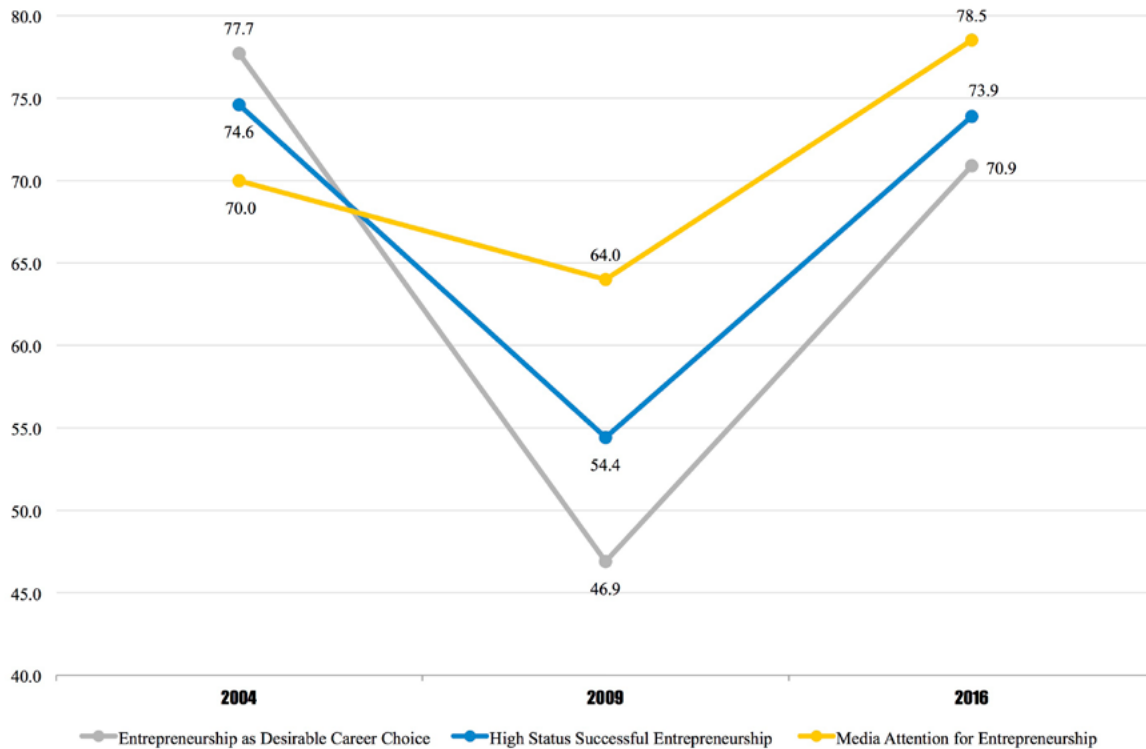


Figure 2.4: Cultural conditions for Entrepreneurship as Percentage of Agreeing Respondents in Hong Kong and Shenzhen

Source: GEM 2003-2016

Reports on cultural appreciation of entrepreneurship in both cities are on their way back to pre-recession levels as well. In Hong Kong, the percentage of adults reporting that entrepreneurship is a desirable career choice bounced back to 55.4% in 2016 from 44.8% in 2009, a **+23%** increase. Similarly, successful entrepreneurs are regaining their high status with an increase from 55.2% in 2009 to 63.4% in 2016 (**+15%** increase).

In the eyes of the general public, the media has always been supportive of entrepreneurs, with 70.8% of adults reporting “lots of media attention for entrepreneurship”. In Shenzhen, similar change patterns were observed, with respondents reporting a culture that is very supportive of entrepreneurship. Figure 2.4 illustrates the findings.

% of adult population within the sample reporting:	Entrepreneurial education at school?		Having entrepreneurial parents?		Knowing an entrepreneur?	
	Yes	No	Yes	No	Yes	No
Having skills to start a business	46.9% ¹	32.8% ¹	42.9% ¹	26.9% ¹	49.4% ¹	23.9% ¹
Intentional Entrepreneur	35.6% ¹	18.0% ¹	24.9% ¹	15.0% ¹	31.0% ¹	12.2% ¹
Nascent Entrepreneur	10.1% ¹	4.7% ¹	7.3% ¹	3.1% ¹	11.3% ¹	1.2% ¹
New Entrepreneur	3.4%	4.6%	5.7% ¹	3.8% ¹	10.2% ¹	1.1% ¹
Total Early Stage Entrepreneurial Activity	12.8%	9.1%	13.2% ¹	6.4% ¹	20.9% ¹	2.3% ¹
Established Business Owner	5.4%	6.7%	8.7% ¹	5.1% ¹	9.5% ¹	4.8% ¹

¹ Differences are statistically significant between both groups at $p < 0.05$

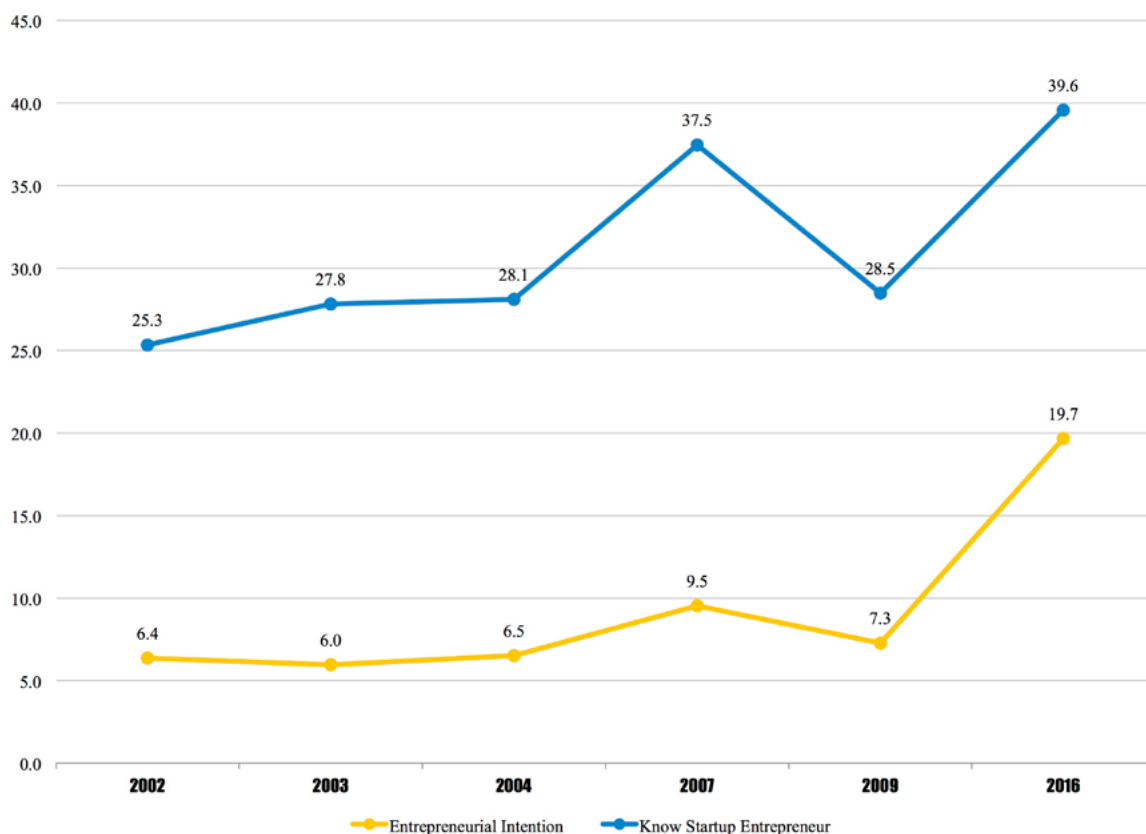
Table 2.4: Percent of Adult Population Reporting Levels of Entrepreneurial Activities and Their Exposure to Entrepreneurship in Hong Kong

Source: GEM 2016

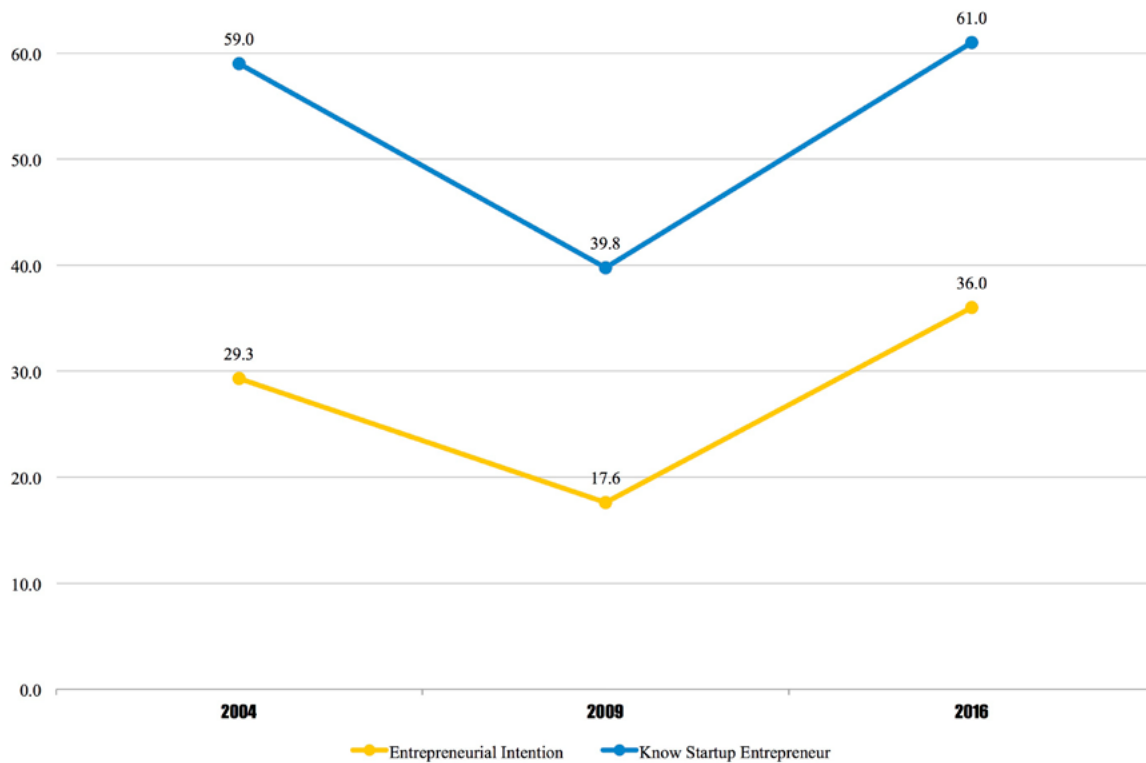
Having role models of other people starting their businesses also matters. Our additional analysis of Hong Kong data on the impact of proximity to other entrepreneurial individuals has revealed that knowing an entrepreneur or having entrepreneurial parents were strongly associated with launching one's entrepreneurial career, regardless of the current development stage. Education in entrepreneurship topics at the university or secondary school was associated with nascent entrepreneurship rates, entrepreneurial intentions of starting a business in the next three years and with overall perception of own skills and knowledge to start a business. Entrepreneurial prevalence rates associated with all three exposure variables are reported in Table 2.4 and Figure 2.5.

Together, the cultural conditioning and attitudes towards entrepreneurship, perception of own skills, and exposure to entrepreneurship practices had positive impact on peoples' intention to start businesses in Hong Kong. Comparing to 2009, the entrepreneurial intentions in Hong Kong population grew from 7.3% to 19.7% in 2016, which represents an impressive increase of **+170%**. Similarly, in Shenzhen the intentions grew from 17.6% to 36%, and increase of **+105%**. Figure 2.5 illustrates.

A. Hong Kong (% adult population)



B. Shenzhen (% adult population)



● Figure 2.5: Longitudinal Analysis of the Percentage of Individuals with Entrepreneurial Intentions in Adult Population of Hong Kong and Shenzhen

Source: GEM 2002-2016

Entrepreneurial Motives: Opportunity VS Necessity

Why do people start businesses in Hong Kong and Shenzhen? GEM method differentiates between two key motives: taking advantage of an opportunity for business and becoming an entrepreneur out of necessity because of no better career choice. Table 2.5 presents the results for all participating economies.

Necessity-driven entrepreneurship prevails if individuals have no better choice for work or engage in entrepreneurship to maintain their income levels. Hong Kong's necessity-motivated entrepreneurs constitute 1.6% of the general adult population. These figures are comparable to the average for all innovation-driven economies. They represent 19.24% of the total early-stage

entrepreneurs operating from Hong Kong. The proportion of necessity-driven entrepreneurs slightly increased since 2009 with a percentage change of **+3.5%**.

Shenzhen saw an increase in the population-wide rates of necessity-driven entrepreneurship as well. In 2016, 2.4% of adult population was engaging in entrepreneurial activities because of no better choice for work; in 2009, this share was estimated at 1% of adult population. However, since the opportunity-based

entrepreneurial activities in the city grew much faster, the overall proportion of necessity-based entrepreneurs in comparison to all entrepreneurs had actually decreased by **-17%**, from 21.7% in 2009 to 18% in 2016.

At the same time, China has recorded a noticeable **-41.2%** decrease in necessity-driven entrepreneurship among entrepreneurs and **-69%** in the general population. Figure 2.6 illustrates.

Economy	Economy classification	TEA and Opportunity motive (% adult population)	TEA and Necessity motive (% adult population)	Opportunity to Necessity Ratio
India	factor-driven	6.45	3.71	1.74
Cameroon	factor-driven	16.66	8.91	1.87
Iran	factor-driven	8.12	4.34	1.87
Russia	factor-driven	4.16	1.92	2.17
Burkina Faso	factor-driven	23.06	10.02	2.30
Kazakhstan	factor-driven	7.00	2.57	2.72
Georgia	efficiency-driven	4.19	4.39	0.96
Jamaica	efficiency-driven	4.60	4.41	1.04
Brazil	efficiency-driven	11.22	8.30	1.35
Slovakia	efficiency-driven	5.20	3.80	1.37
Macedonia	efficiency-driven	3.61	2.54	1.42
Lebanon	efficiency-driven	12.12	8.33	1.45
Guatemala	efficiency-driven	12.27	7.71	1.59
El Salvador	efficiency-driven	9.10	5.16	1.76
Egypt	efficiency-driven	8.75	4.47	1.96
Argentina	efficiency-driven	9.69	4.50	2.15
Croatia	efficiency-driven	5.58	2.56	2.17
Bulgaria	efficiency-driven	3.29	1.50	2.20
Ecuador	efficiency-driven	20.80	8.91	2.34
Uruguay	efficiency-driven	10.01	3.98	2.51
Jordan	efficiency-driven	5.64	2.17	2.60
China	efficiency-driven	7.28	2.75	2.65
Morocco	efficiency-driven	4.04	1.52	2.66
Poland	efficiency-driven	7.58	2.83	2.67
South Africa	efficiency-driven	5.14	1.63	3.15
Chile	efficiency-driven	18.33	5.48	3.34
Hungary	efficiency-driven	6.14	1.59	3.85
Thailand	efficiency-driven	13.43	3.36	4.00
Turkey	efficiency-driven	12.06	2.84	4.24
Mexico	efficiency-driven	7.62	1.75	4.36
Malaysia	efficiency-driven	3.90	0.76	5.15
Panama	efficiency-driven	10.92	1.99	5.50
Shenzhen	efficiency-driven	13.39	2.40	5.58
Indonesia	efficiency-driven	11.67	2.04	5.72
Latvia	efficiency-driven	11.76	1.98	5.94
Peru	efficiency-driven	20.57	3.21	6.41
Colombia	efficiency-driven	23.51	3.55	6.62
Belize	efficiency-driven	25.40	2.39	10.61
Saudi Arabia	efficiency-driven	10.56	0.86	12.32

Economy	Economy classification	TEA and Opportunity motive (% adult population)	TEA and Necessity motive (% adult population)	Opportunity to Necessity Ratio
Greece	innovation-driven	3.72	1.94	1.92
United Arab Emirates	innovation-driven	3.50	1.65	2.11
Puerto Rico	innovation-driven	6.87	3.18	2.16
Spain	innovation-driven	3.68	1.36	2.70
Cyprus	innovation-driven	8.79	2.90	3.04
South Korea	innovation-driven	5.04	1.60	3.15
Chinese Taipei	innovation-driven	6.26	1.83	3.41
Germany	innovation-driven	3.45	0.99	3.47
Slovenia	innovation-driven	6.07	1.75	3.47
Netherlands	innovation-driven	8.53	2.32	3.68
Portugal	innovation-driven	6.34	1.70	3.73
Estonia	innovation-driven	12.87	2.86	4.51
Hong Kong	innovation-driven	7.71	1.60	4.82
Australia	innovation-driven	11.68	2.40	4.86
Austria	innovation-driven	7.64	1.50	5.09
Israel	innovation-driven	9.05	1.72	5.26
Ireland	innovation-driven	8.99	1.70	5.28
Canada	innovation-driven	13.35	2.39	5.59
Switzerland	innovation-driven	6.78	1.16	5.85
United Kingdom	innovation-driven	7.33	1.18	6.18
Luxembourg	innovation-driven	7.75	1.03	7.54
USA	innovation-driven	11.06	1.44	7.66
France	innovation-driven	4.55	0.59	7.68
Italy	innovation-driven	3.79	0.48	7.83
Qatar	innovation-driven	6.49	0.82	7.88
Finland	innovation-driven	5.79	0.48	12.15
Sweden	innovation-driven	6.74	0.34	19.62
Average	Factor-driven	10.91	5.25	2.11
Average	Efficiency-driven	10.19	3.54	3.63
Average	Innovation-driven	7.18	1.59	5.58

Source: GEM 2016

● Table 2.5: Opportunity versus Necessity Entrepreneurship Rates in the Adult Population

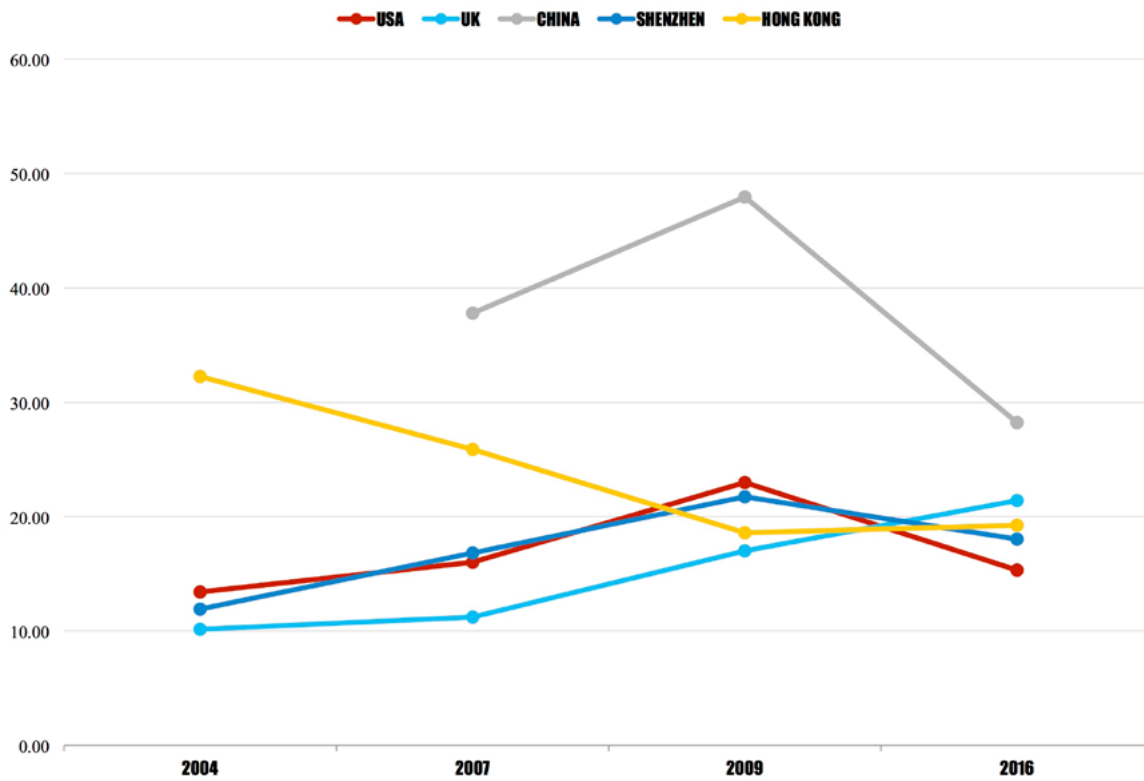


Figure 2.6: Longitudinal Analysis of the Proportion of Necessity-driven Motives among Total Entrepreneurial Activity (TEA) in Selected Economies

Source: GEM 2004-2016

Perhaps even more interesting is the high level of improvement-driven opportunity motives. In 2016, 74.3% of entrepreneurs in Hong Kong stated they were motivated to launch their businesses by the pursuit of opportunity and desired to increase their income or the level of independence in their work. This is the highest proportion reported in all economies in the study, and in the innovation-driven economies in particular. Overall, the opportunity-motivated entrepreneurs in Hong Kong constituted 7.7% of the adult population. In Shenzhen, this proportion oscillated around 65% of all early-stage entrepreneurship, also among the highest in the sample of 66 economies from the study. Figure 2.7 provides cross-country comparison for selected economies.

Overall, the proportion of opportunity to necessity-driven entrepreneurs in Hong Kong, has been improving since 2004. It has significantly increased in comparison to previous years and it is on its way to reach the levels similar to the ones of the US and United Kingdom. In Shenzhen, the proportion of opportunity- to necessity-driven entrepreneurs has also improved significantly, which is a sign of a growing, healthy economy. Figure 2.8 provides a comparison chart.

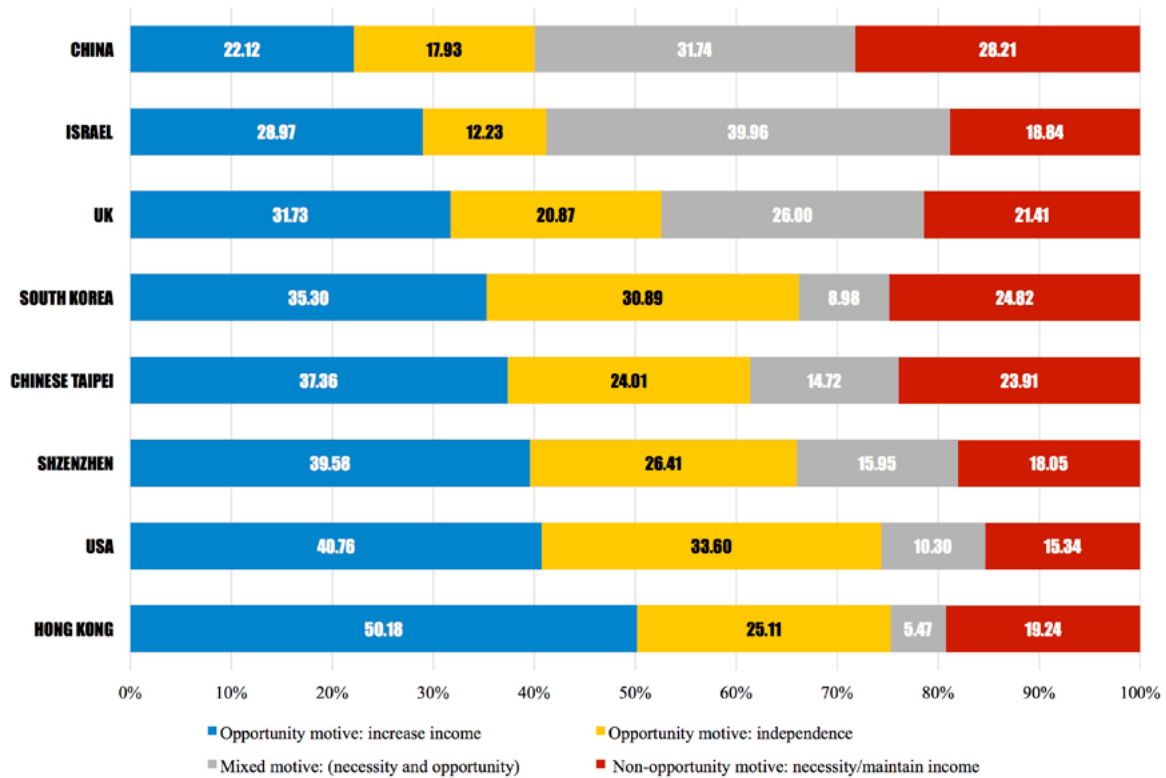


Figure 2.7: Cross-country Comparison of Motives for Entrepreneurship among Total Entrepreneurial Activity (TEA)

Source: GEM 2016

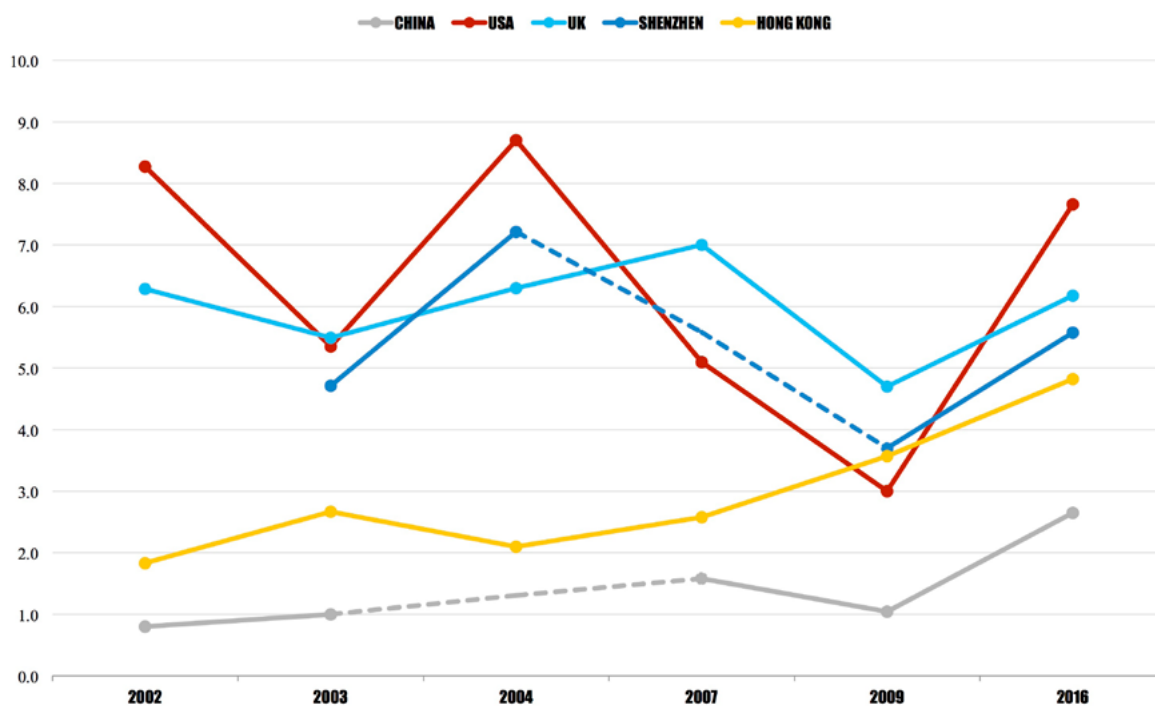


Figure 2.8: Longitudinal Analysis of the Ratio of Opportunity to Necessity-driven Motives for Entrepreneurship among Adult Population in Selected Economies

Source: GEM 2002-2016

Characteristics of Entrepreneurs

Who are Hong Kong and Shenzhen entrepreneurs? This section provides an analysis of entrepreneurial individuals by gender, age, origin, income, and education levels.

Gender

Similarly to most worldwide economies, entrepreneurship in Hong Kong and Shenzhen is driven by male entrepreneurs. The only exceptions in the 2016 study include Indonesia, Mexico, and Brazil, where there were slightly more females than males engaging in the early stage entrepreneurial activities.

In Hong Kong, for every female entrepreneur, there were two male early-stage entrepreneurs. The proportion was even higher for established business owners: the ratio of

male to female business owners was at 2.6x, one of the highest in the Southeast Asian region. A lower proportion of male to female early-stage vs established entrepreneurs can be interpreted as a sign of closing the gender gap in entrepreneurship. Women become more daring and venture to establish businesses on their own terms. In Shenzhen, while the gap between early-stage male and female entrepreneurs was also closing and faster than in Hong Kong, with 2 female entrepreneurs for every 3 male entrepreneurs, in established business activity, this gap was much larger than in Hong Kong – the proportion of males to females was of 3.35. In comparison, in China, the proportion of male to female early stage entrepreneurs was 1.37x and for established business owners 1.32x. Figure 2.9 illustrates the findings for nascent and new entrepreneurs.

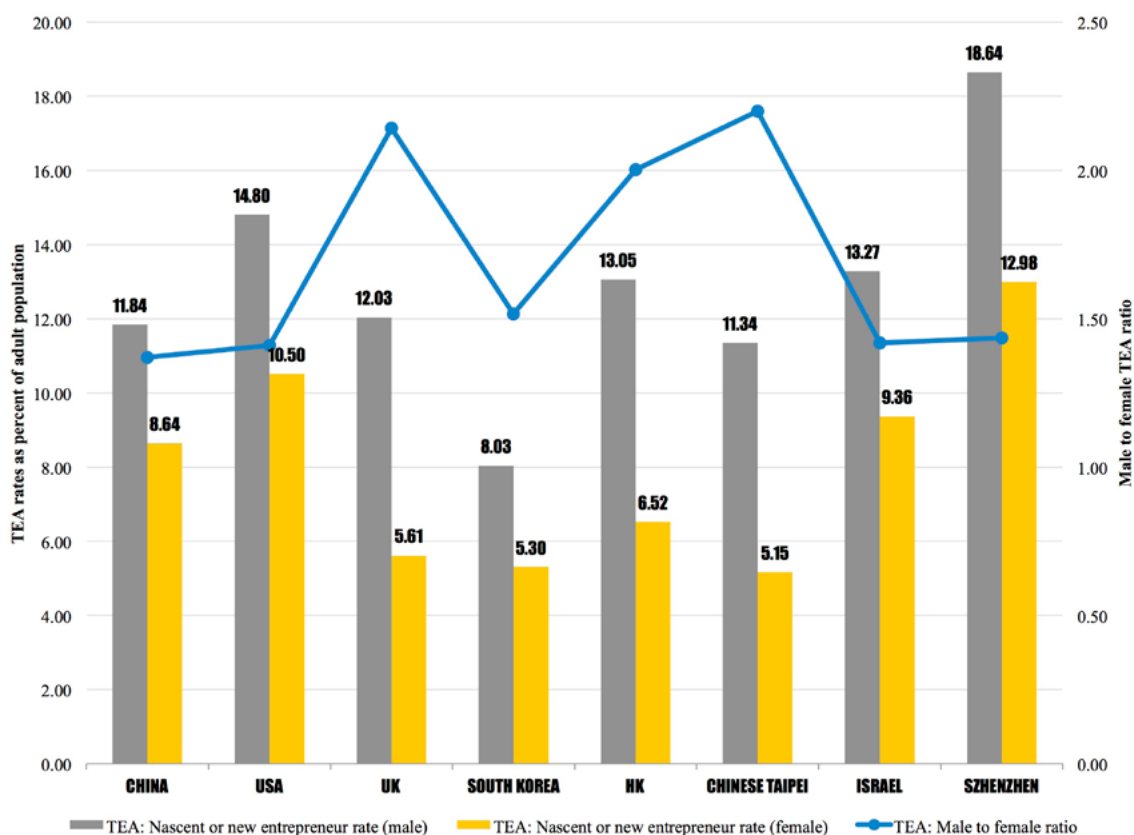


Figure 2.9: Total Early Stage Entrepreneurship Rates in Adult Male and Female Population in Selected Economies

Source: GEM 2004-2016

In general, Hong Kong and Shenzhen men are still much more confident than women about their skills and knowledge mastery for starting a business. In Hong Kong, they are also less afraid of failure that would prevent them from starting up. Similar, although slightly less pronounced patterns are observable in other economies around the world as Figure 2.10 shows. Yet, in Shenzhen we found no gender differences in the fear of failure. Also, in opposition to findings many from other economies, Hong Kong and Shenzhen women perceive almost the same level of opportunities for starting a business than their male counterparts, just like their peers in Finland, Estonia, Russia, or United Arab Emirates⁷. The ratio of male to female respondents declaring that they perceive “good conditions to start business in the next 6 months” in Hong Kong was estimated at 0.98 and at 0.99 in Shenzhen (Figure 2.10).

Additionally, while the total early-stage entrepreneurial activity for males recorded a percent change of **+151%** from 2009 to 2016, for females, the recorded growth was stronger, of **+197%**, and even surpassed the highest-recorded pre-recession levels (5.82% in 2007 vs 6.52% in 2016). A similar growth pattern of **+191%** was observed in Shenzhen males, but the growth in early-stage entrepreneurial activity prevalence rates for females was even higher, **+333%**, from 3% in 2009 to 13% in 2016. Table 2.5 and Figure 2.11 summarize the statistics.

⁷ Please refer to the Global Report for detailed statistics:
www.gemconsortium.com

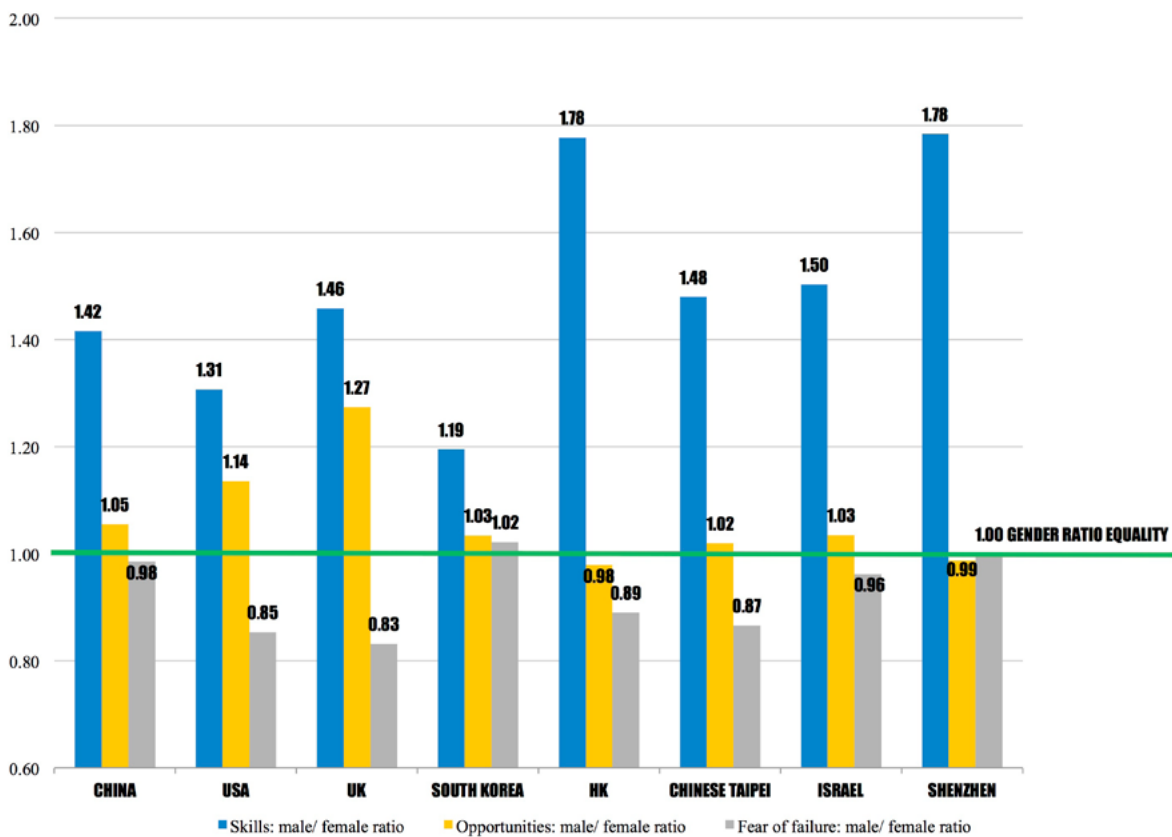


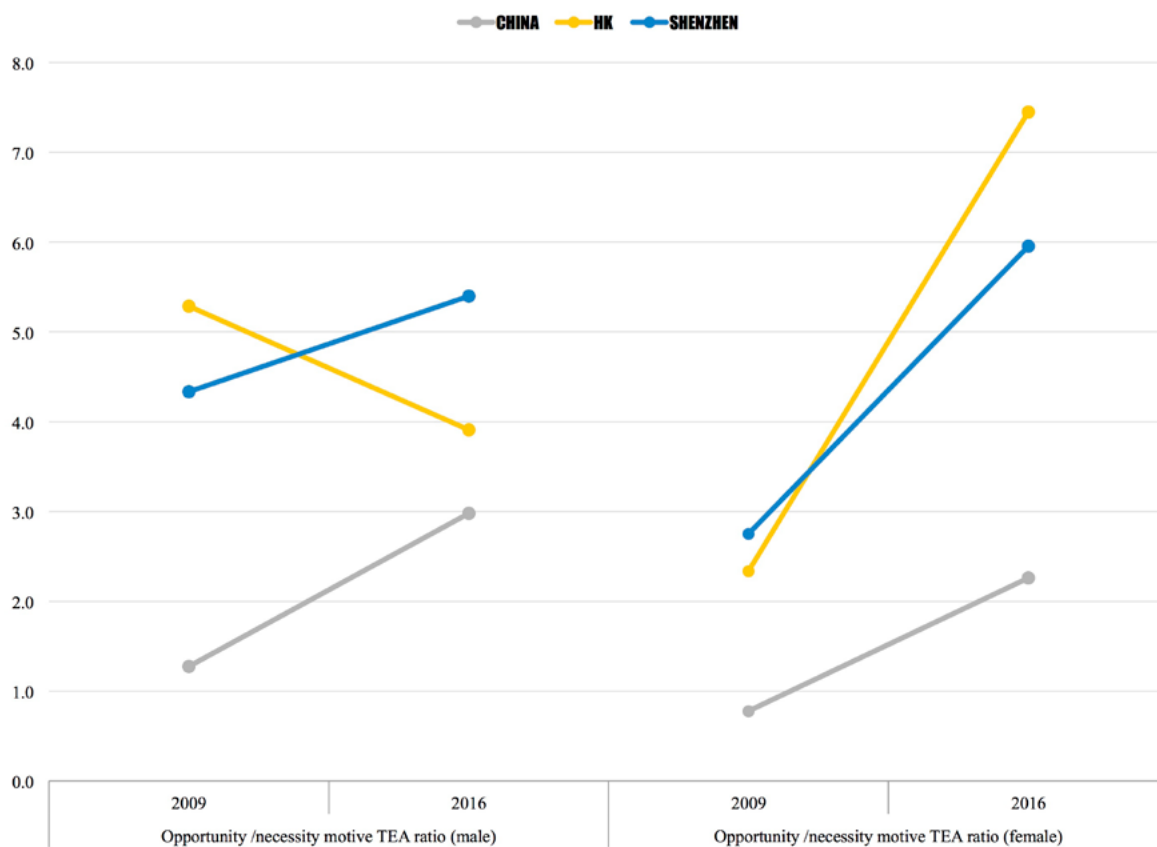
Figure 2.10: Entrepreneurial Attitudes in Adult Male and Female Population in Selected Economies

Source: GEM 2016

Also, women in Hong Kong were more likely to start businesses out of opportunity rather than necessity. The incidence of female opportunity entrepreneurship to necessity entrepreneurship was much higher than for males (3.9 for males vs. 7.5 for females in Hong Kong and 3.7 for males and 6.0 for females in Shenzhen). Similar findings were recorded for South Korea, Chinese Taipei, and Israel, but not in China, US, or UK, where males were more likely to act out of opportunity than females. Furthermore, the ratio of opportunity to necessity-driven female entrepreneurship recorded a significant increase from 2009. The opportunity-driven entrepreneurship in women recorded a large percent change of **+219%** in Hong Kong and **+117%** in Shenzhen.

In contrast, for males, the ratio of opportunity to necessity entrepreneurship decreased in the same period and recorded **-26%** change in Hong Kong from 2009 to 2016. In Shenzhen, the same ratio for males increased by **+25%** between 2009 and 2016.

In summary, women in Hong Kong and Shenzhen were still less likely to start businesses in 2016, but when they did, their decision was much more opportunity-driven as they felt better equipped with recognizing opportunities for entrepreneurship. Female startup rates grew faster than for males and showed a sign of reversing the general preconception that entrepreneurship is a gentlemen's affair.



● Figure 2.11: Change in Ratio of Opportunity to Necessity Total Early-Stage Entrepreneurial Activities in Adult Males and Females of Hong Kong, Shenzhen and China

Source: GEM 2016

Year	Total Early-Stage Entrepreneurial Activity					
	Male working population			Female working population		
	HK	SZ	CHN	HK	SZ	CHN
2002	4.59%	n/a	13.6%	2.33%	n/a	10.3%
2003	4.45%	14.9%	14.3%	2.05%	6.0%	11.6%
2004	4.47%	15.6%	n/a	1.55%	7.9%	n/a
2007	14.33%	n/a	19.3%	5.82%	n/a	13.4%
2009	5.20%	6.4%	20.7%	2.19%	3.0%	16.0%
2016	13.05%	18.64%	11.8%	6.52%	12.98%	8.6%
2009-2016 % change	+151%	+191%	-43%	+197%	+333%	-46%

Table 2.6: Total Early Stage Entrepreneurship Rates in Adult Male and Female Population
in Hong Kong, Shenzhen, and China 2002-2016

Source: GEM 2002-2016

Age

In the pre-recession global economy, new and nascent entrepreneurs were younger, with the highest incidence rates occurring in groups 25 to 34 years old. The global recession changed many professional careers and pushed people towards entrepreneurship at a later stage of their lives.

Although the 25 to 34 group is still the age group, which is showing the highest entrepreneurship prevalence in innovation-driven economies in aggregate, older, more experienced entrepreneurs of 35-44 years old are emerging. In 2016, the average early-stage entrepreneurship rates for age groups 25 to 34 and 35 to 44 were 11.6% and 10.6% respectively, collectively accounting for 55.3% of entrepreneurs in innovation-driven economies. For established businesses, the prevalence rates are the highest in more senior age groups of 45+ years. Figure 2.12 highlights the cross-country comparison for early-stage and established entrepreneurial activities.

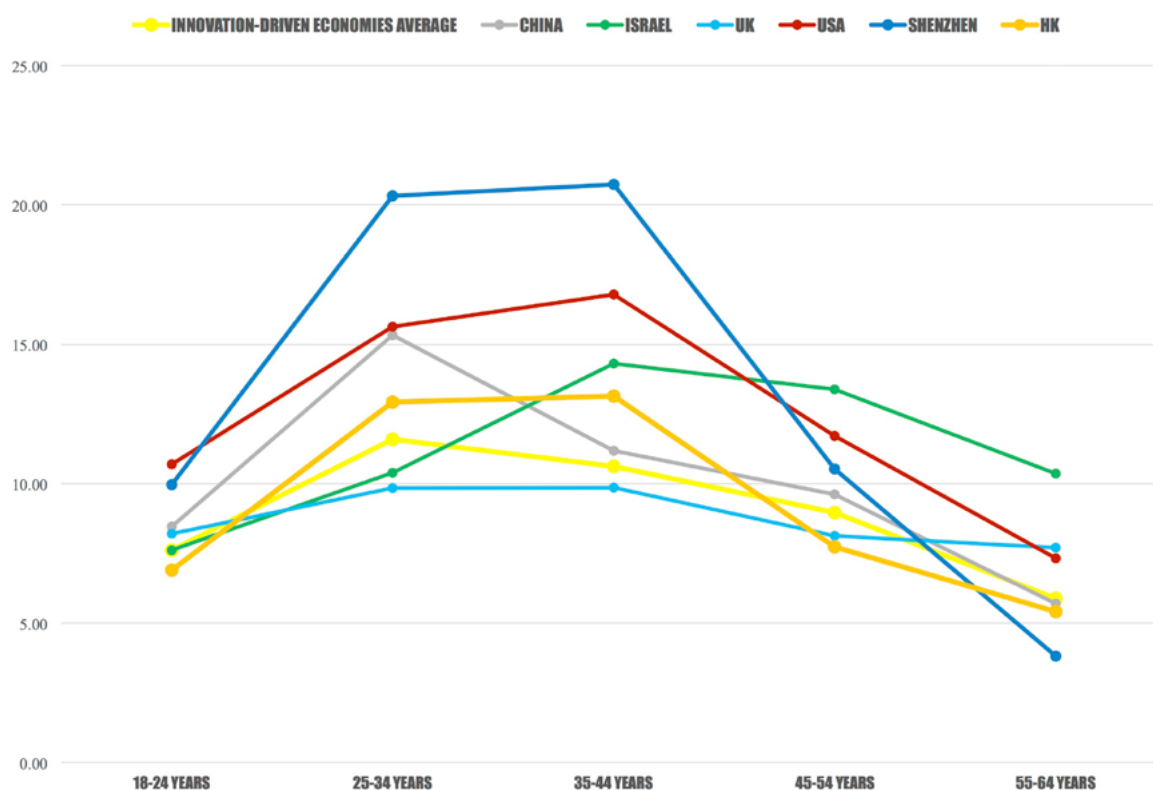
Hong Kong's largest group of early-stage entrepreneurs got slightly older, just like in many other innovation-driven economies around the world, including the US, UK, Israel, or South Korea. In the early-stage businesses, individuals aged from 25 to 34 and from 35 to 44 constituted the largest two groups. Together, they accounted for 60% of Hong Kong early-stage entrepreneurs and the early-stage prevalence rates were estimated at around 13% in both groups. Interestingly, while in 2009, the largest group of early-stage entrepreneurs was between 24 to 34 years old, in 2016, the group aged 35 to 44 took the lead. Younger adults, up to 25 years of age, constituted 8.5% of early-stage entrepreneurs. In 2009, the same age group accounted for 13.1% of nascent and new entrepreneurs. In parallel, owners-managers of established business in

mid-2016 also came from older age groups than in 2009; 27.6% of established entrepreneurs in 2016 were 55 years or older. In comparison, in 2009 this group constituted 20.6% of all established entrepreneurs.

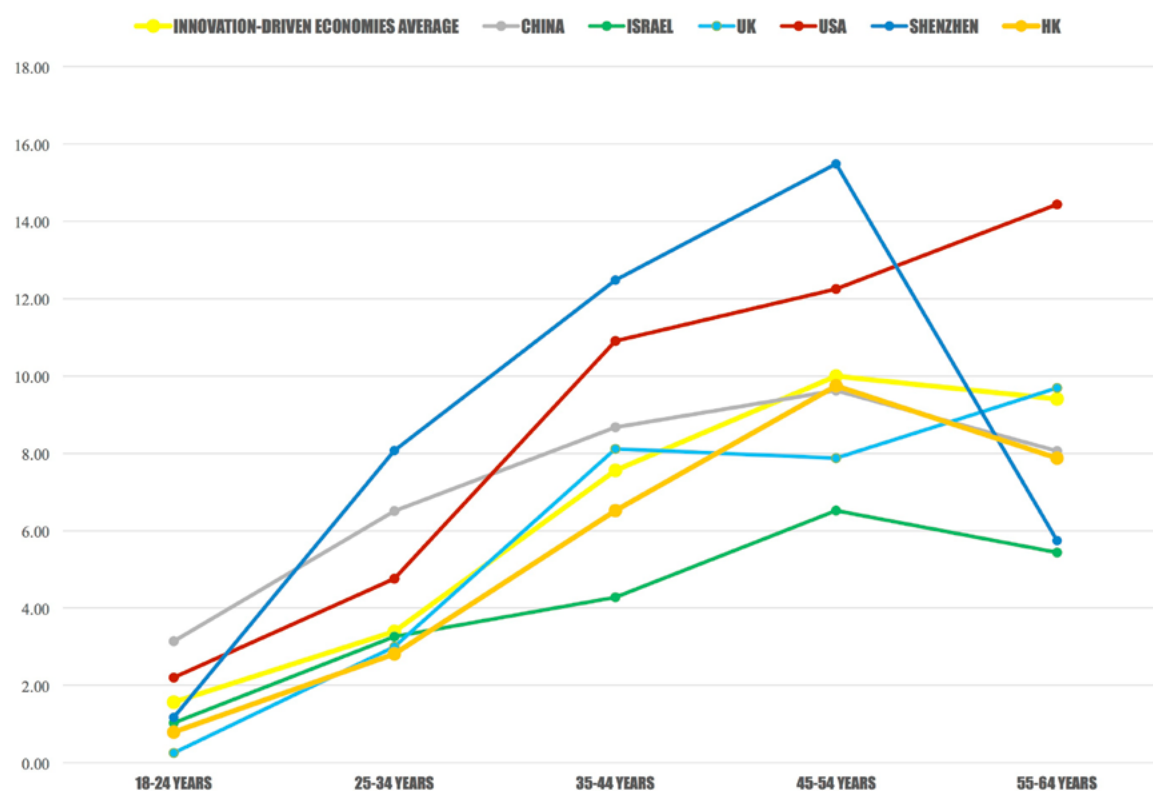
In Shenzhen, a similar structure of prevalence rates across age groups of early-stage entrepreneurs has been observed in 2016, but they recorded higher intensity of start-up activity than in Hong Kong. Similarly, while in 2009 starting-up was the focus of youngsters, often aged 18 to 34, this time around older groups in the general population became more entrepreneurial than in 2009. In particular, the two groups aged from 25 to 34 and 35 to 44 accounted for 76% of early-stage entrepreneurs and as much as 20% of adult population from these groups was engaging in early-stage entrepreneurial activities. Within the established business activity, although the owners-managers in Shenzhen got a little bit older, we have also recorded a clear age demarcation for established business owners. Prevalence rates were increasing for consecutive age groups from 18 to 54 years old, but for owners-managers aged 55+ we have recorded much lower rates of established business activity (Figure 2.12). In consequence, this age group represented only 2.7% of all established business owners in Shenzhen, which is 10 times lower than the 27.6% of Hong Kong.

Put it together, even accounting for the increased entrepreneurial activity in older groups in both cities, Shenzhen established business owners and early-stage entrepreneurs were much younger than the Hong Kong ones. One interpretation could be that Shenzhen's economic strength has only emerged in the past 20 years; therefore the city did not have sufficient time to groom long-term, older owners-managers of established businesses. Figure 2.13 illustrates findings for both city-economies.

A. Early-Stage Entrepreneurship Prevalence Rates (% total adult population)



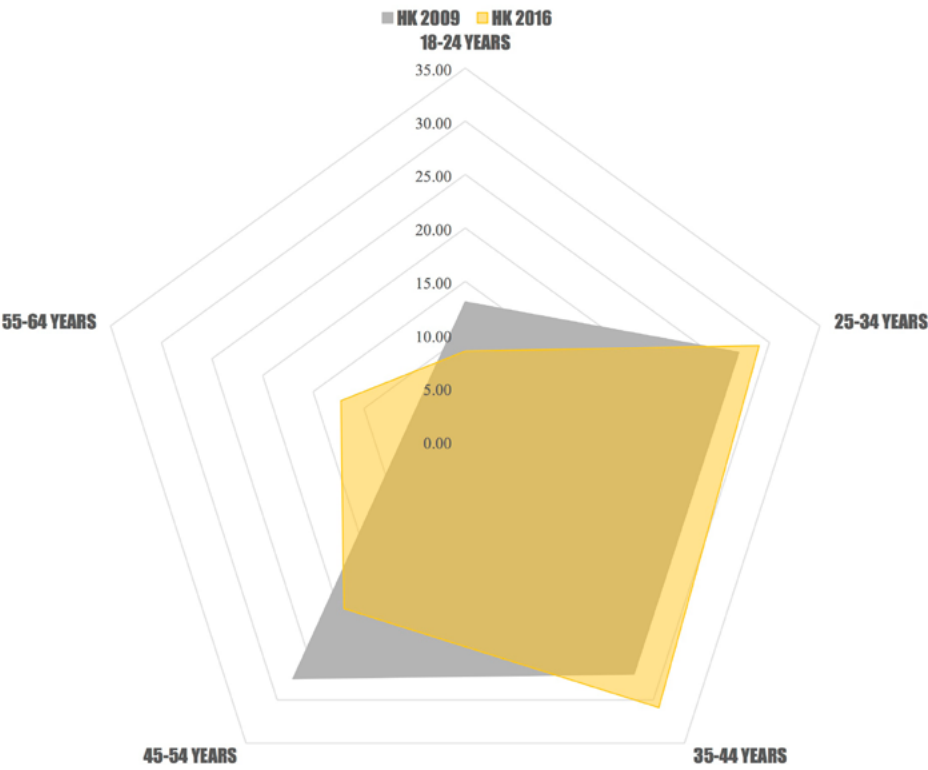
B. Established Business Prevalence Rates (% total adult population)



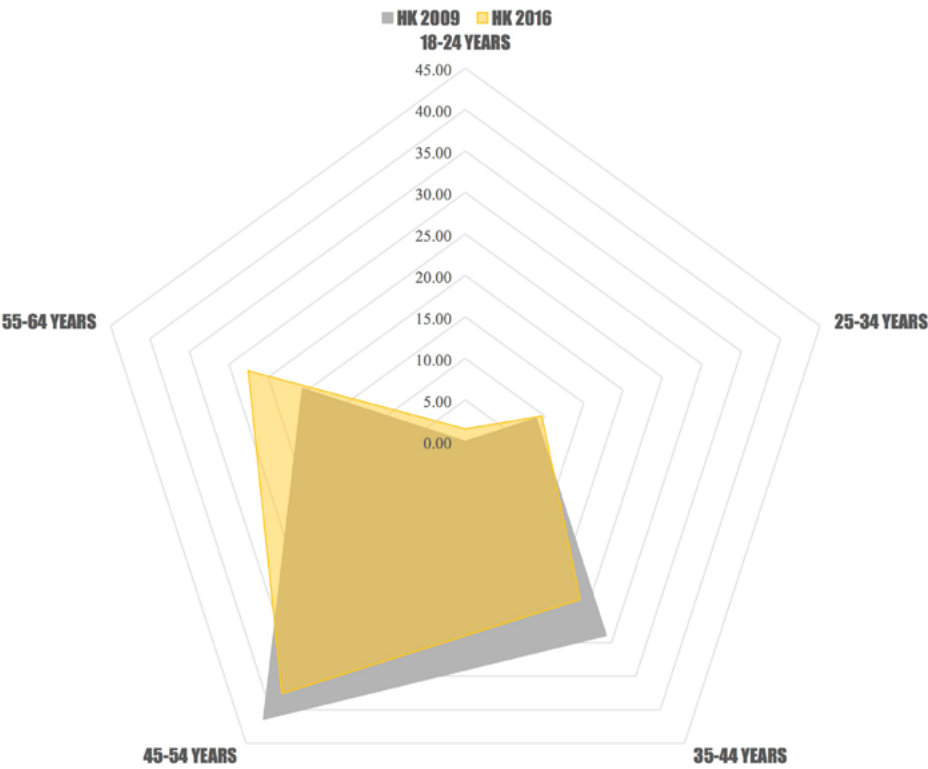
Source: GEM 2016

Figure 2.12: Cross-country Comparison of Entrepreneurship Prevalence by Age Groups

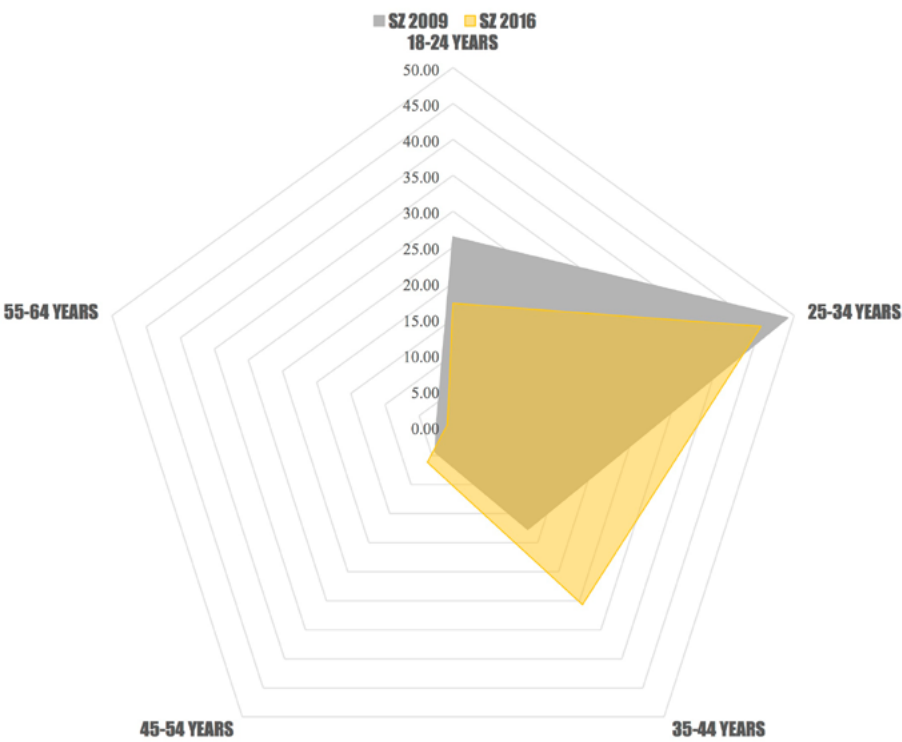
A. Hong Kong: Early-Stage Entrepreneurship Age Distribution (% total early stage entrepreneurial activity)



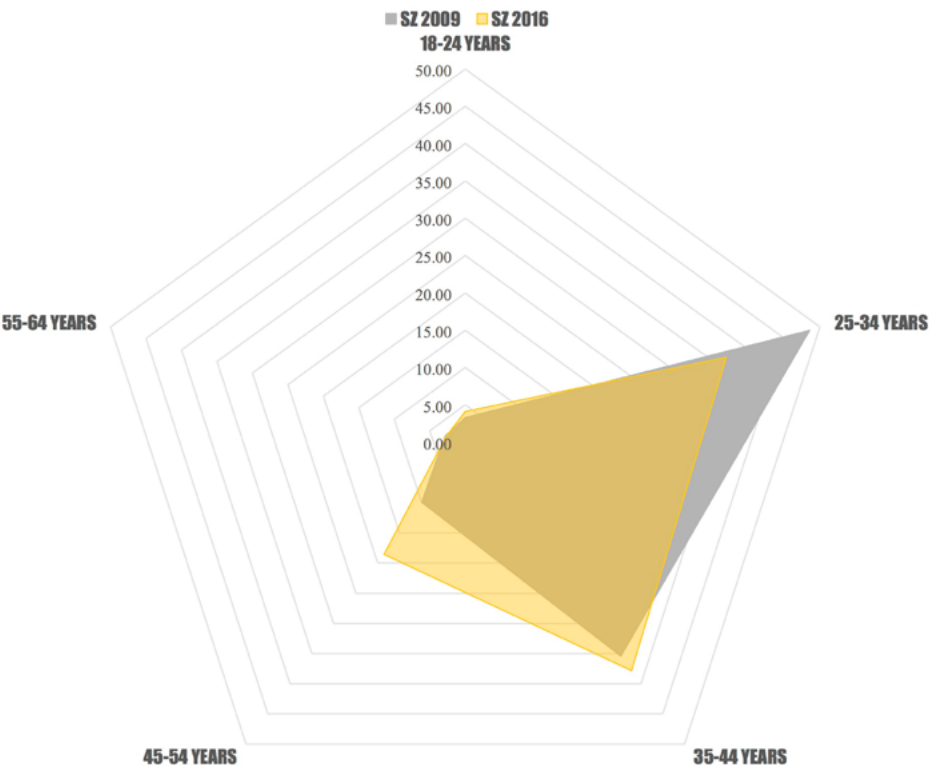
B. Hong Kong: Established Entrepreneurs Age Distribution (% total established business activity)



C. Shenzhen: Early-Stage Entrepreneurship Age Distribution (% total early stage entrepreneurial activity)



D. Shenzhen: Established Entrepreneurs Age Distribution (% total established business activity)



● Figure 2.13: Longitudinal of Age Distribution of Entrepreneurship Activities in Hong Kong and Shenzhen

Source: GEM 2009-2016

Education

Overall, levels of early-stage and established entrepreneurship increased across all categories of education in Hong Kong and Shenzhen (Figure 2.14). In Hong Kong, this was particularly salient for individuals with secondary and post-secondary education; the percent change from year 2009 to 2016 was of **+198%** and **+168%** for early-stage entrepreneurship and **+217%** and **+120%** for established businesses respectively. These two groups were the principal drivers of the increase in entrepreneurship rates in Hong Kong. On average, individuals with secondary education were 1.1 times more likely to start new business than an average person and people with post-secondary education were 1.34 times more likely to start a new venture in mid-2016.

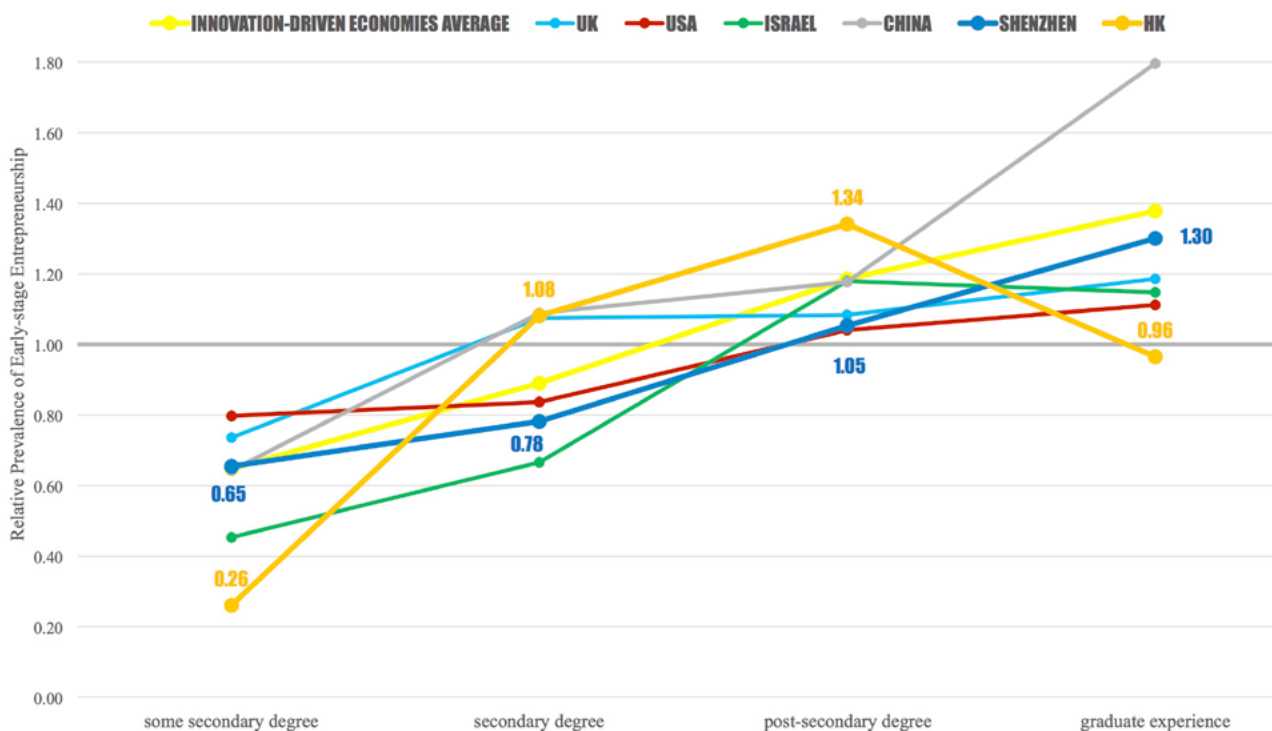
Typically, in innovation-driven economies, more educated individuals drive the entrepreneurial activities within the economy. This was also the case in China, which is transitioning from the efficiency- to innovation-driven economy. In Hong Kong, the percentage of entrepreneurs holding at least a post-secondary degree rose from 49.3% in 2009 to 60.8% in 2016. However, unlike in 2009, individuals with postgraduate higher education were slightly less likely than the average to start or run businesses in Hong Kong (Figure 2.15). While the proportion of highly educated (graduate experience) early-stage and established entrepreneurs saw a positive percent change of **+30.6%**

and **+37.2%** respectively, it did not match the explosive growth in other educational categories, notably among higher diploma and bachelor degree holders (post-secondary degree).

In Shenzhen, early-stage entrepreneurship activities were dominated by individuals with higher levels of education. As much as 80% of total early-stage activity was conducted by people with at least post-secondary education, up from 68.2% in 2009. Also, individuals with graduate experience were 1.3 times more likely to start businesses in Shenzhen than the average. In general, the higher the education of individuals in the sample was, the more likely they were to engage in early-stage entrepreneurial activities. Also, all education categories recorded a strong growth in nascent, new, and established entrepreneurial activities. For example, 21% of adults with graduate experience were estimated to engage in early-stage enterprising in 2016, a stark contrast with 5.3% from 2009.

In contrast, Shenzhen's established businesses fell into the domain of those with less education. People with some secondary education were 2.4 times more likely to report being owners-managers in established businesses. These findings represent a clear shift in the nature of entrepreneurial activities in Shenzhen, promoting its transformation from efficiency- to innovation-driven economy.

A. Early-Stage Entrepreneurship Prevalence Rates (% total adult population)



B. Established Business Prevalence Rates (% total adult population)

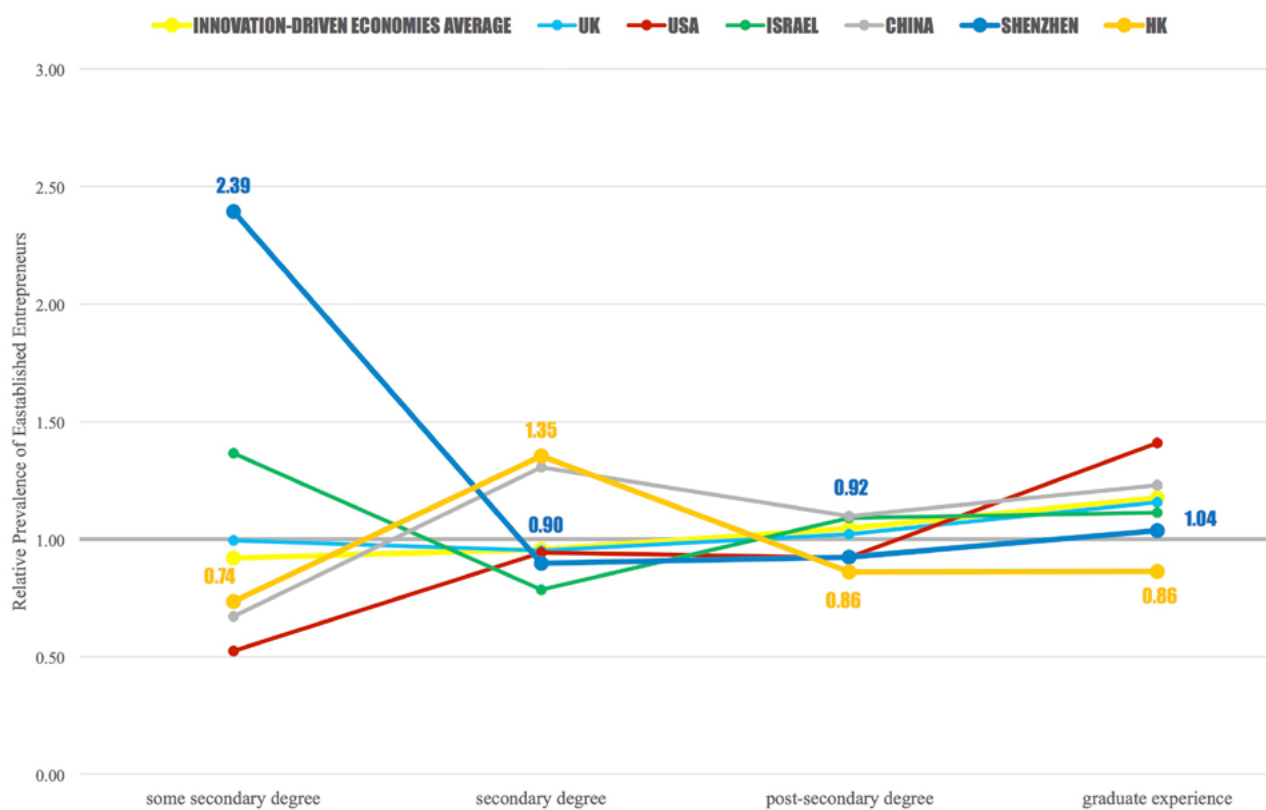
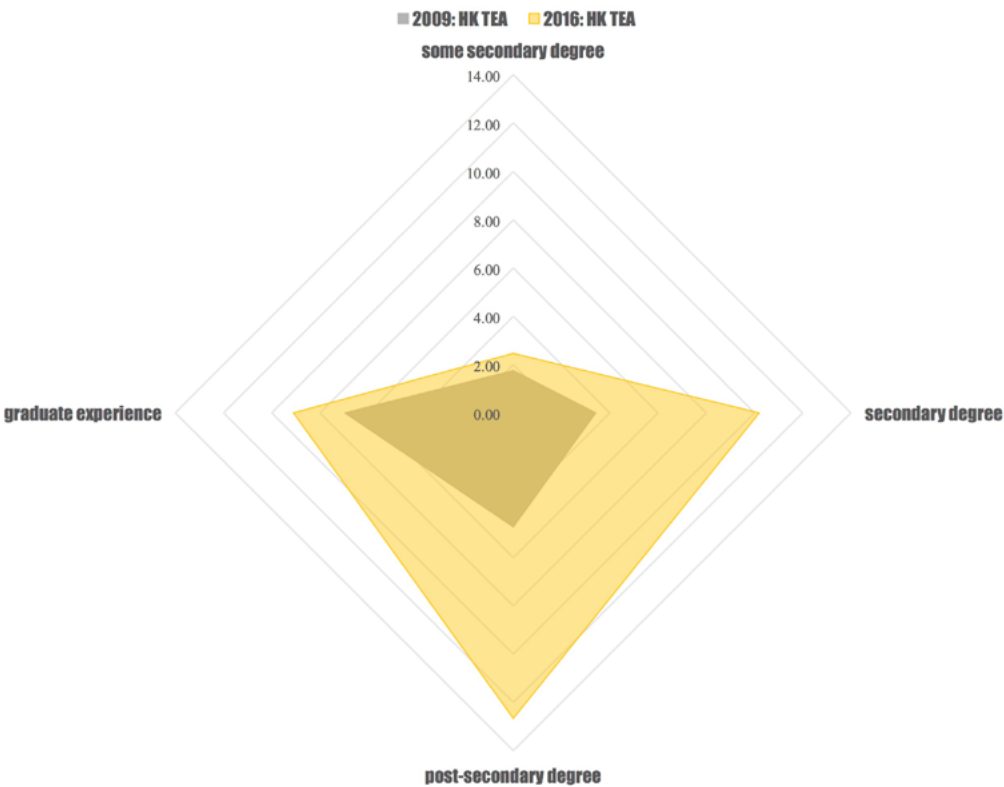


Figure 2.14: Cross-country Comparison of Entrepreneurship Prevalence⁸ by Level of Education

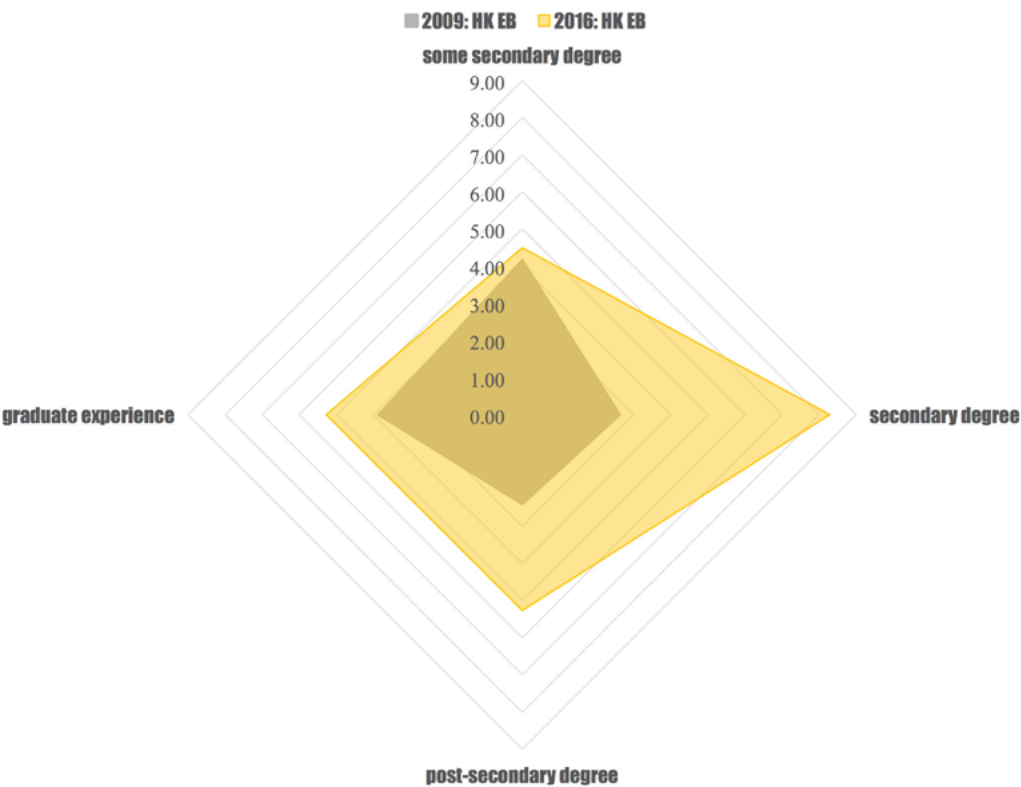
⁸ The charts above divide the entrepreneurial prevalence rates in each education group by the entrepreneurial prevalence rates of the entire population, thereby "normalizing" the prevalence rates around 1. Anything that is above 1 represents a rate that is higher than the average; anything scoring below 1 means the rates below average.

Source: GEM 2016

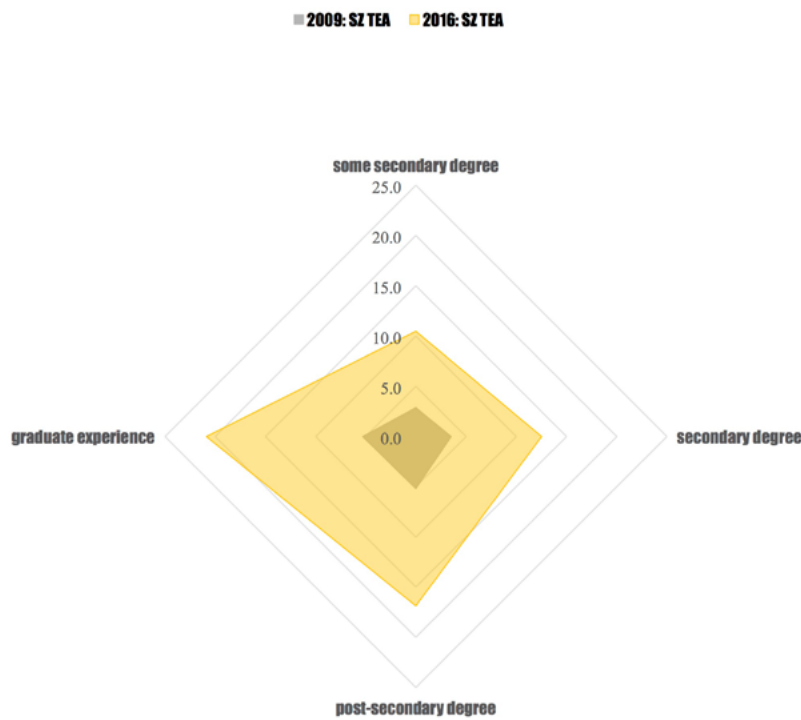
A. Hong Kong: Early-Stage Entrepreneurs’ Level of Education Distribution (% total adult population)



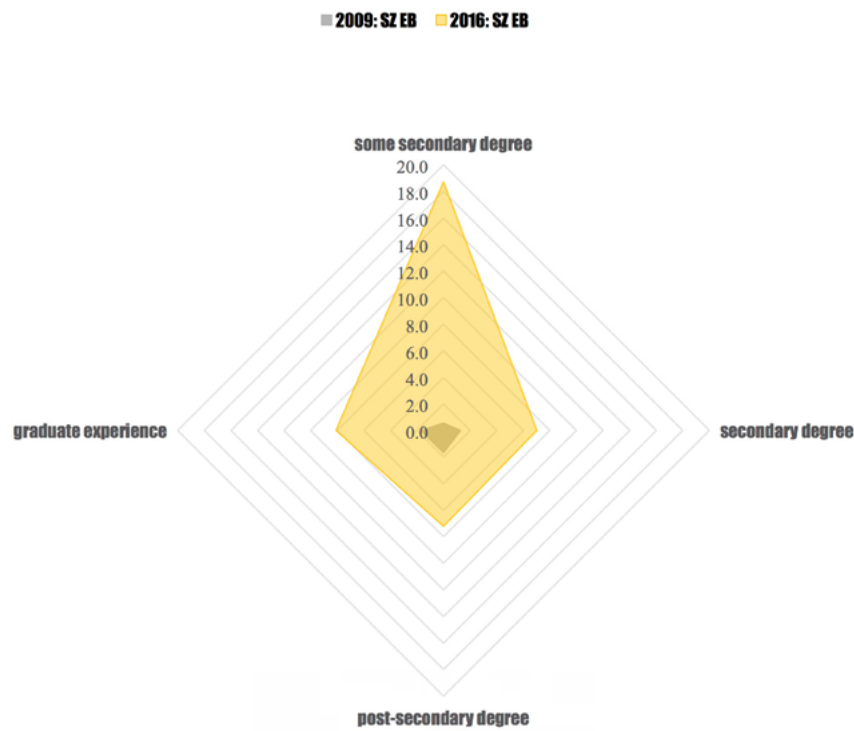
B. Hong Kong: Established Entrepreneurs’ Level of Education Distribution (% total adult population)



C. Shenzhen: Early-Stage Entrepreneurs’ Level of Education Distribution (% total adult population)



D. Shenzhen: Established Entrepreneurs’ Level of Education Distribution (% total adult population)



Source: GEM 2009-2016

● Figure 2.15: Longitudinal Analysis of Education Levels in Entrepreneurship Activities

Income

Entrepreneurship is fueled by individuals from the highest income groups, regardless of the stage of economic advancement of a given country. Highest early-stage and established entrepreneurship prevalence rates were recorded in the individuals from the 1/3 of the population with the highest income worldwide.

In Hong Kong, only surpassed by Estonia and Canada, the early-stage entrepreneurship prevalence rates of the wealthiest individuals were ranked the third highest among the innovation-driven economies, with 17.7% of high earners from the adult population being engaged in nascent or new start-up activities (Figure 2.16). Shenzhen also recorded the highest early-stage entrepreneurship rates among the highest earners, but its numbers fell below the average in efficiency-driven economies. In this regard, Hong Kong and Shenzhen are similar to the China average, where people with higher income are far more likely to start businesses. In contrast, in countries such as the US or UK, the difference in nascent and new entrepreneurship rates among income groups was less pronounced, although still present.

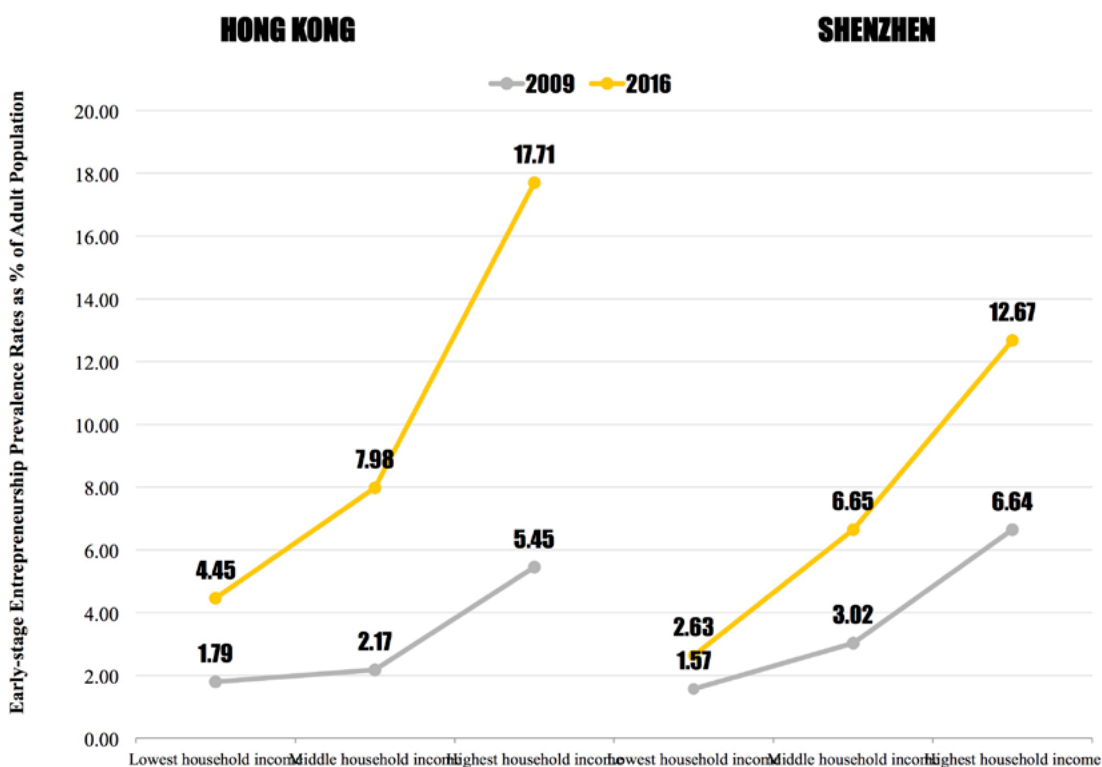
More specifically, Hong Kong and Shenzhen ranked as the Top 2 economies, innovation-driven or otherwise, where the top third of income earners were almost 5

times (Shenzhen) and 4 times (Hong Kong) more likely to engage in early-stage entrepreneurship than individuals from the bottom income group. Hong Kong is also the number two economy among innovation-driven ones, where established business activity prevalence rates are 4.5 times higher in high than low income earners, and Shenzhen surpasses all economies in the sample with the ratio estimated at 7.25 (Figure 2.17).

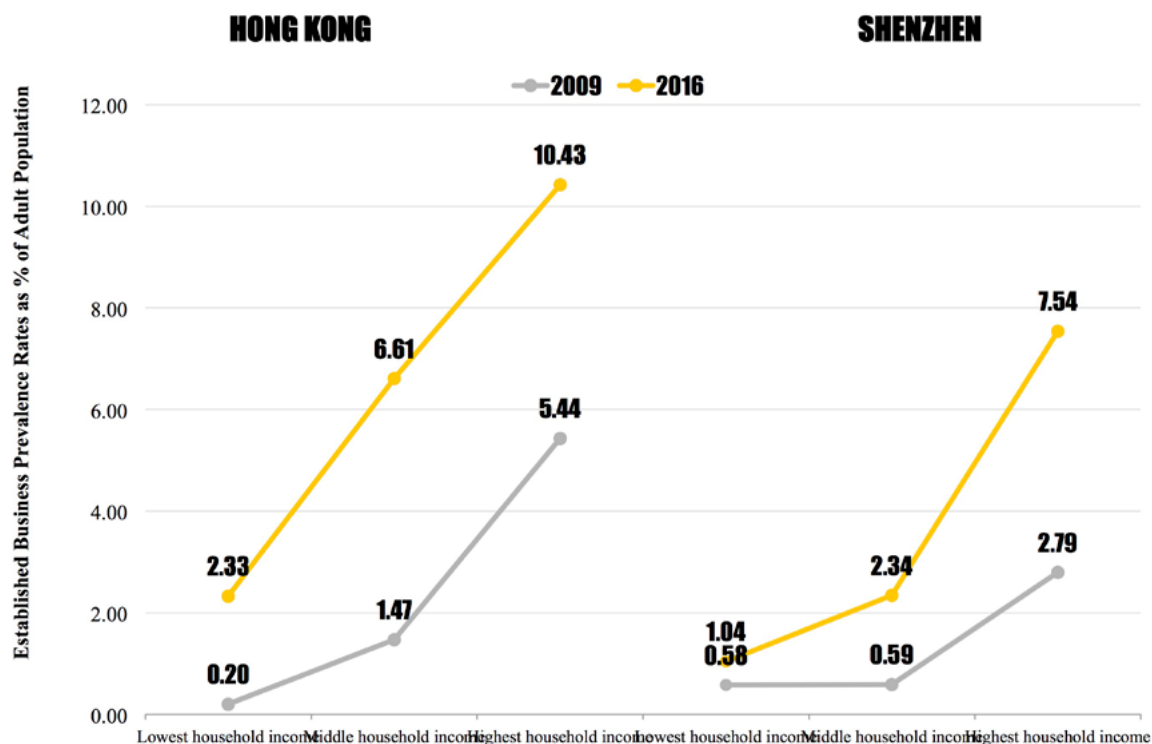
This discrepancy between low and high income early-stage entrepreneurial activity of Hong Kong used to be much larger. In 2009, high earners were 27 times more likely to start businesses than low income individuals. The gap, although still significant, is getting smaller for early-stage entrepreneurs (Figure 2.16c). For established businesses, the stable size of the gap likely represents successful entrepreneurship that is causing a higher level of income.

In contrast, in Shenzhen the gap between high and low income earners in their entrepreneurial venturing is widening. While in 2009, high earners were 4.8 times more likely to start new businesses, in 2016, they were already 7.25 times more likely to embark on entrepreneurial adventure. The ratio remained stable and on high levels, demarcating a difference between income levels of the established business owners and the rest of the population.

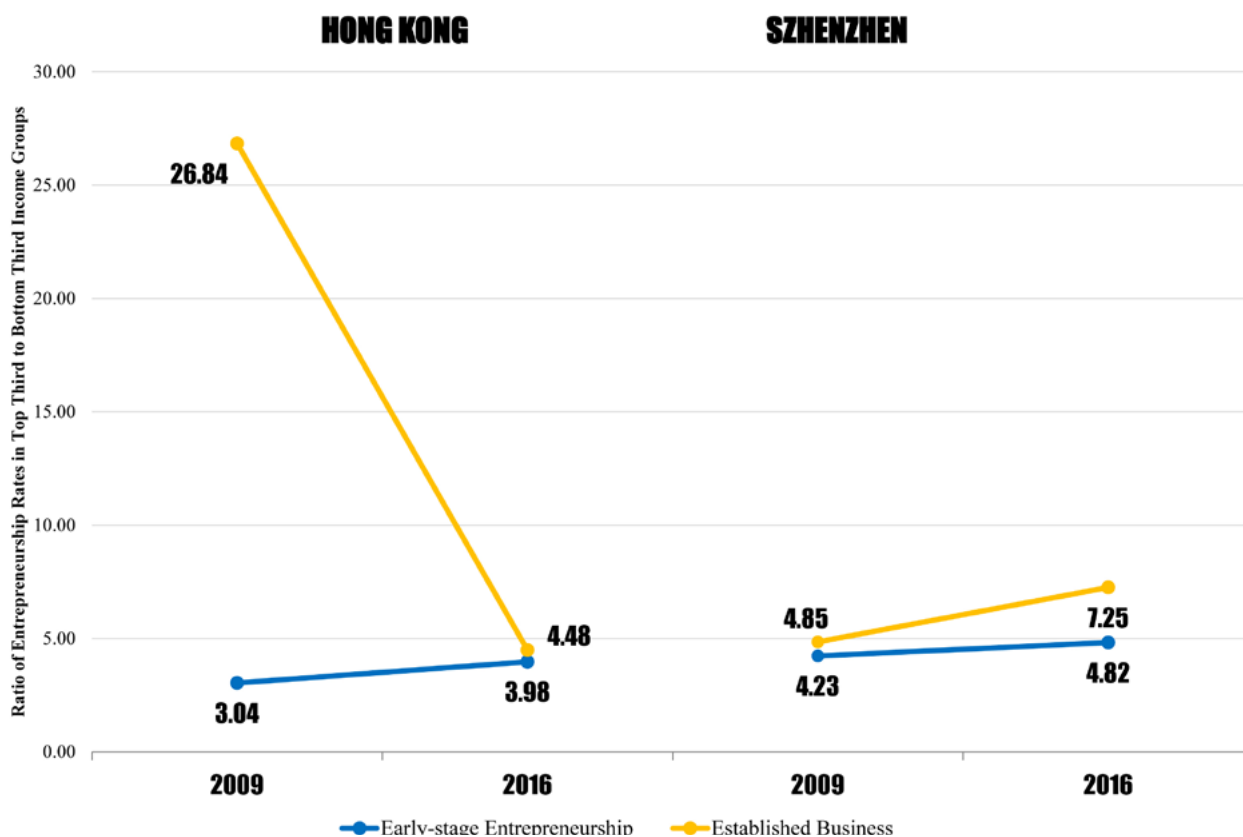
A. Early-Stage Entrepreneurs' Income Distribution (% total adult population)



B. Established Entrepreneurs' Income Distribution (% total adult population)



C. Entrepreneurship Rates in Top Third to Bottom Third Income Groups



Source: GEM 2009-2016

Figure 2.16: Longitudinal Analysis of Income Levels and Entrepreneurship Activities in Hong Kong and Shenzhen

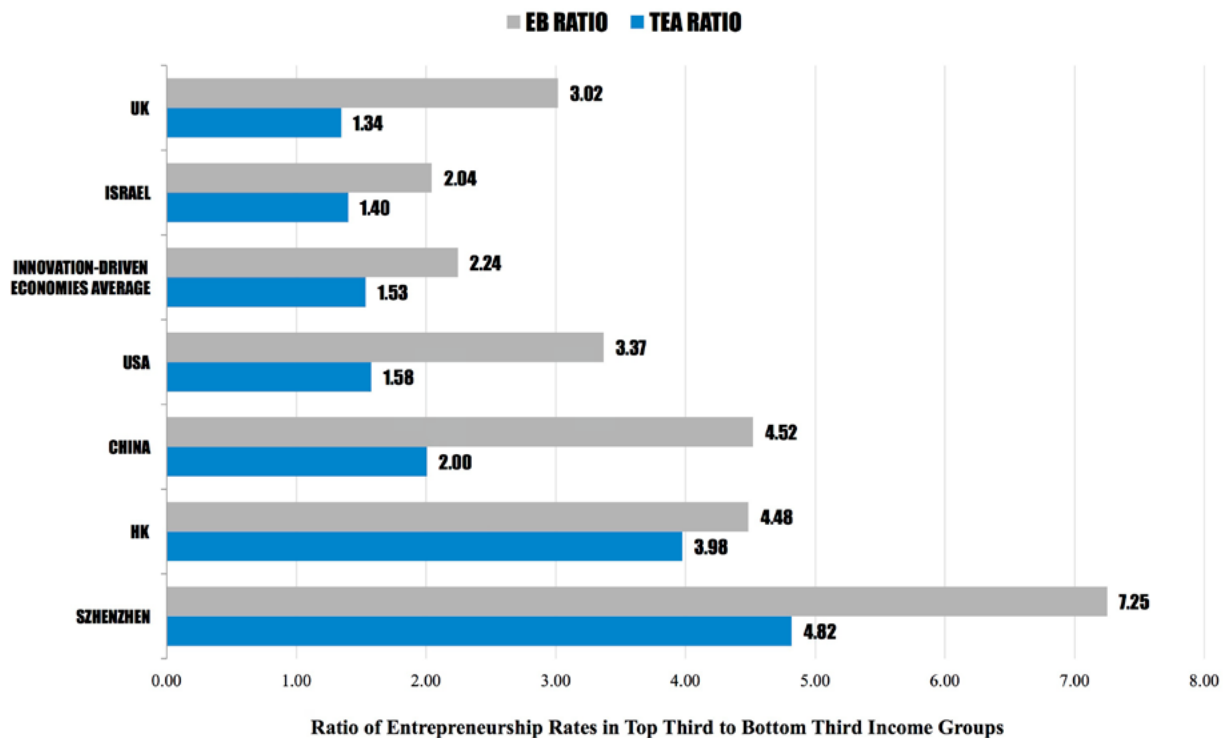


Figure 2.17: Cross-country Comparison of Entrepreneurship Rates in Top Third to Bottom Third Income Groups in 2016

Source: GEM 2016

Characteristics of Ventures

Entrepreneurial Teams

Nobody succeeds alone. This is a mantra relentlessly repeated by many entrepreneurs. In order to achieve firm growth, individuals need to share responsibilities and divide roles within the business. In innovation-driven economies, there were, on average, 2.6 business owners per early-stage firm and 2.4 owners per established business reported in 2016 (Figure 2.18).

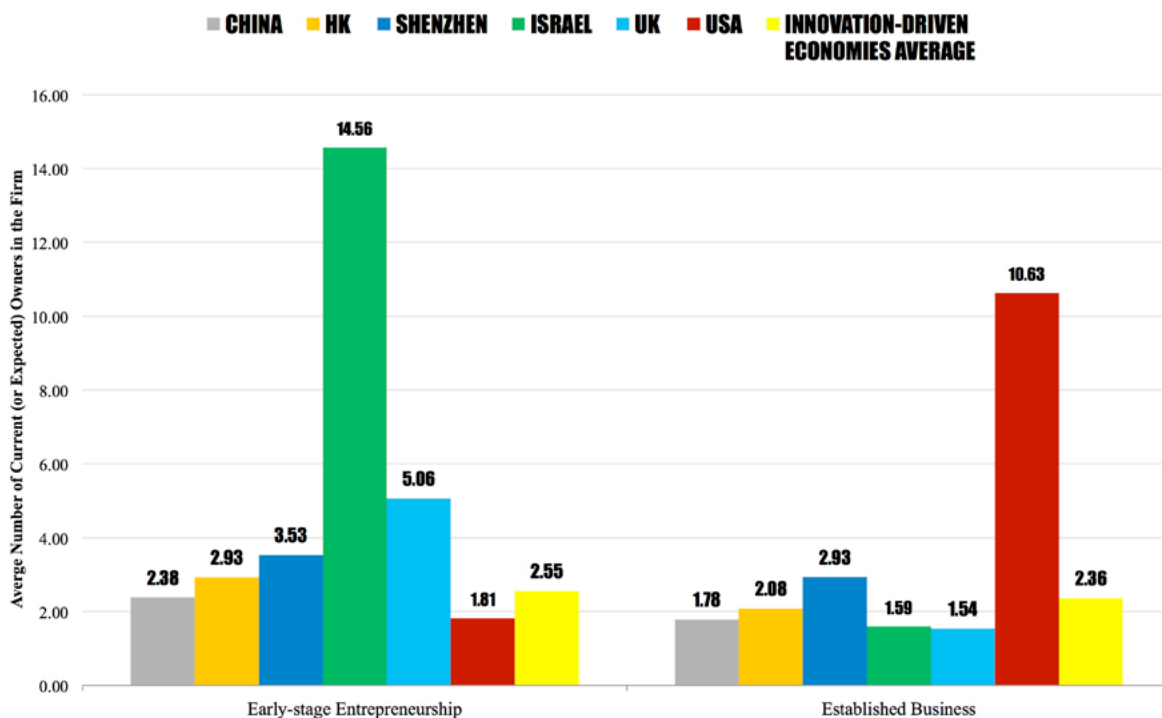
Interestingly, Hong Kong was in the Top 3 innovation-driven economies with the largest early-stage teams defined as current and expected owners in the firm, after Israel and the United Kingdom, with an average of 3 owners per firm. In established businesses, there were, on average, 2 owners per business, which also placed Hong Kong among the Top 3 innovation-driven economies with the highest number of owners in established businesses, together with Ireland and the US. Comparing to 2009 figures, early-stage (2 vs 3 owners on average) and established teams (1.7 vs 2 owners on average) increased in size in 2016.

In similar vein, in Shenzhen, the early-stage teams were the largest among studied economies, with an average of 3.53 co-founders per early-stage venture. For established businesses, Shenzhen has recorded 3 co-owners per venture, which placed it among the Top 3 efficiency-driven economies with the largest co-ownership of established businesses. Both figures increased for Shenzhen in comparison to 2009: early-stage teams increased in size from 2.6 to 3.5 co-owners on average, and the established businesses recorded an increase from 2 to 3 co-owners.

How do co-founders of local businesses meet? In Hong Kong and Shenzhen alike, their connections were mostly built in a social setting (Figure 2.19). As much as 66% of nascent business owners and 54% of established business owners in Hong Kong met their co-founders through a common friend, at a social event, or in a social club. In Shenzhen, social setting was at the origin of 78% of nascent businesses and 56% of established businesses. In the nascent business setting, the second most prevalent way of meeting future co-founders was the work environment (55% in Hong Kong and 61% in

Shenzhen) and the third was related to the schoolmate relations of the co-founders (22% for Hong Kong and 32% for Shenzhen). Relatives accounted for 20% of nascent venture founder configurations in Hong Kong and 29% in Shenzhen. Interestingly, relations built through voluntary associations constituted a way of recruiting co-founders for 19% of nascent entrepreneurs in Shenzhen and 14% in Hong Kong. In more established businesses, the owners principally found their co-owners from within their informal social network, work acquaintances, and family members. Schoolmates or people met through voluntary work were of lesser importance to established businesses.

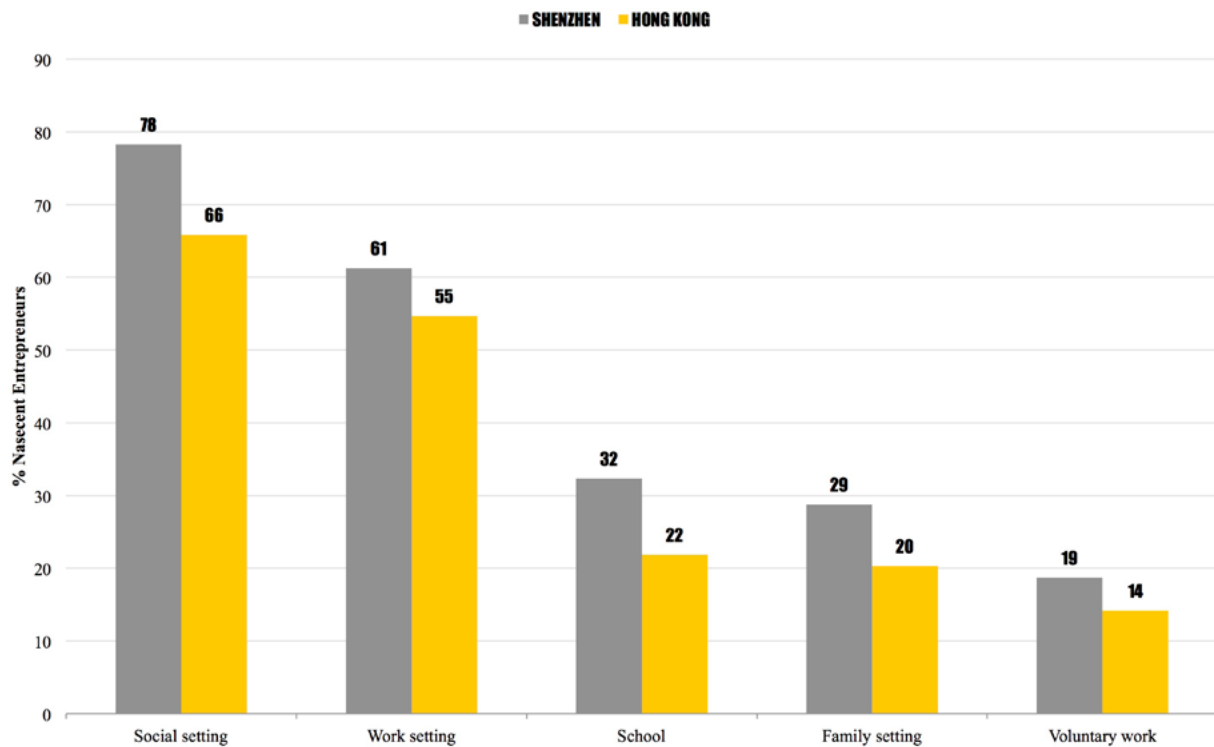
One interesting observation is that there were much fewer family-originated co-owners in nascent than established businesses in Shenzhen and Hong Kong. The differences between the origins of interpersonal connections for business formation may be explained by the changing face of local businesses. In the past, they were often a family affair, ensuring the livelihood to multiple generations, but currently, they tend to focus more on skill complementarity between the co-founders instead.



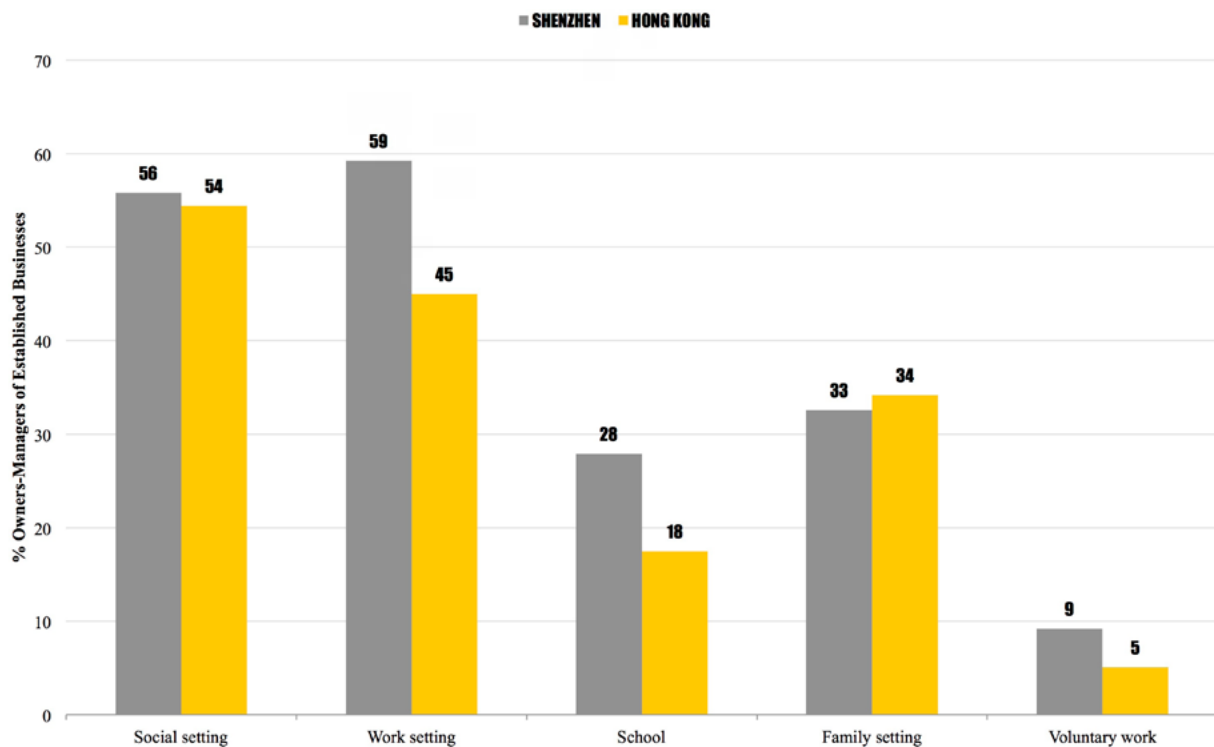
● Figure 2.18: Cross-country Comparison of Average Number of Owners in Early-stage and Established Firms in 2016

Source: GEM 2016

A. Origins of Founding Teams in Nascent Businesses ⁹



B. Origins of Founding Teams in Established Businesses



⁹ The sum of all categories per city does not equal 1 because respondents could choose more than one circumstance in which they have met the co-owners of their business.

Industry Sector Participation

Most of the World's early-stage entrepreneurial activities are consumer-oriented services. In mid-2016, as much as 54% of early-stage businesses worldwide catered to consumers by establishing restaurants, stores, home sales, rentals, or repairs. Their high prevalence rates are associated with the high turnover in this sector of the economy. Consumer-oriented services also represent the largest industry sector for early-stage firms in Hong Kong; the second highest share among the innovation-driven economies. However, it is also the only sector that recorded a decrease in their share of the Hong Kong economy. Consumer-related share of early-stage ventures dropped from 71.6% in 2009 to 61% in 2016; the share of established businesses in consumer services also dropped from 55.4% to 35.5%. In Shenzhen, the proportion of consumer-oriented services in early-stage and established businesses also decreased from 2009 to 2016.

Innovation-driven economies are characterized by the high prevalence of business-oriented services, the second most important category after consumer services (Figure 2.20). They represent industries such as finance, insurance, real estate, and other business services. In Hong Kong, business-oriented services recorded the highest growth in established businesses since 2009, by **+163.6%**. A similar pattern has been recorded for Shenzhen, with the proportion of business-oriented services recording an increase of **+375%** from 2009 to 2016. Their proportion among the early-stage companies also grew within the same period by **+26.5%** for Hong Kong and **+81%** for Shenzhen. However, in Hong Kong, they still account for a relatively small proportion of all early-stage businesses in comparison to other innovation-driven economies (18.4% vs. 26.5%). In that aspect, the structural composition of Shenzhen's industry sectors is much closer to the innovation-driven economies average than Hong Kong is.

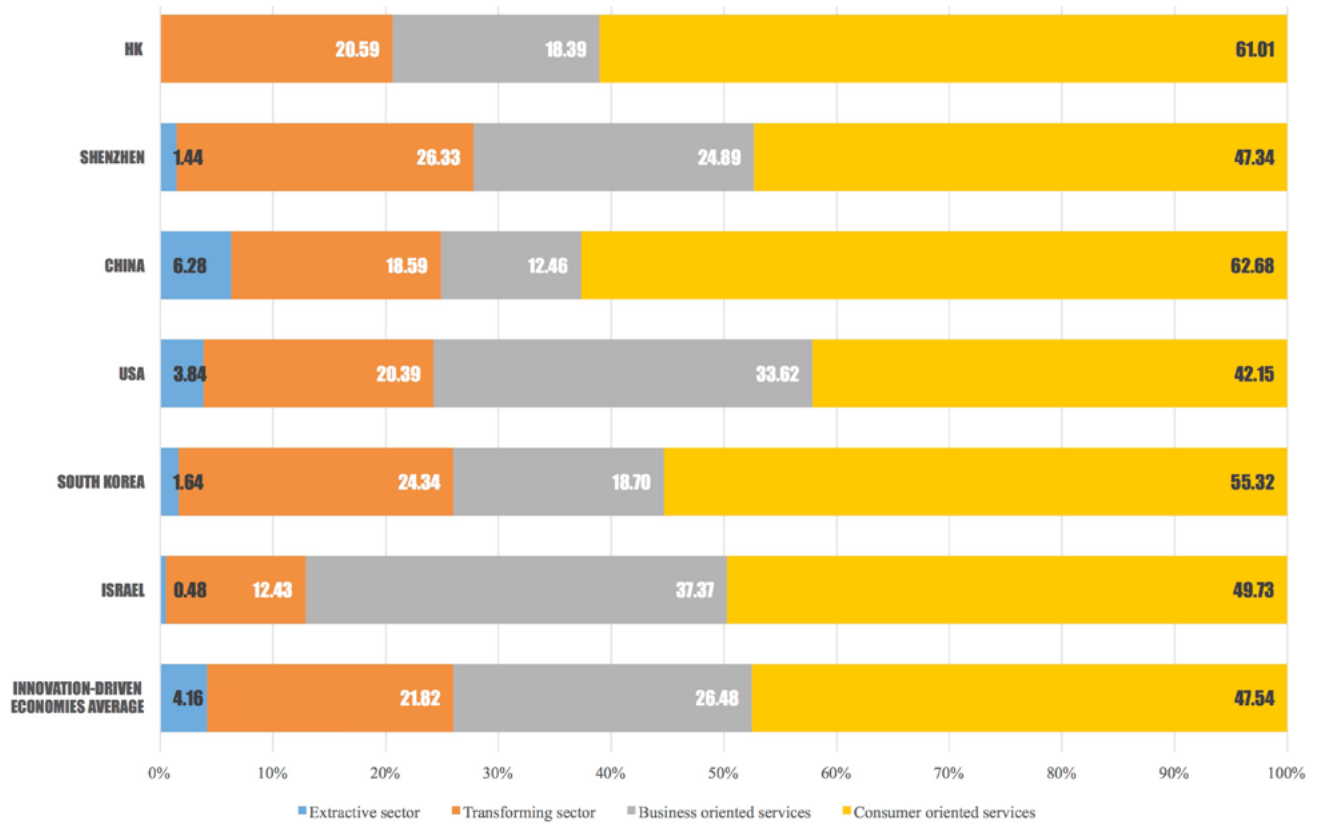
The transforming sector includes construction, manufacturing, transportation, communication, utilities, and wholesale. In mid-2016, Hong Kong recorded one of the highest proportion of transforming sector among established businesses operating from innovation-driven economies, only surpassed by Qatar, UAE, and Chinese Taipei. The sector grew by **+14.4%** comparing to survey from 2009, when it represented the total of 35.6% of established businesses. Transforming sector businesses also recorded an increase in the early-stage business

activity of Hong Kong, growing by **+49%** from 2009 to 2016. On the other hand, while transforming sector new businesses recorded a slight decrease in the share of all early-stage businesses of Shenzhen, their proportion increased for established businesses.

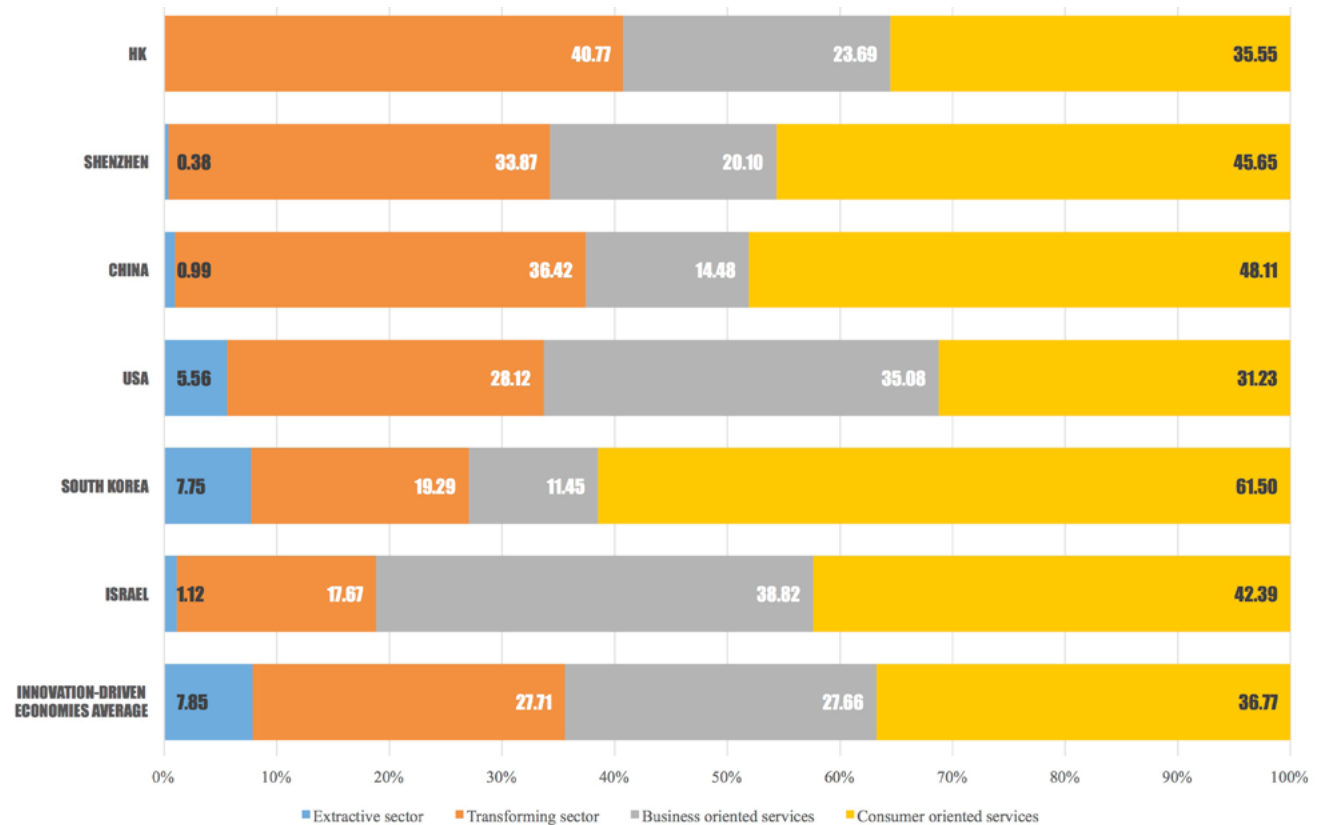
Overall, Hong Kong and Shenzhen economies are undergoing a positive transformation. Local businesses put more emphasis on business-oriented services and transforming sectors than before at the expense of consumer-related sectors. This pattern of change is aligned with the structural composition of other innovation-driven economies.

More specifically, Hong Kong early-stage businesses are developing more retail trade, hotels, and restaurants, personal/ consumer service activities, and information and communication services than its well-established businesses. We also note a large shift away from wholesale trade and professional services. In Shenzhen, we observed a similar pattern of change in ITC and retail trade, hotels, and restaurants, with a shift away from wholesale trade, manufacturing, and administrative services. Figure 2.21 illustrates.

A. Early-Stage Ventures



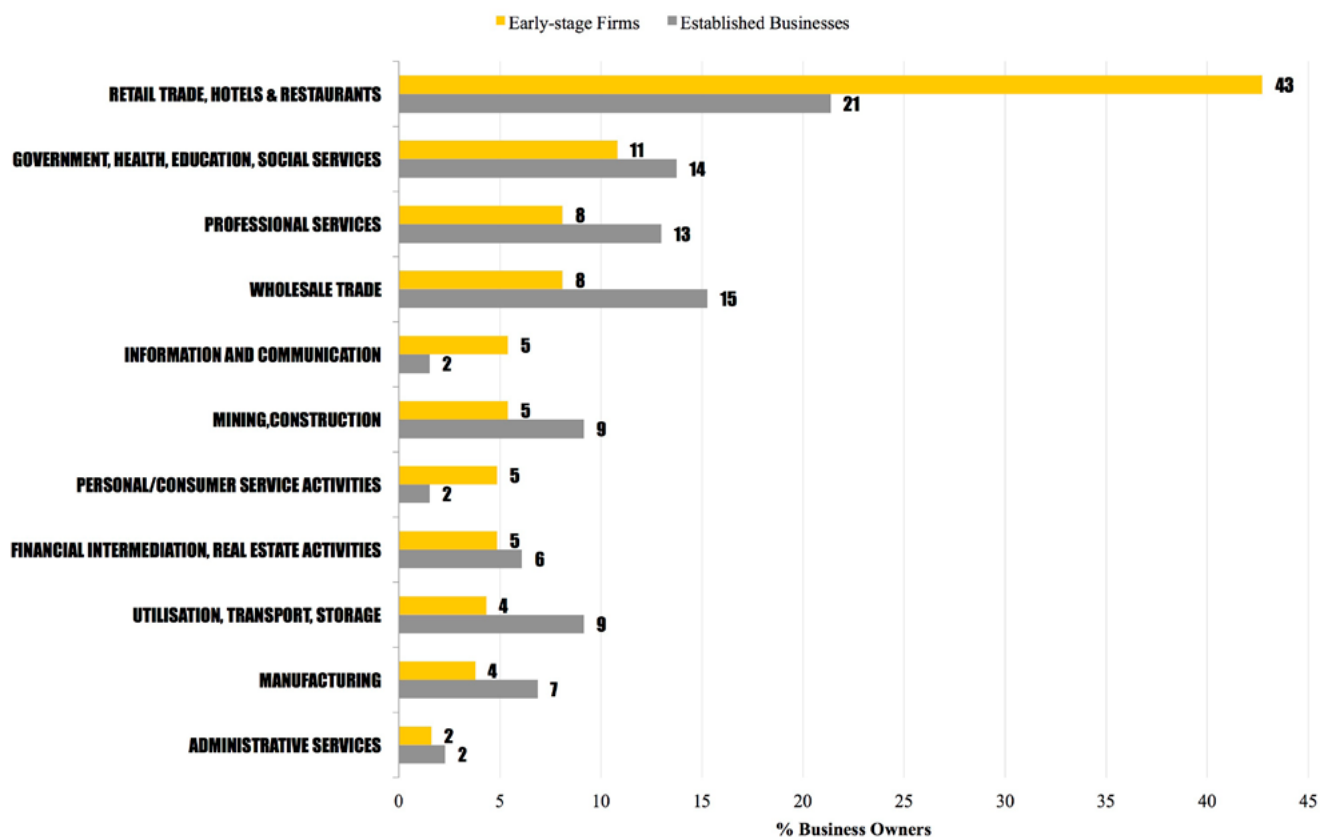
B. Established Businesses



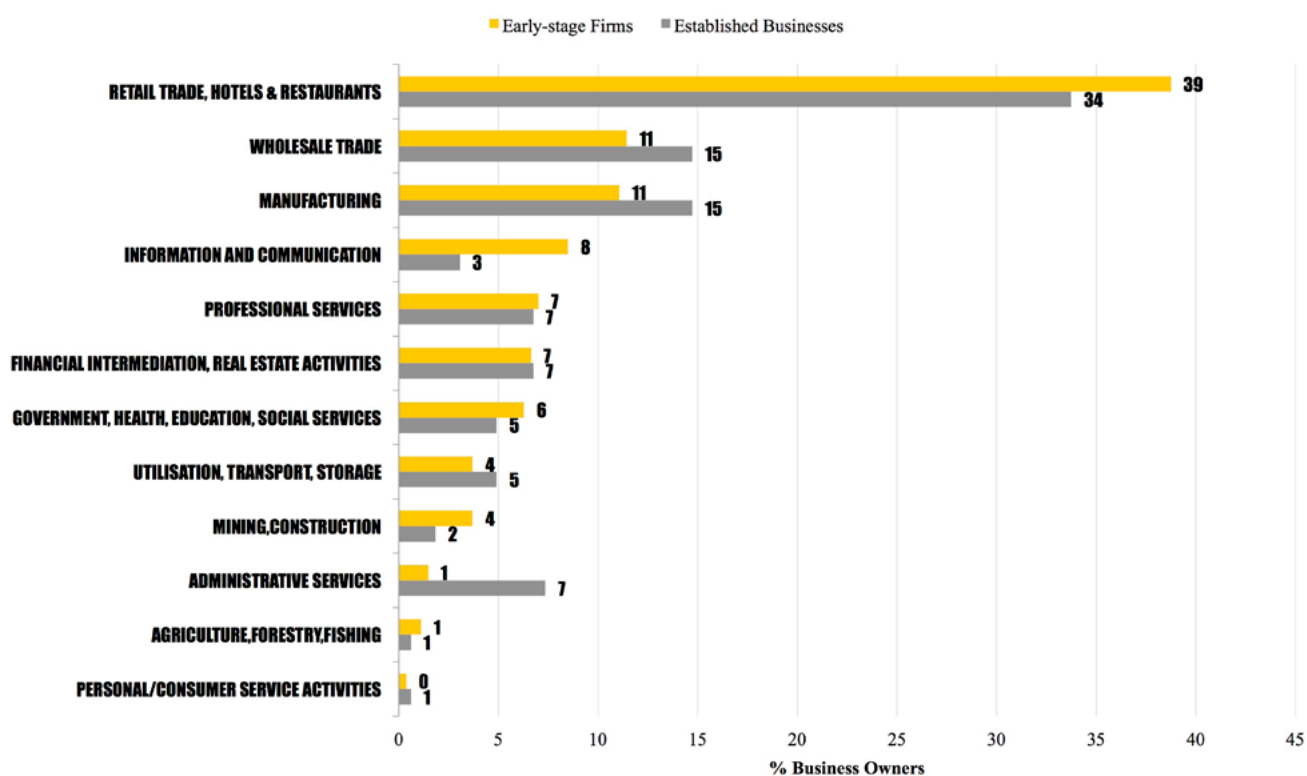
Source: GEM 2016

● Figure 2.20: Cross-country Comparison of Industry Sector Composition in Early-stage and Established Firms in 2016

A. Hong Kong



B. Shenzhen



Source: GEM 2016

Figure 2.21: Industry sector distribution of early-stage and established businesses of Hong Kong and Shenzhen

Job Creation Expectations

Job creation expectations of the founders can serve as an indicator for assessing the potential of business opportunities currently explored. When entrepreneurs believe they can create many jobs in the future, they also consider their opportunity to be of high potential for growth. While it is difficult to expect all entrepreneurs to work on high-growth business opportunities, fostering and enabling their development is essential to the economic advancement. Such entrepreneurs represent an important part of the economy that caters to the economic development of the society in general.

From the perspective of entrepreneurial prevalence rates, high growth expectation early-stage entrepreneurial activity increased in Hong Kong and Shenzhen in recent years. In fact, Shenzhen has recorded the highest prevalence rate of early-stage entrepreneurial activity among adult population expecting to employ 20+ persons in the next five years of all economies in the study and Hong Kong took a high 4th position among innovation-driven economies. In contrast, the proportion of high-growth early-stage firms of China slightly decreased. Table 2.7 illustrates.

Year	Prevalence Rate (%) of Early-stage Entrepreneurial Activity among Adult Population Expecting to Employ 20+ Persons in the Next Five Years		
	China	Hong Kong	Shenzhen
2016	2.26	1.99	6.22
2009	2.70	0.82	2.20
2007	4.00	2.30	n/a
2004	n/a	0.40	3.40

● Table 2.7: Cross-country Comparison of High Job Expectations
Entrepreneurship Rates in the Adult Population

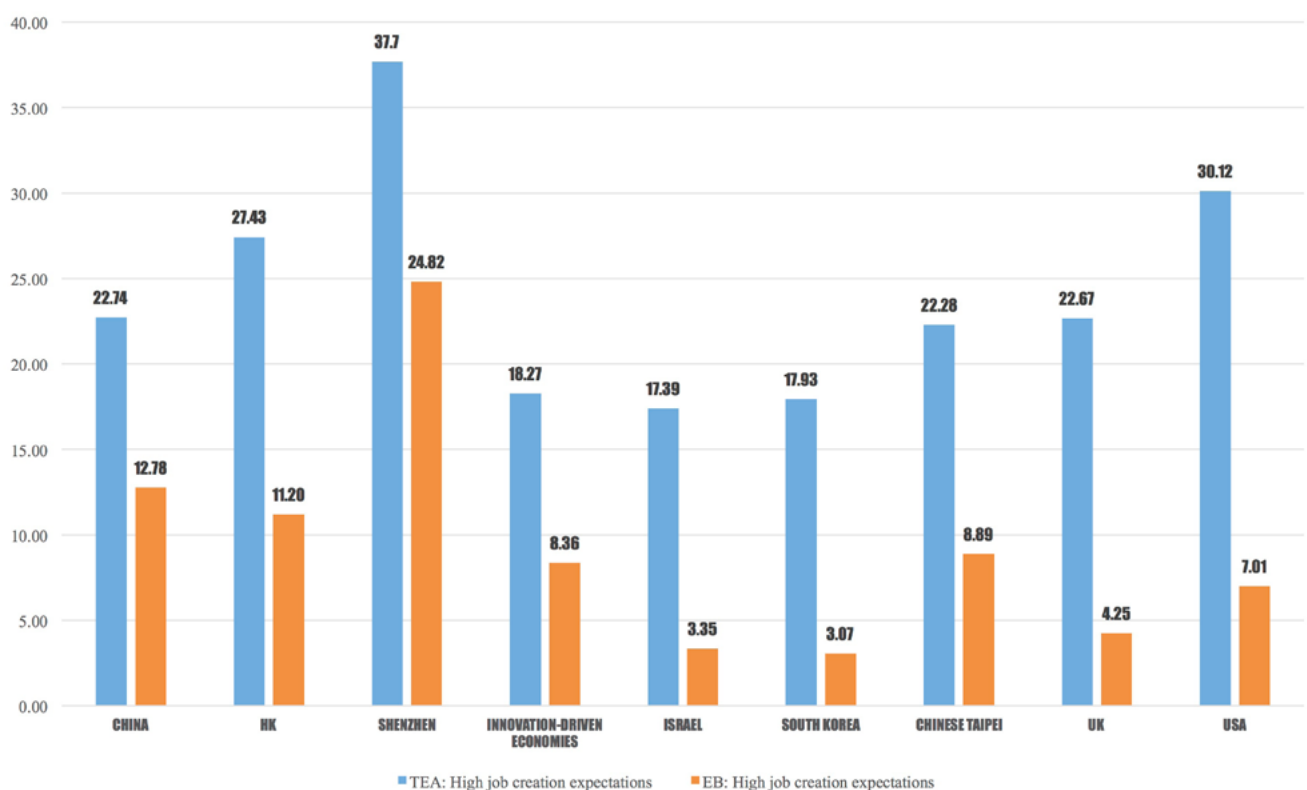
Source: GEM 2016

Taking a closer look at the types of early-stage and established businesses reveals a more nuanced pattern. As figure 2.22 shows, 27.4% of Hong Kong and 37.7% of Shenzhen early-stage entrepreneurs have expectations to create at least 10 jobs in the next 5 years. This represents an increase of **+21%** for Hong Kong comparing to early-stage businesses betting on high growth in 2009. This places Hong Kong among the innovation-driven economies with the largest proportion of businesses with high job creation expectations, together with the US, Ireland, and Qatar. In contrast, high growth expectations among Shenzhen early-stage businesses have decreased by **-26%** in the same period. Even with this decrease, Shenzhen is still the efficiency-driven economy with one of the highest proportions of high job creation expectations among all -economies in the study.

Established business owners in Hong Kong are more cautious, with 11.2% of them expecting to hire 10+ people in the next 5 years and their level of confidence about

job creation remained the same as in 2009. Nonetheless, they also seem to explore higher potential opportunities than the rest of the innovation-driven economies. Hong Kong ranks No. 3, after UAE and Qatar in this regard. In Shenzhen, we have recorded a decrease in share of established high job expectation businesses from 36% in 2009 to 25% in 2016. Similarly to early-stage businesses, Shenzhen's established ventures report the highest share of businesses with high job creation expectations among efficiency-driven economies (Figure 2.22).

Put it differently, while high job creation expectations were on the rise in both Hong Kong and Shenzhen, in Hong Kong high-expectations early-stage entrepreneurship grew faster than the overall entrepreneurial activity. In contrast, while Shenzhen recorded stronger growth in the overall entrepreneurial activity, its high job creation expectation businesses were developing at a slower pace than less ambitious businesses, hence the negative change in their share.



● Figure 2.22: Cross-Country Comparison of Percentage of Entrepreneurs Expecting to Create 10+ Jobs in the Next Five Years

Source: GEM 2016

Overall Market Impact

As in previous years, we also asked the entrepreneurs to provide us with their evaluation of the market impact their businesses are making within their local economy. In general, a business is considered as having high impact when it delivers a profound market expansion; its products or services are novel to customers; firm uses the most recent technology, and it has little or no competitors. Conversely, businesses with limited impact offer no market expansion opportunities within their own economy. They operate on highly competitive markets by providing products or services well-known to their customer and by using well-established technologies.

Year 2016 saw an increase in the overall entrepreneurial activity across all categories in Hong Kong and Shenzhen. The early-stage prevalence rates of high impact early-stage activities among the general population more than doubled comparing to the 2009 measurements (0.11% vs. 0.26% of the adult population in Hong Kong and 0% vs. 0.22% in Shenzhen). In lower-impact categories, this increase was even more prominent: **+182%** for low impact early stage entrepreneurship prevalence rate and **+175%** for moderate impact with no technological innovation in Hong Kong and **+270%** and **+154%** in Shenzhen respectively. A similar growth pattern across the categories applies to the established businesses of Hong Kong and Shenzhen.

While the general activity was on the rise, the distribution of entrepreneurial activities within low, moderate, and high impact activities painted a slightly different picture (Figure 2.23). In mid-2016, Hong Kong recorded one of the highest proportions of low impact early-stage entrepreneurial activities among the innovation-driven economies, similar to Portugal, Germany, or Netherlands. This represents a slight increase of **+9%** in low impact entrepreneurship compared to the 2009 statistics. Shenzhen also recorded an increase in low impact early stage activities in the same period, so the share of low impact businesses in both cities was comparable in 2016.

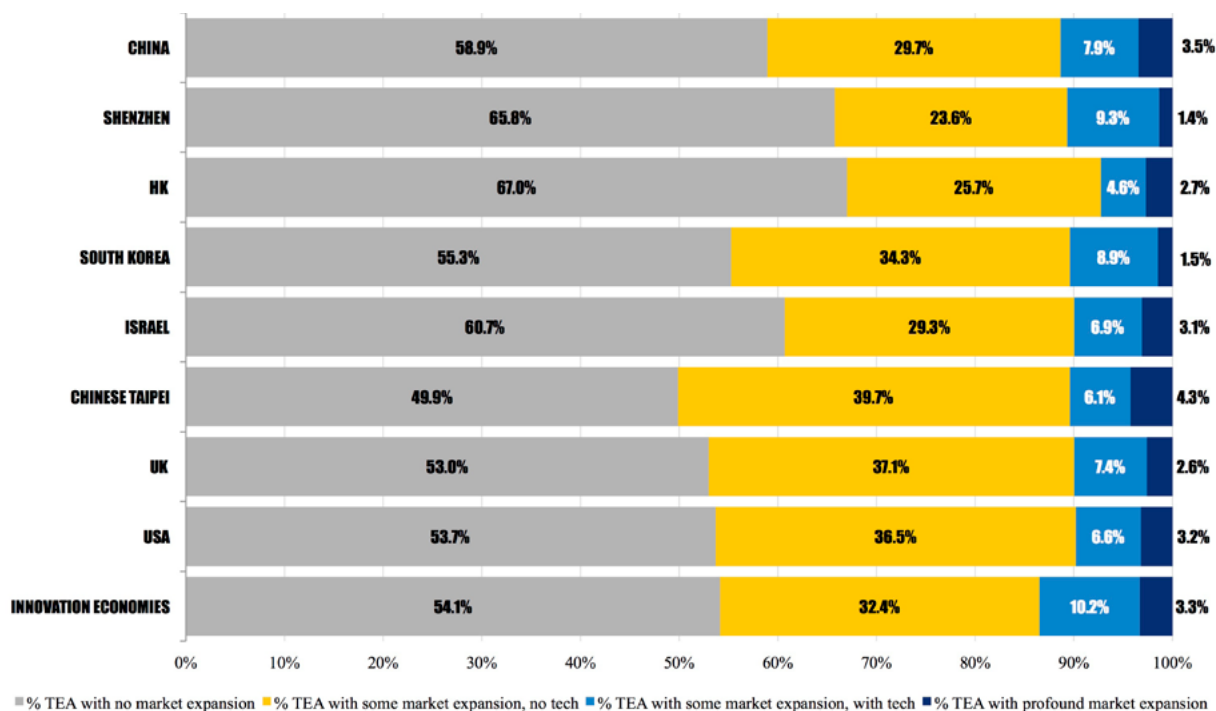
At the same time, the proportion of high impact businesses decreased among the early-stage ventures in Hong Kong as compared with 2009 (Figure 2.24). In 2009, early-stage businesses with profound market expansion accounted for 2.9% and with moderate tech-driven market expansion for 11.3%, 14.2% in total. In mid-2016, these businesses constituted 2.7% and 4.6% respectively, 7.3% in total. For established businesses, activities with low impact were on the rise, while the moderate and high impact ones remained unchanged or slightly decreased. On the other hand, in Shenzhen, higher impact activities recorded a slight increase in the overall pool of early-stage businesses, from 9% in 2009 to 11% in 2016 for profound market expansion and some market expansion with tech combined. Established businesses in Shenzhen were also gaining in market impact – low impact firms were on decline while high impact ventures were on the rise.

In summary, while both cities recorded an increase in their overall activities with low, moderate, and high impact on the economy, in Hong Kong the share of low impact ventures grew faster than the share of high impact ventures. In Shenzhen, it was the reverse – the share of high impact ventures grew faster than the share of low impact ventures.

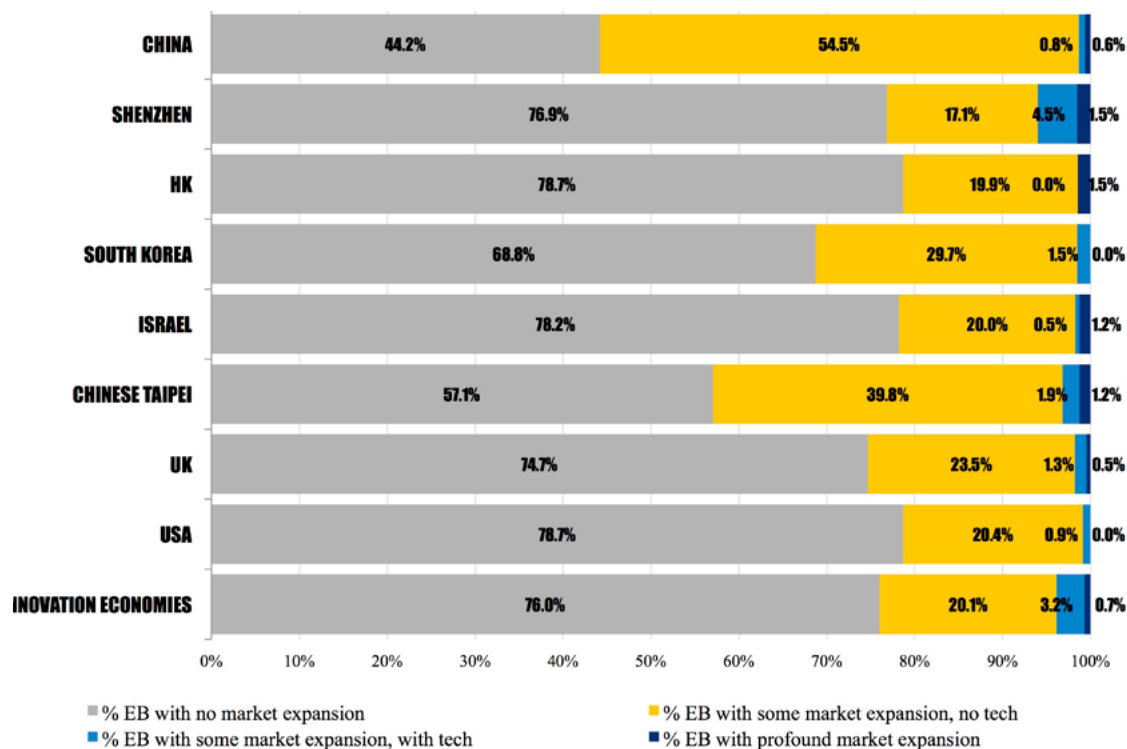
These figures need to be interpreted with caution; market impact of each economy is marked by specific market structures, their overall technological advancement, and levels of competition within local economy¹⁰. This means entrepreneurs can have divergent interpretation of what constitutes profound market expansion; one country's high impact entrepreneurship may be considered as moderate impact in a different economic setting.

¹⁰ Also, please note that the figures provided in the report are estimates of the mean and subject to sampling error. This is especially important in interpreting smaller values that are estimated based on a small proportion of the general sample.

A. Early-Stage Ventures ^{11 / 12}



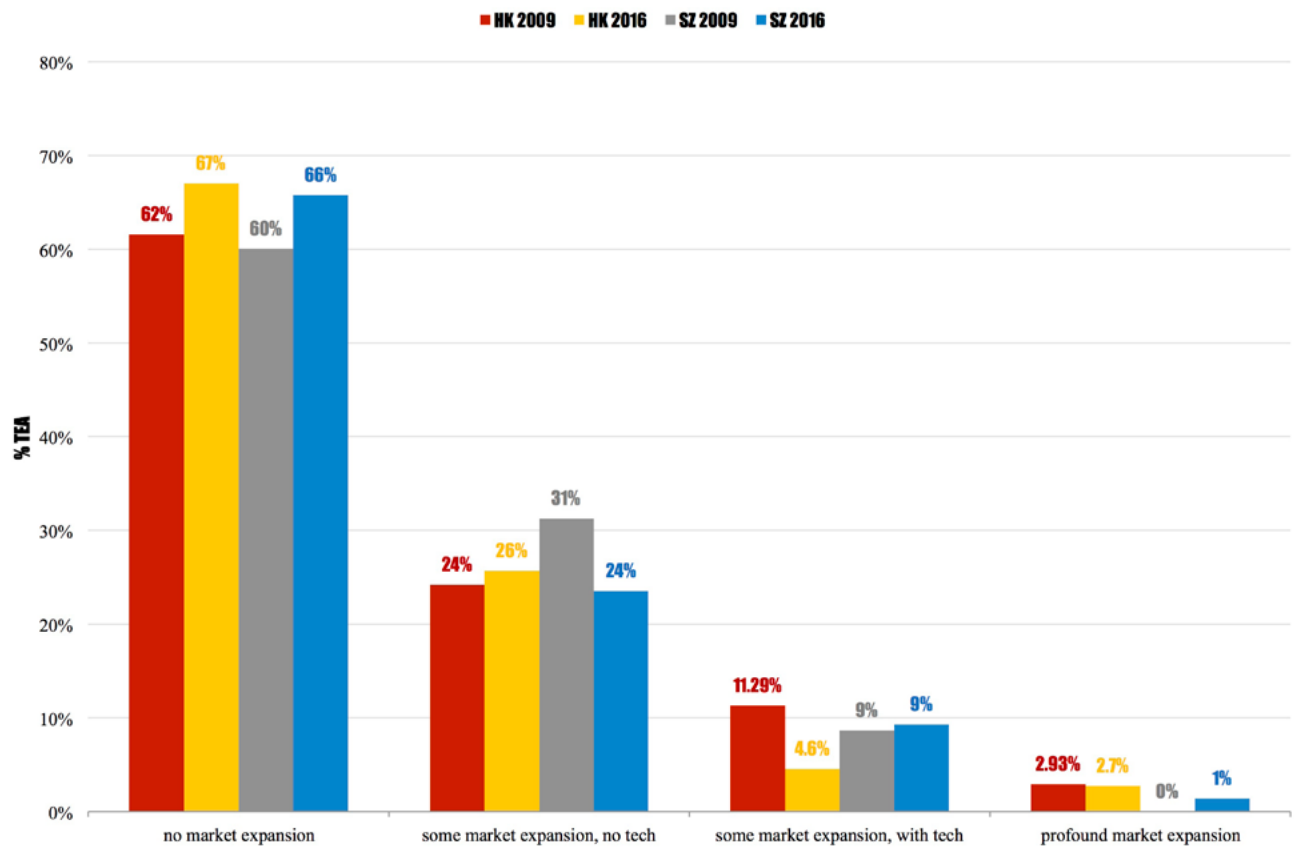
B. Established Businesses



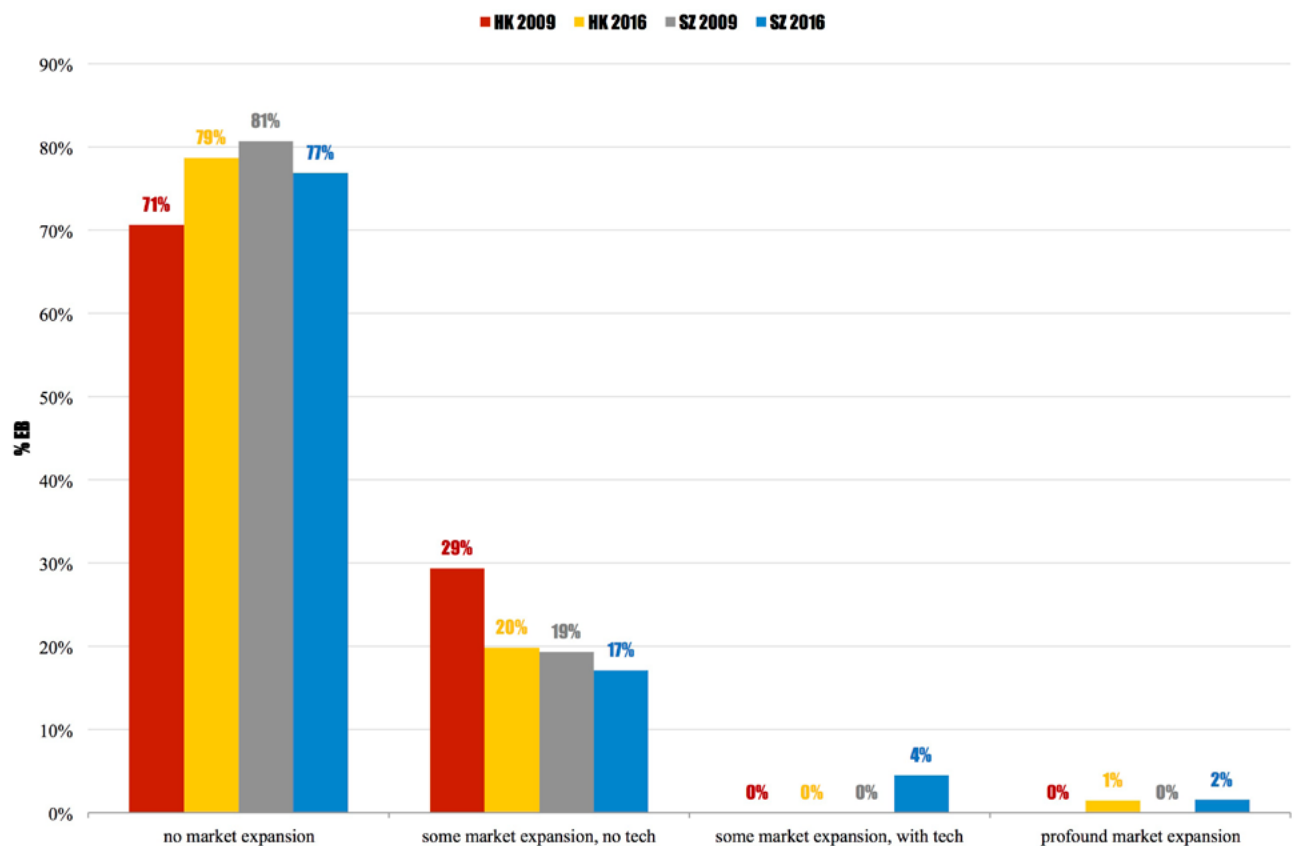
¹¹ Interpret results as % of early-stage/ established entrepreneurs from this country who believe their business provides no/some/profound market expansion within their local economy.

¹² Numbers provided are estimates and subject to sampling error. For example, we can be 95 percent confident that between 2.65 and 2.75 percent of early-stage entrepreneurs in Hong Kong are running businesses with profound market expansion. Similar confidence intervals apply to other statistics in this figure and others.

A. Early-Stage Ventures



B. Established Businesses



Source: GEM 2009-2016

Figure 2.24: Longitudinal Analysis of Market Impact of Entrepreneurial Activities in Hong Kong

Technology & Product-Market Innovation

To further investigate the causes of decrease in high impact entrepreneurship in Hong Kong and a concurrent increase in Shenzhen, we look into the components that define the market expansion. Figure 2.25 presents the analysis. Change patterns are very similar for both cities, but the magnitude of change is different, resulting in dissimilar effects in the overall market impact.

While the overall perception among the entrepreneurs about the novelty of their products to local customers significantly decreased for early-stage and established businesses in both cities, their view of the technological advancement and the competitive landscape had improved.

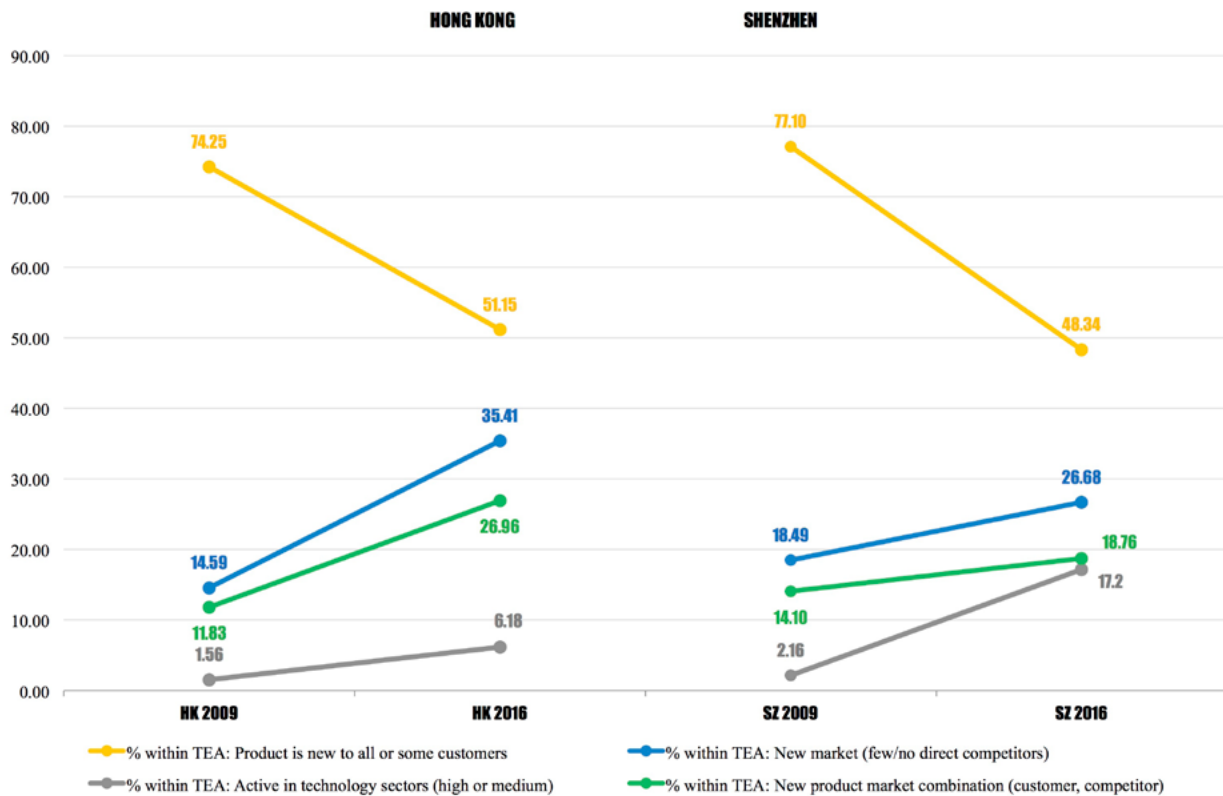
Entrepreneurs in Hong Kong and Shenzhen see the local customers as highly advanced in their knowledge of products and services available on the market, even more so than in 2009. While in 2009, 74% of early-stage entrepreneurs in Hong Kong and 77% in Shenzhen believed their products were new to local customers, nowadays, only about half of entrepreneurs in both cities believed this was the case. Naturally, these perceptions of novelty were even lower among the established business owners.

In contrast, early stage entrepreneurs also believed that the competitive landscape was less intense in 2016 than in 2009. The ratio of entrepreneurs believing that they had little or no direct competitors on the local market grew by +143% in Hong Kong and +44% in Shenzhen from 2009 to 2016. While customers were believed to be very well educated about their choices, they were also provided with limited options to satisfy their needs, so the new product-market opportunity combinations were on the rise compared with 2009 (11.8% vs. 26.9% of early-stage ventures in Hong Kong and 14.1% vs. 18.8% in Shenzhen).

However, a small although growing proportion of local entrepreneurs in Hong Kong considered their products or services as technologically advanced. In fact, the share of early-stage entrepreneurs active in technology sectors almost quadrupled in Hong Kong in comparison to 2009, but this was not enough to counterbalance the perceptions of the local customer maturity. In consequence, although the perceptions of the competitive landscape and technological advancement seem to be improving, entrepreneurs reduced their overall assessment of their market impact.

In contrast, in Shenzhen, early-stage entrepreneurs recorded the highest proportion of ventures active in technology sectors than in any other economy in the study. As much as 17.2% reported their businesses being high to moderately advanced in technology terms, seven times higher than in 2009. Similar pattern was recorded for established ventures in Shenzhen – the city became the leader of efficiency-driven economies in the share of activity in technology sectors with 15% of established business owners reporting such capacity. This was sufficient to increase the overall profound market impact of Shenzhen-based ventures reported in earlier sections of this report.

A. Early-Stage Ventures



B. Established Businesses

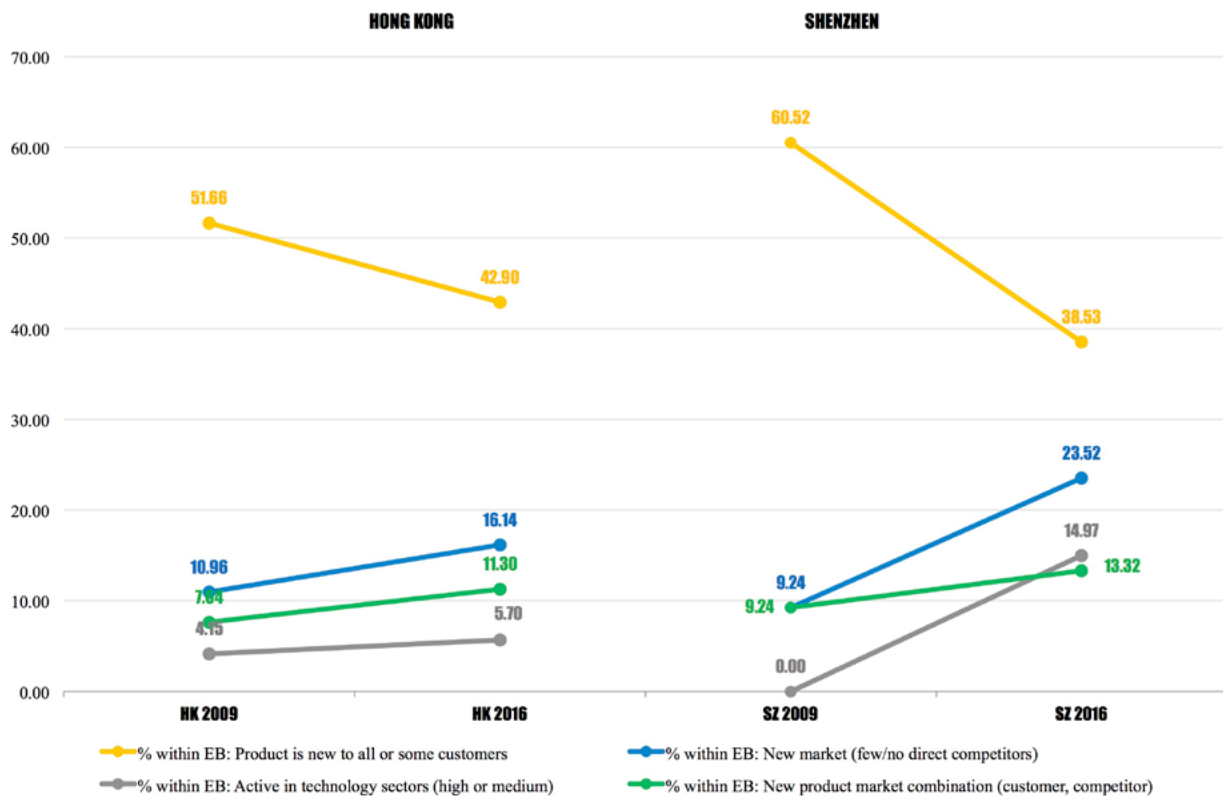


Figure 2.25: Longitudinal Analysis of Technological Advancement and Market-Product

Source: GEM 2009-2016

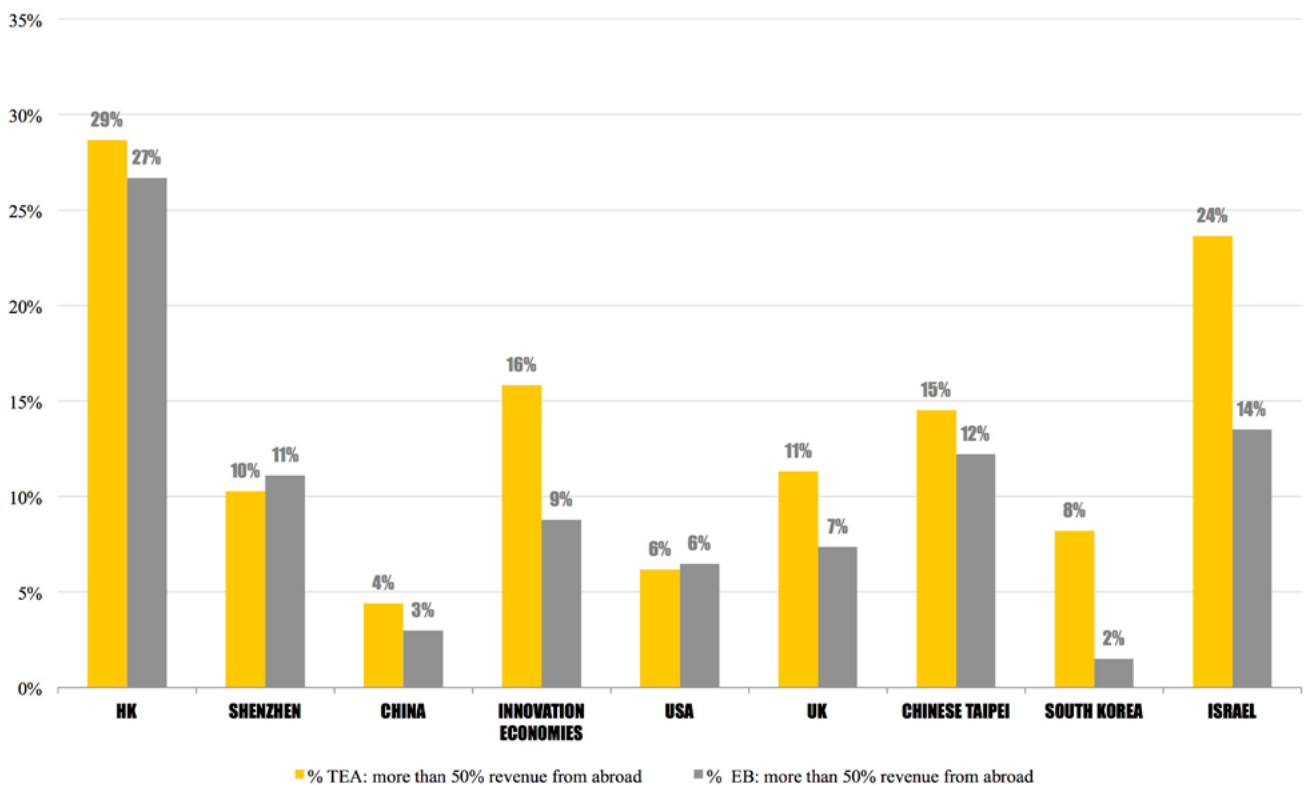
Internationalization

Hong Kong economy has always been internationally oriented. A small domestic market and brokering opportunities between Mainland China and the rest of the World forged the city into an international trading port.

Not surprisingly, Hong Kong ranked very high in the percentage of its businesses with more than 50% of revenue coming from outside of the domestic market. Comparing to the average in innovation-driven economies where this ratio was of 15.8%, Hong Kong recorded higher share of internationally-oriented early-stage businesses (almost 29% generated more than 50% of their revenue abroad) within the economy in 2016. Similar pattern has been observed for established businesses (Figure 2.26).

This proportion had further increased since 2009, especially for early-stage ventures. In 2009, 78.2% of early-stage firms were mostly domestic-market oriented, with up to 25% of their revenues generated outside of Hong Kong. In 2016, this number dropped to 61.7%. International new ventures are on their path to becoming the quintessential part of entrepreneurial activity in Hong Kong. For established businesses, the share of domestic-driven firms did not change (Figure 2.27).

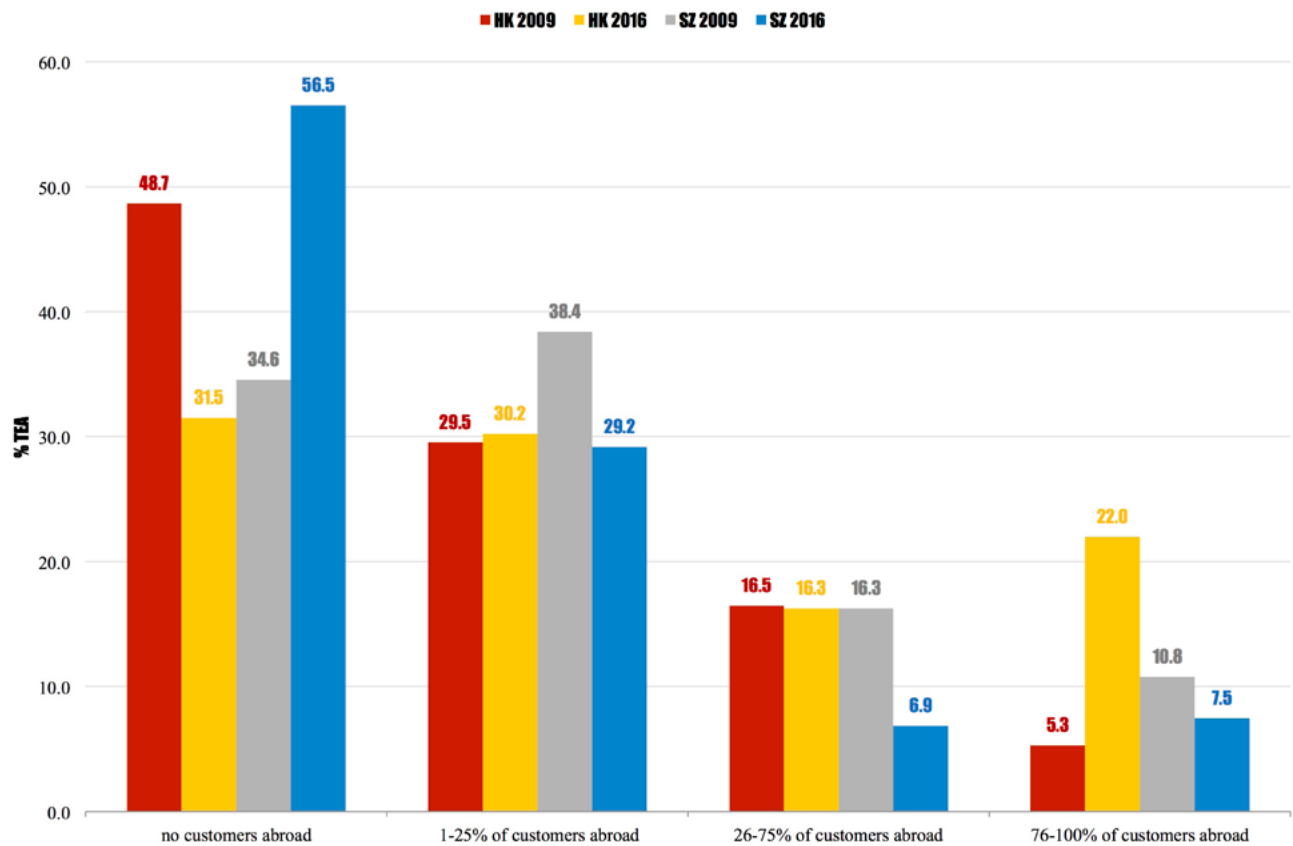
In Shenzhen, the share of early-stage and established firms with strong international orientation is lower than in Hong Kong and it has decreased since 2009 by -35%. With the development of the Chinese economy, Shenzhen businesses gained better access to local customers and were able to concentrate more on their local market, which happens to be the largest in the world (Figure 2.27).



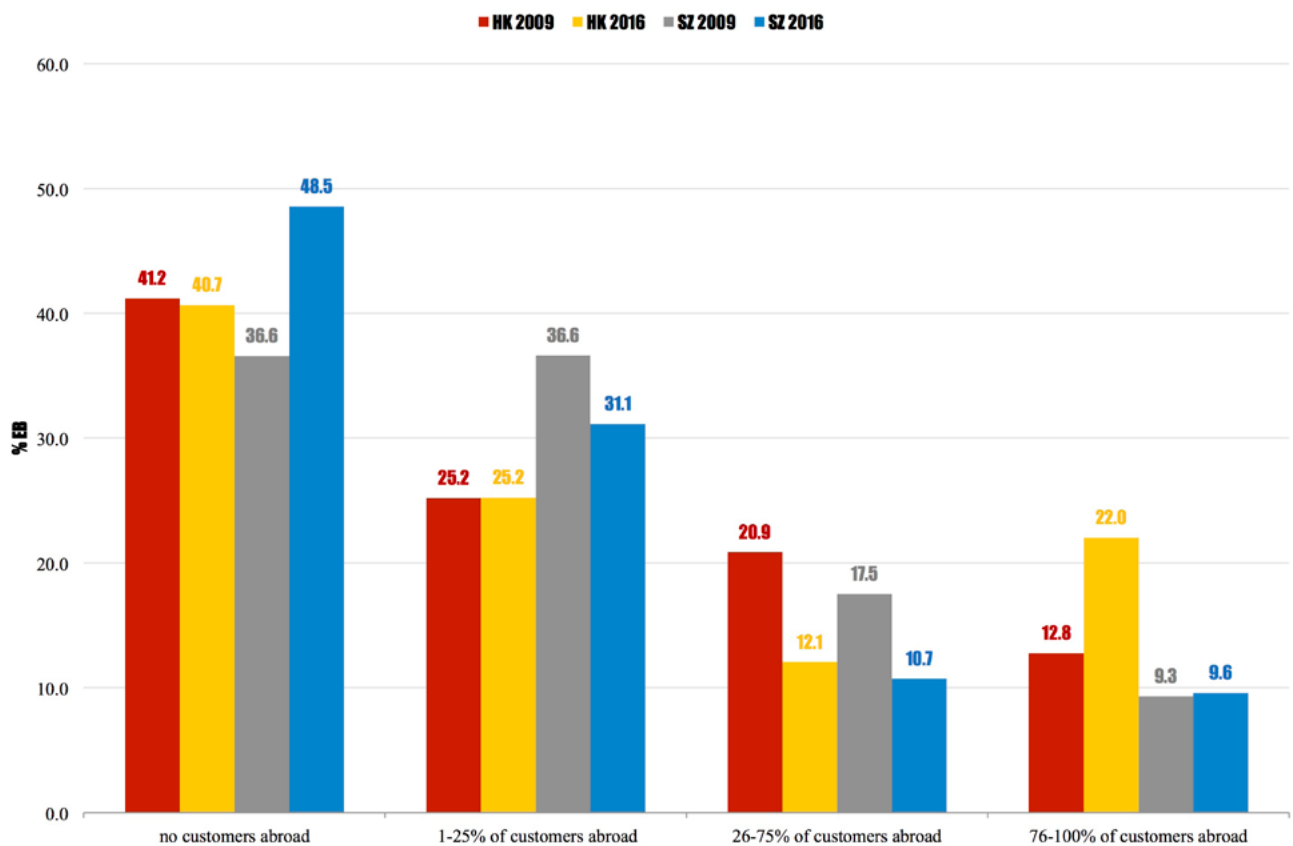
Source: GEM 2016

Figure 2.26: Cross-Country Comparison of Internationalization of Entrepreneurial Activities

A. Early-Stage Ventures



B. Established Businesses



Source: GEM 2009-2016

Figure 2.27: Longitudinal Analysis of Internationalization of Entrepreneurial Activities in Hong Kong and Shenzhen

Support for Nascent Entrepreneurship

In this section we focus on the nascent businesses and their access to financial and non-financial resources available for setting up businesses in mid-2016.

Non-financial support from public and private stakeholders

Extended start-up support within the Hong Kong ecosystem is a relatively new phenomenon. The number of support agencies and organizations from public and private sectors grew exponentially in the past five years. New initiatives are launched every month; networking events, festivals, conferences, co-working spaces, incubation and acceleration programs are being developed in support of start-up activities. A similar change was recorded in Shenzhen. The sheer speed of development and the diversity of support available make it more challenging for the entrepreneurs looking for support to navigate. It will take some time for the entrepreneurs to learn about the support at their disposal and how to use it to their advantage.

We saw this learning process in the nascent entrepreneurs' perceptions of public and private support. In general, 34% of interviewed start-up owners starting their businesses nowadays either search for or benefit from the support of the public bodies and only 25% search for or benefit from the support of private agencies and organizations that provide support for entrepreneurs to launch, organize, and develop new businesses¹³. These organizations include incubation and acceleration programs, advisory services, research and development support funds, co-working spaces, and start-up academies that make up the start-up support ecosystem.

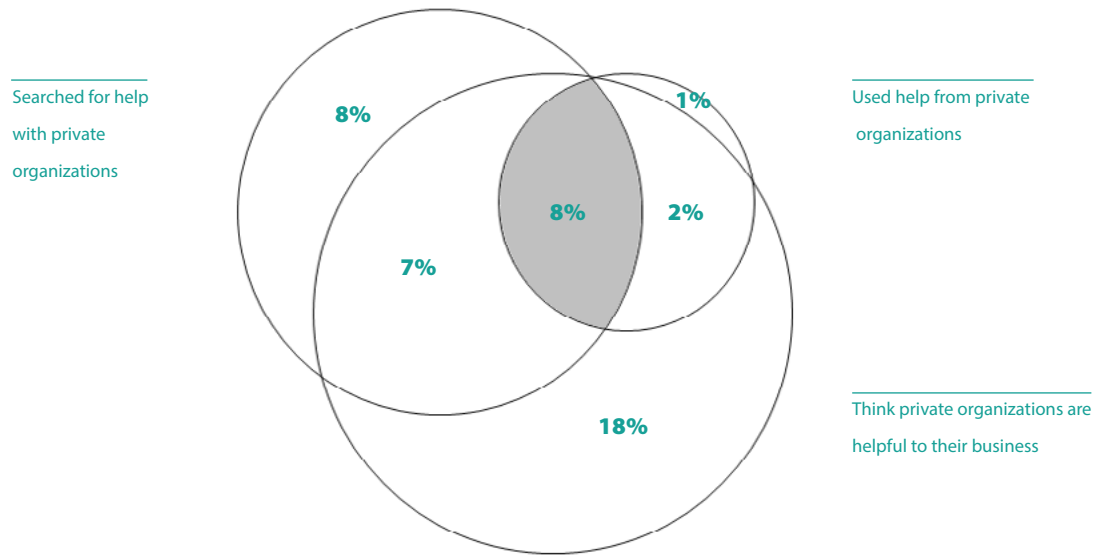
Furthermore, 35% of entrepreneurs consider private support available within the Hong Kong ecosystem as helpful to their business. For public support, it is 26% of entrepreneurs who share positive views of its usefulness.

Also, 21% declared that although they searched for support from public bodies, they did not use their services in the end and they did not find them useful. Those who were satisfied with the level of public support they sought and received constituted 5% of all nascent entrepreneurs. For private support organizations, only 8% of entrepreneurs ended up not using their services because they saw little value in it and another 8% of entrepreneurs declared that they have searched, used, and were happy with the private support offered to their businesses (see Figure 2.28 for details).

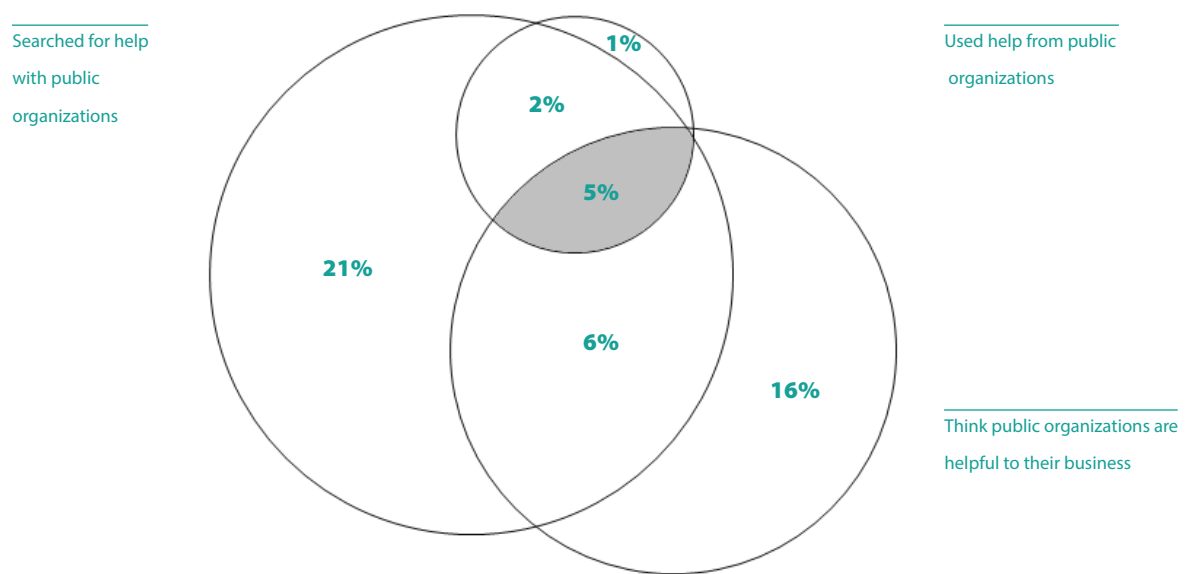
Overall, private organizations of Hong Kong are evaluated higher than the public ones. One reason might be that there are fewer public support organizations available to the entrepreneurs and their undertakings are more constrained because of public financing of their activities. As a result, in comparison to the booming private sector, they may appear less competitive with their stringent criteria to the entrepreneurs seeking for support but also bearing higher entry barriers because of higher demand for their services. Nevertheless, the share of entrepreneurs actually looking for the public support is still higher than of those seeking private backing.

¹³ We have interviewed 190 nascent entrepreneurs for this purpose.

A. Private Support in Hong Kong (% of total nascent entrepreneurs)¹⁴



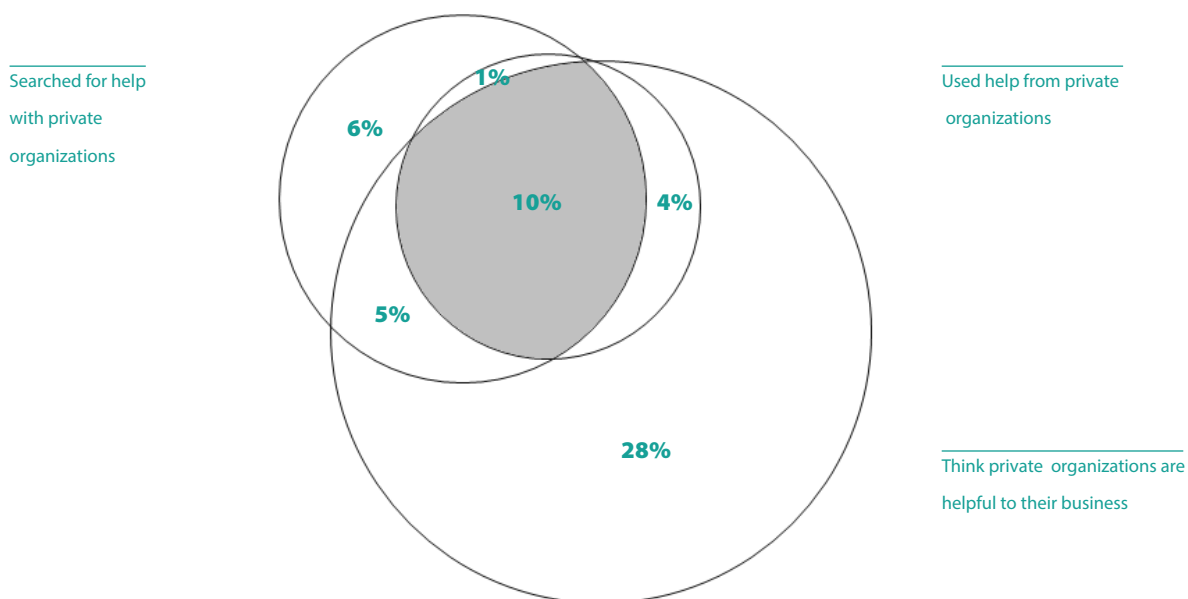
B. Public Support in Hong Kong (% of total nascent entrepreneurs)¹⁵



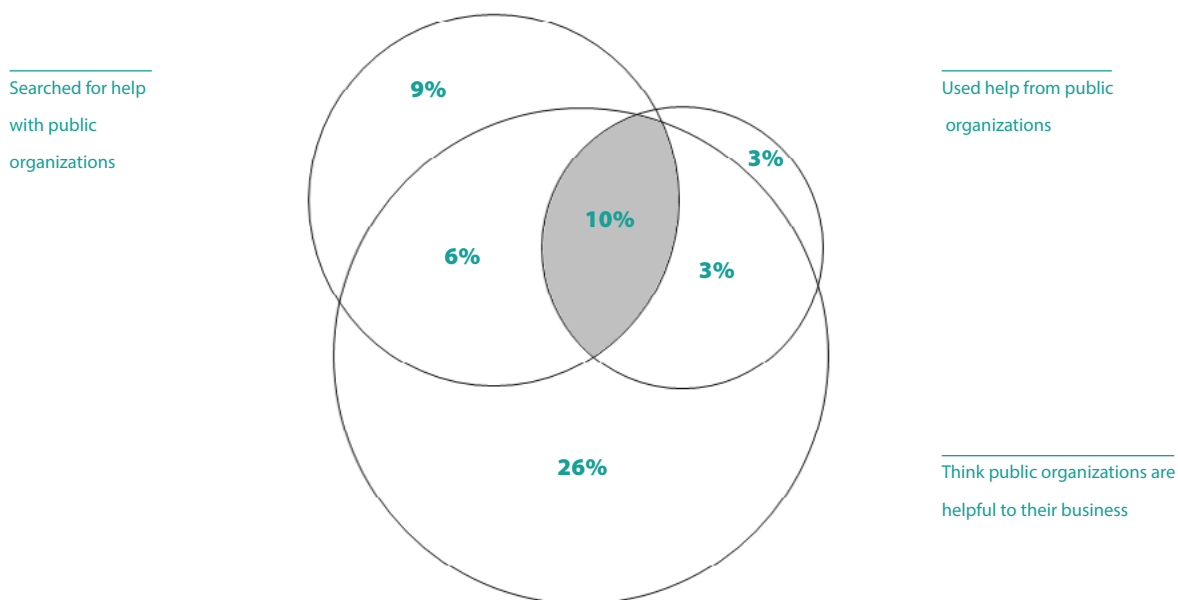
¹⁴ Of all 190 entrepreneurs surveyed in Hong Kong, 44% declared that they searched, used, or appreciated private support organizations. The figure below provides the breakdown of the 44 percent.

¹⁵ Of all 190 entrepreneurs surveyed in Hong Kong, 50% declared that they searched, used, or appreciated public support organizations. The figure below provides the breakdown of the 50 percent.

C. Private Support in Shenzhen (% of total nascent entrepreneurs)¹⁶



D. Public Support in Shenzhen (% of total nascent entrepreneurs)¹⁷



¹⁶ Of all 262 entrepreneurs surveyed in Hong Kong, 53% declared that they searched, used, or appreciated private support organizations. The figure below provides the breakdown of the 53 percent.

¹⁷ Of all 262 entrepreneurs surveyed in Hong Kong, 56% declared that they searched, used, or appreciated public support organizations. The figure below provides the breakdown of the 56 percent.

¹⁸ Size of the bubbles is proportional to the number of entrepreneurs who agreed with the respective statements of searching for support, receiving support, and the overall usefulness of the support to their business.

¹⁹ Percentages in the figure should be interpreted as the proportion of all entrepreneurs surveyed.

Entrepreneurs in Shenzhen paint a slightly different picture of the non-financial support they receive from public and private organizations²⁰.

Similarly to Hong Kong, many of them are still learning how to navigate for the support available within the ecosystem. Overall, 30% of interviewed nascent business owners search for or benefit from the support of the public bodies and 25% search for or benefit from the support of private agencies and organizations. These numbers are comparable to Hong Kong and slightly lower for public organizations.

However, they have already developed a stronger sense of appreciation for the ongoing initiatives than their Hong Kong counterparts. Specifically, 47% of entrepreneurs in Shenzhen find the private support helpful to their businesses and 45% share this view on public support organizations.

Also, only 9% of nascent business owners did not follow up on their search for public support and they deemed it not helpful and another 10% were satisfied with the results of their search and support received. In Hong Kong, unsatisfied entrepreneurs from the former group were much more prevalent than in Shenzhen. However, in Shenzhen the satisfied, latter group was twice the size of the one in Hong Kong.

In terms of support from private organizations, Hong Kong and Shenzhen entrepreneurs shared similar views; 6% looked for support but did not use it and found it of little value and 10% received the exact support their required after searching for it.

Similarly to Hong Kong, in Shenzhen the private support to nascent entrepreneurs was still valued higher than the public one, although there were much fewer entrepreneurs not following up on their search for public support than in Hong Kong.

²⁰ We have interviewed 262 nascent entrepreneurs in Shenzhen.

Financial Support

Fifty percent of Hong Kong's nascent entrepreneurs start their business with initial capital of HK\$ 300,000 or below. Seventy percent are able to begin their operations with financial capital below HK\$ 1 million. Capital-intensive start-ups, requiring HK\$ 5 million or more, account for 11% of nascent firms (Figure 2.29A).

Conversely, nascent businesses in Shenzhen are much more capital-intensive. The median investment requirement is of RMB 1 million (HK\$ 1.13 million). Businesses requiring more than HK\$ 5 million to start in Shenzhen constitute 27% of all nascent businesses, which is more than double comparing to Hong Kong.

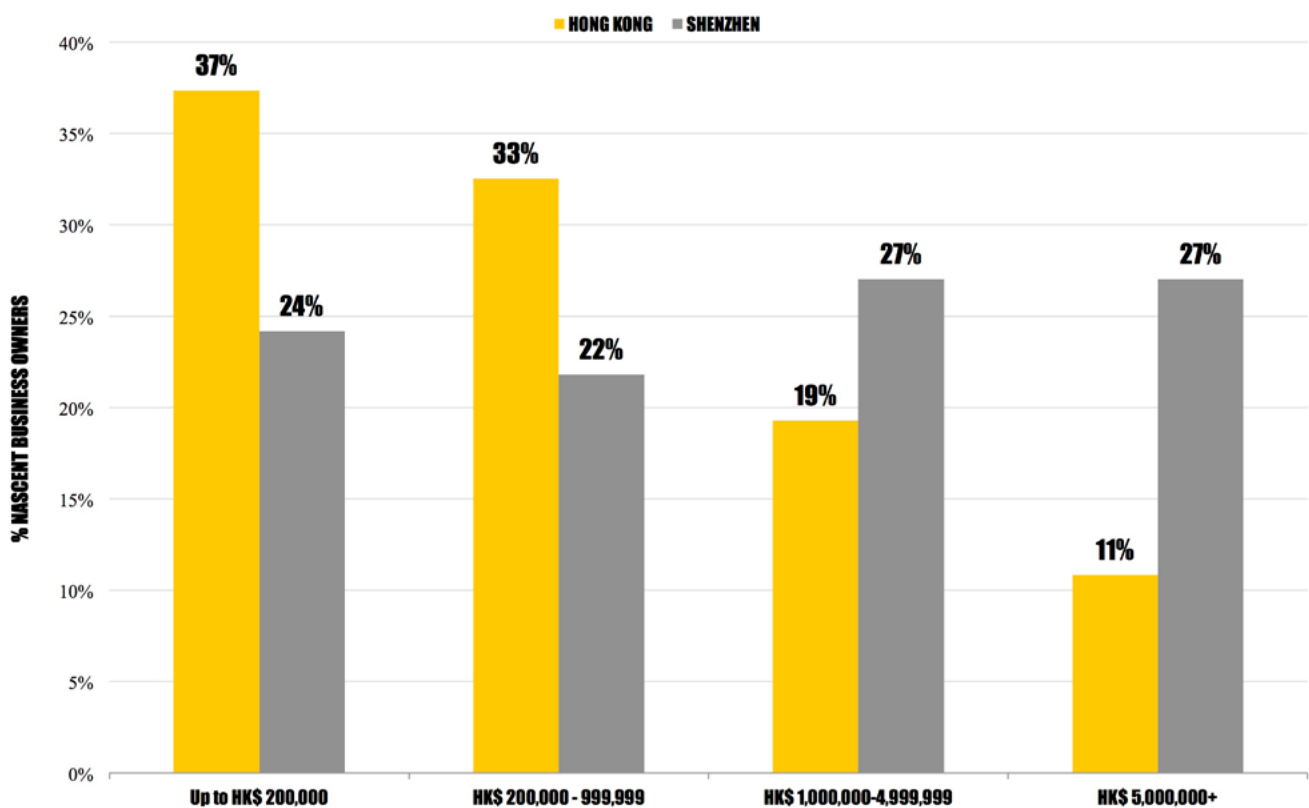
Most of the funding for Hong Kong entrepreneurs comes from their own savings. In fact, 92% of interviewed nascent business owners in Hong Kong declared that their principal source of financial support was their own savings. Reinvesting the firm's profit was the second most common way of securing investment. Friends and family came next (Figure 2.29B).

In Shenzhen, on the other hand, while own savings are equally important and used by 92% of founders, re-investing profit, relatives, and friends are much more prominent in providing the source of financing to start-ups. For example, as much as 48% of nascent businesses in Shenzhen received funding from their family members, which is more than double comparing to Hong Kong numbers. Also, banks play an important role in fueling start-up development in Shenzhen, with 34% of entrepreneurs declaring they used them as source of funding. This is not the case in Hong Kong.

Crowdfunding is gaining in popularity in both cities, with 18% of Hong Kong's and 13% of Shenzhen's nascent entrepreneurs declaring to secure funding from this source. Business angels and venture capitalists provided funding to 7% and 2% of Hong Kong entrepreneurs respectively, which is consistent with findings from other studies. While business angel funding was provided to a similar share of entrepreneurs in Shenzhen (10%), the venture capital industry was much more prevalent across the border, with 8% of founders reporting receiving funds from venture capitalists, four times the share in Hong Kong.

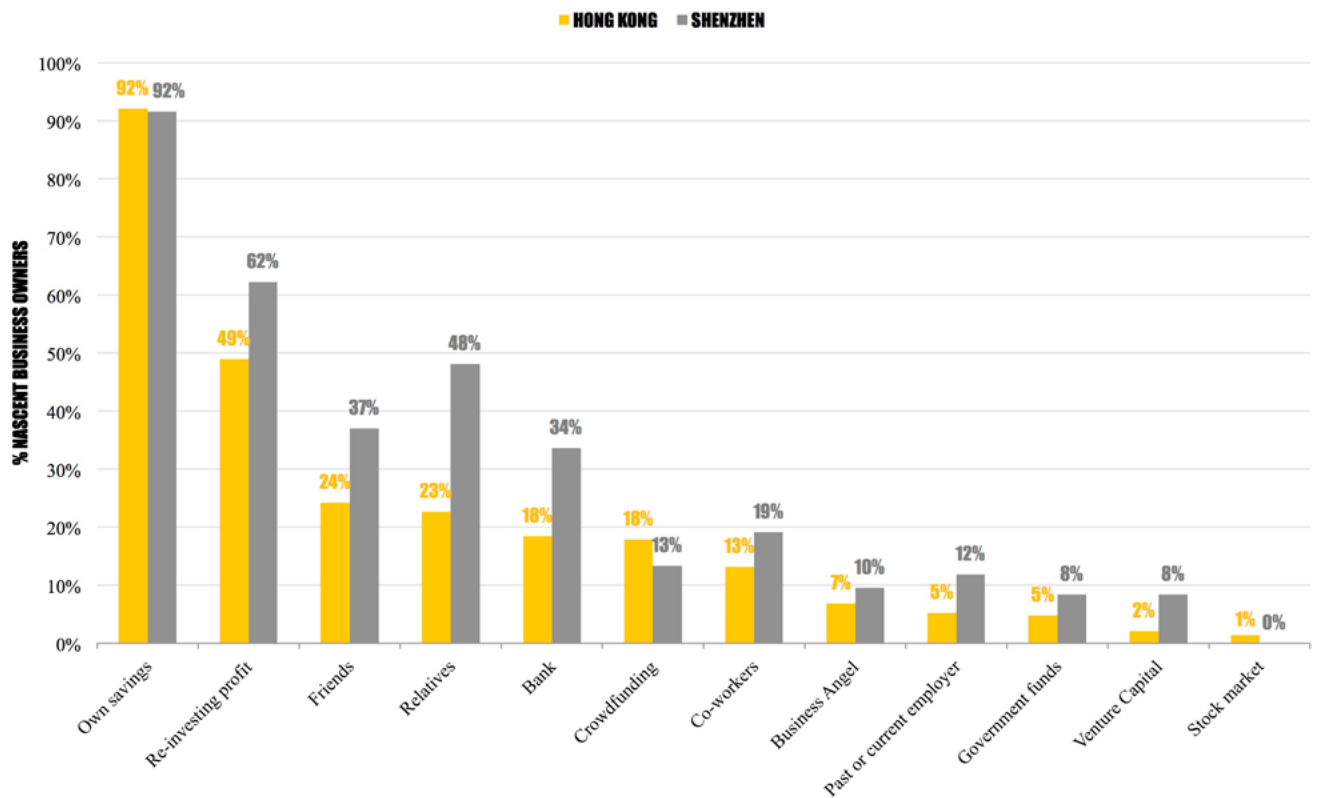
Perhaps more interestingly, statistical analysis of Hong Kong funding patterns revealed that those who used their own savings did not tap government funding and vice versa. One interpretation may be that nascent entrepreneurs, who are unable to invest their own money, tap government support in starting businesses. These individuals complement their funding sources from the government with financial support from their immediate work environment (co-workers and employers) and bank loans.

A. Investment Requirements from Nascent Businesses ²¹



²¹ We have converted RMB to HKD for Shenzhen to facilitate the comparison.

B. Sources of Funding for Nascent Businesses ²²



²² Percentages do not sum up to one as entrepreneurs can have more than one source of funding for their business.

Source: GEM 2016

● Figure 2.29: Founding Requirements and Sources for Nascent Businesses in HK and SZ

Informal Investors

We have also sampled the general adult population concerning their informal investments in start-ups to complete the picture of the sources of financing for start-up businesses. Specifically, we asked whether they have provided funds to new businesses in the past three years, what was the average value of the investment, how many individual investments they made within this period, and what was their relationship with the investee. Given that the question extends to three years, the results encompass an investment period from mid-2013 to mid-2016.

The proportion of informal investors among the adult populations of Hong Kong and Shenzhen grew significantly comparing to 2009 (Figure 2.30). In mid-2016, the share of adults making informal investments in new businesses increased to 6.5% in Hong Kong (+151% increase) and to a staggering 20.5% in Shenzhen (+442% increase).

At the same time, the average amount of the investment in Hong Kong increased as well, to US\$ 70,565 in Hong Kong (+43% increase) and slightly declined in Shenzhen from US\$ 80,556 to US\$ 76,112 in 2016 (-6% decrease). This decrease is expected for Shenzhen considering that over 1/5th of the adult population declares investing in start-ups. Smaller investors are getting on board, providing more modest sums to feed all kinds of entrepreneurial activities in the city. For Hong Kong, the proportion of informal investors in the population is on the rise but smaller than in Shenzhen, so there is still room for growth in the investment amounts. Also, Hong Kong's GDP per capita is higher than in Shenzhen, giving much more disposable income available in the general population for investment.

Even with opposite changes in the investment amount, these numbers place both cities among the economies with the highest informal investment levels compared with other 60+ economies in the study. The average investment size in innovation-driven economies was of US\$ 30,549, which is less than a half of what Hong Kong informal investors contribute in a single investment (Figure 2.31). In the efficiency-driven economies, this amount was even smaller, averaging at US\$ 7,335 per informal investor.

A further breakdown of the informal investment distribution has shown that half of the investments

made by informal investors in Hong Kong and Shenzhen provided up to HK\$ 200,000. The differences between the two cities became clearer at larger investment thresholds, with 17% of Hong Kong investing more than HK\$ 1 million and 28% of Shenzhen investors focusing on the same, capital-intensive investment range ²³.

Also, Shenzhen investors were more likely to engage in several deals within the three year period under investigation than their Hong Kong counterparts. While in Hong Kong 9% of investors declared making more than two deals, in Shenzhen individuals reporting completing more than two deals represented 20% of informal investors.

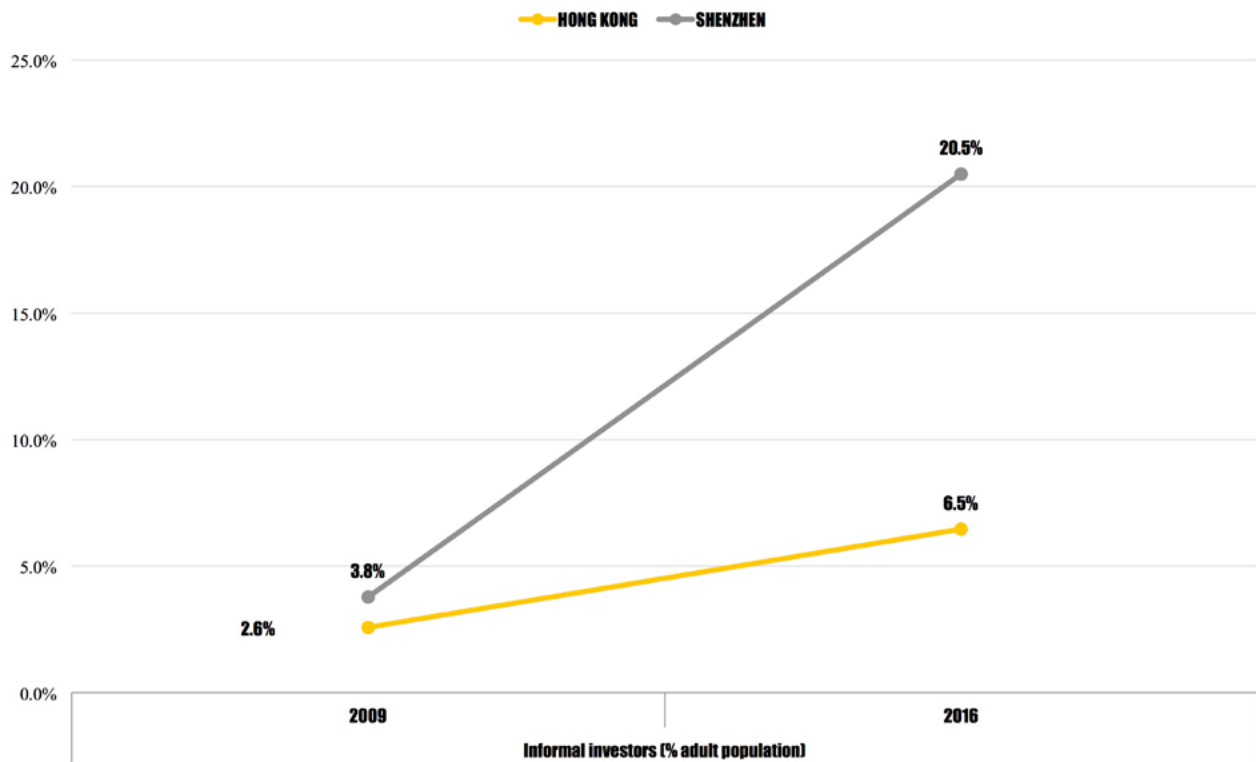
In terms of the choice for investment recipients, Hong Kong and Shenzhen informal investors start to resemble each other to a much greater extent than before. Friends and neighbors are the main recipients of informal investment in both cities, followed by the family members (Figure 2.32). For Hong Kong, this pattern remains unchanged comparing to previous years. For Shenzhen, the definite shift of investment priority from relatives to friends and neighbors constitutes a transformation of the culture of investing.

We also recorded a significant increase in the share of investments made in "strangers with good ideas". Hong Kong saw a +69% increase in this category, but it is the first time that we record this type of investment in Shenzhen. In all previous studies, Shenzhen investors were not trusting strangers with their money. In 2016, an unprecedented 10% of them reported financing new ventures of strangers.

Combined, these two changes provide strong evidence for a growing and stabilizing business angel investor culture in both cities, a development long-awaited and highly anticipated. The similarity of profiles may also suggest then the evolving breed of new angel investors could successfully work on cross-border deals and cooperation, strengthening the ties between the two ecosystems.

²³ Informal investment values from Shenzhen have been converted to HKD to facilitate the comparison.

A. Investment Prevalence Rates (% of adult population)



B. Investment amounts in 2009 and 2016 (in US\$)

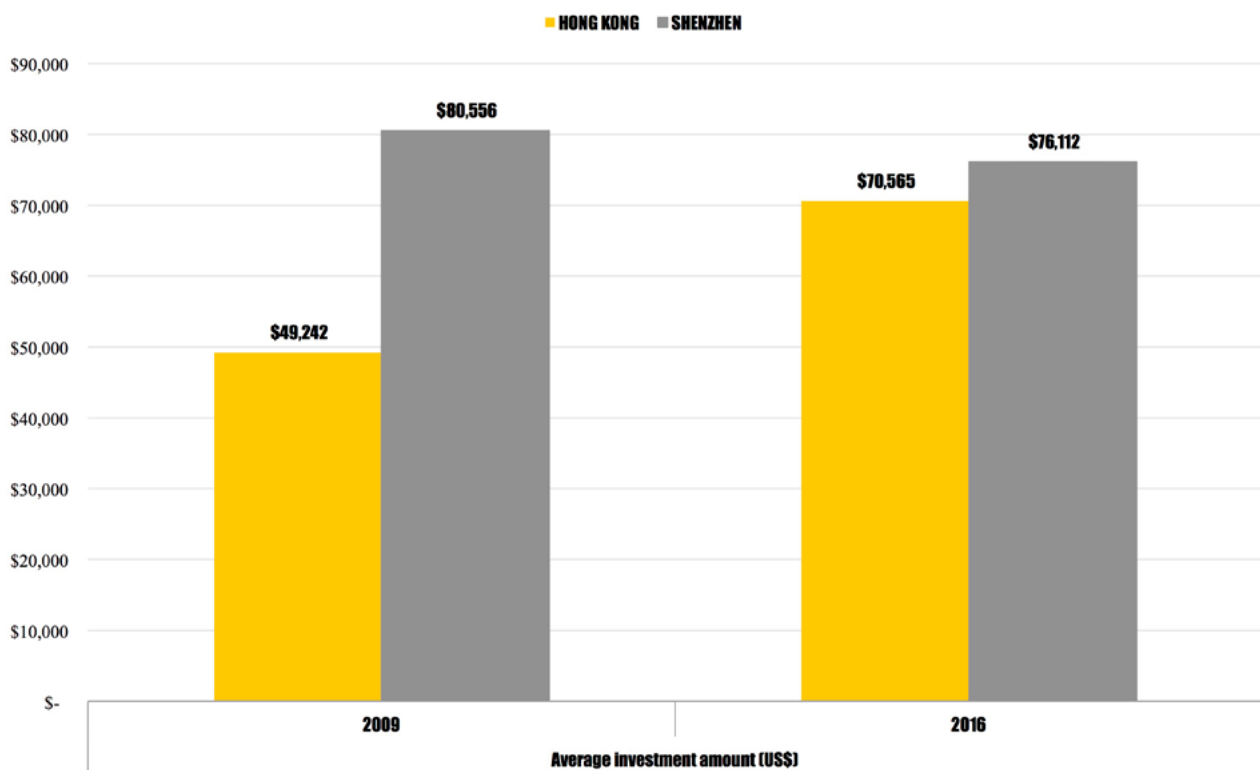
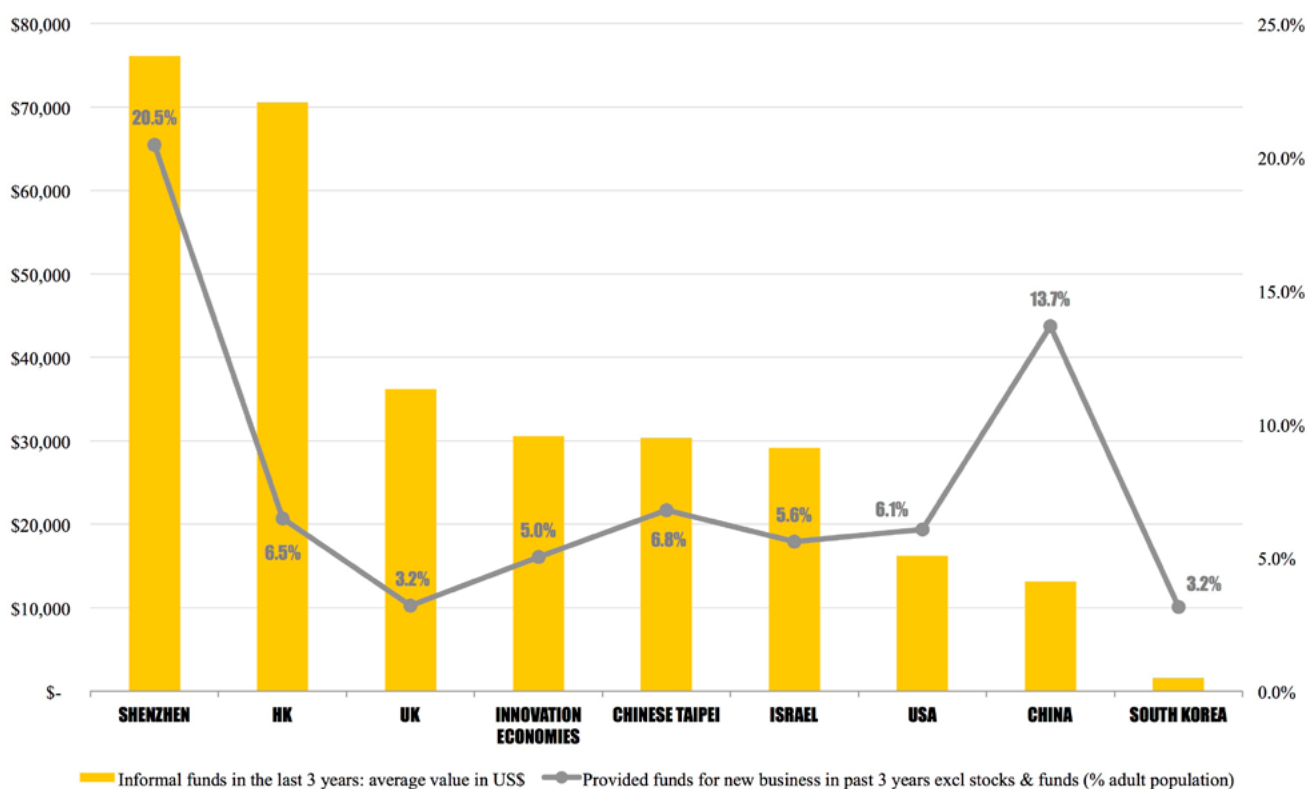


Figure 2.30: Longitudinal Comparison of Informal Investment Prevalence Rates and Amounts in Hong Kong and Shenzhen

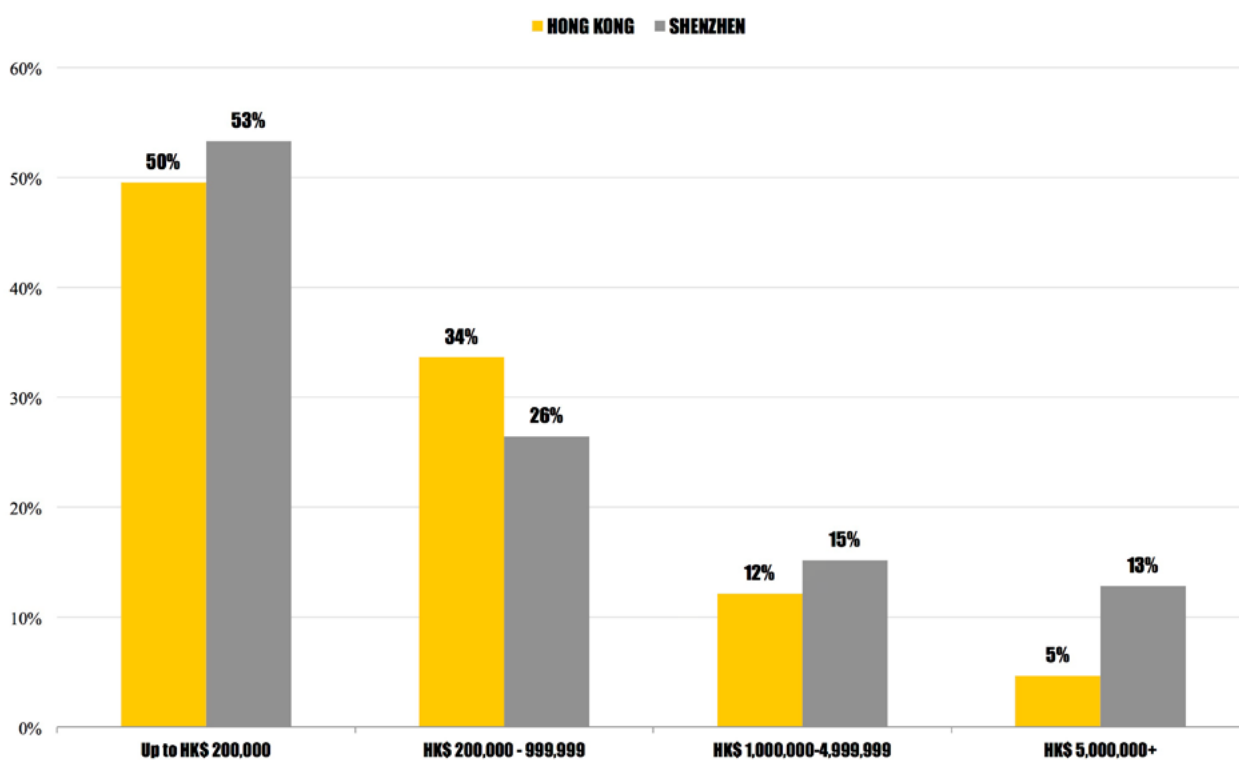
Source: GEM 2009-2016



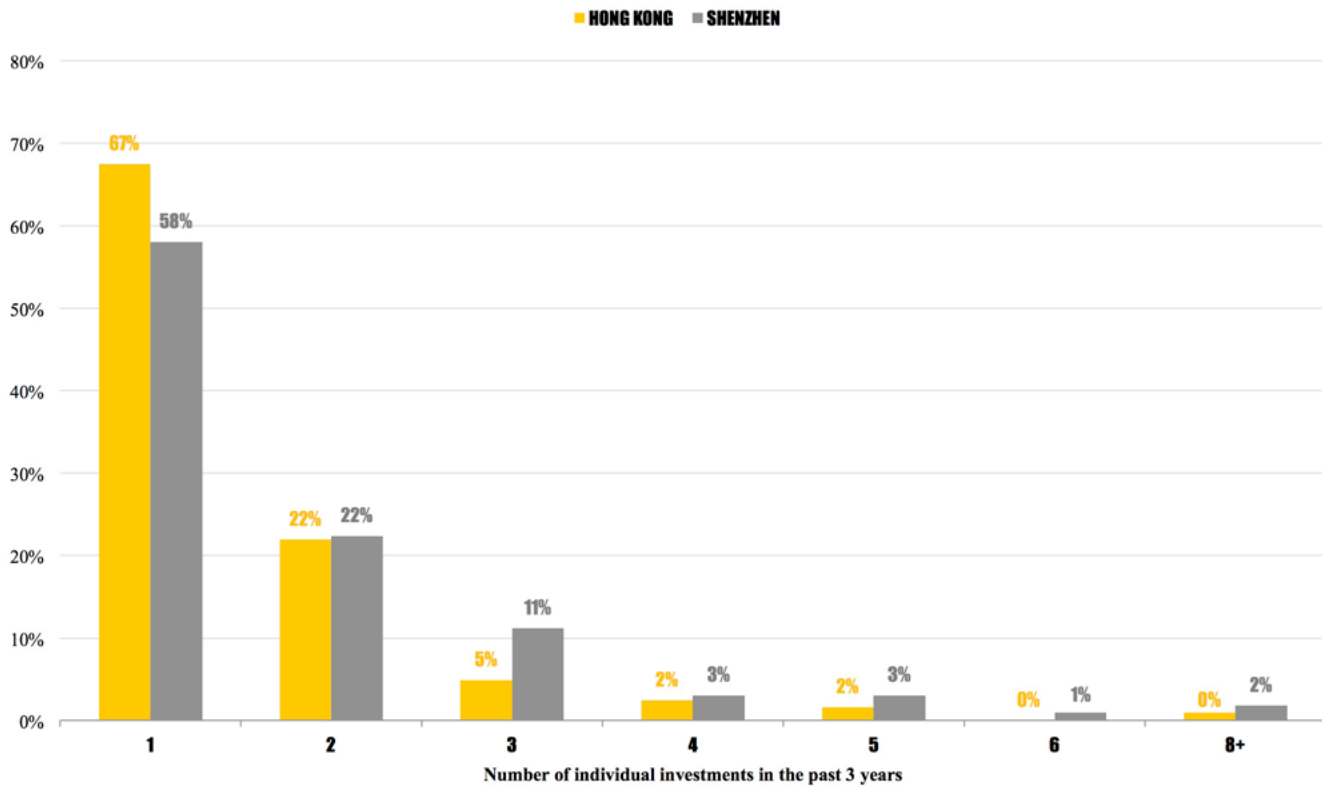
Source: GEM 2016

Figure 2.31: Cross-country Comparison of Informal Investment Prevalence Rates and Amounts

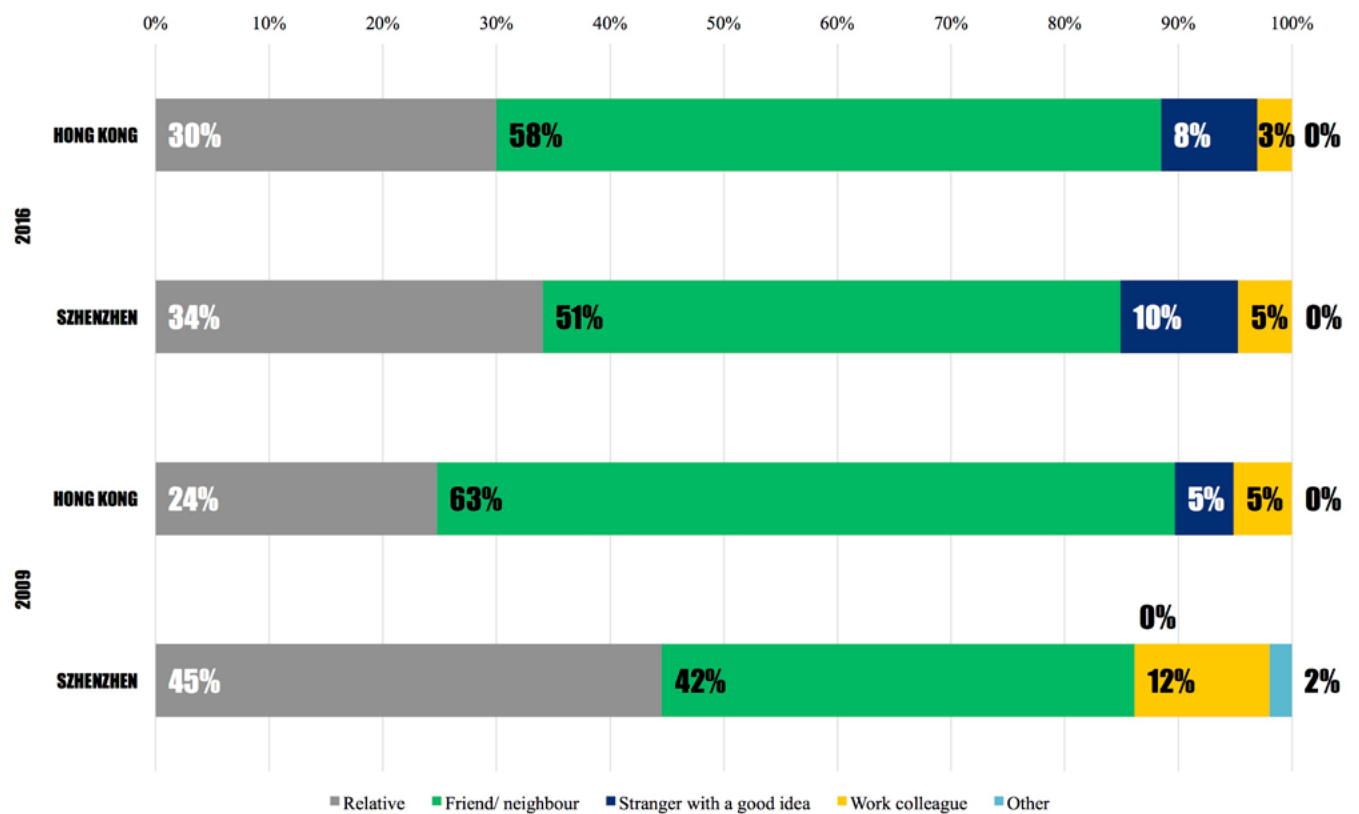
A. Distribution of the Informal Investment Ranges Made in the Past Three Years



B. Distribution of the Number of Informal Investments Made in the Past Three Years



C. Distribution of the Types of Relationship with Informal Investment Recipients



Source: GEM 2016

Figure 2.32: Characteristics of Informal Investments in Hong Kong and Shenzhen

Entrepreneurial Exits

We also asked our respondents whether they have exited a business in the past twelve months. Since our study was conducted from May to November 2016, this means that the time frame under investigation extended from mid-year 2015 to mid-year 2016. Within this period, the percentage of adult population in Hong Kong that made an exit amounted to 3.45%, which is slightly above the average of innovation-driven economies (Figure 2.33A). Within this group, exits related to discontinuation accounted for 69% of all exits in Hong Kong. This represents an improvement comparing to 2009, when discontinuation-related exits accounted for 75% (Table 2.8).

In Shenzhen, the share of population who exited businesses in the same period had also increased from 2.45% in 2009 to 6.96% in 2016, placing the city above the average for efficiency-driven economies. The proportion of exits caused by company wind down slightly increased within this period, from 62% to 68%.

Overall, the principal reason for business discontinuation remains the lack of profitability and related financial problems. Figure 2.33B provides a cross-country comparison. In Hong Kong, 45% of entrepreneurs exited because the business was not making money. Perhaps most interestingly, the share of exits because of unprofitability of business almost doubled in Shenzhen in years 2009-2016, from 19.5% to 37%, a sign of an increase entrepreneurial activity across the border. On a positive note, both cities' exits because of inability to secure funding were in decline, making it easier for entrepreneurs to find financial resources for their ventures.

Another major reason for discontinuation was personal – 21% of entrepreneurs in Hong Kong and 29% in Shenzhen gave up their businesses because of family or personal issues. Finding another job or business opportunity slightly declined in Shenzhen but it also noted the largest increase in reasons for exit in Hong Kong – from 3.1% in 2009 to 14% in 2016 among all respondents who exited their businesses.

Year	Prevalence Rate of Entrepreneurial Exit among Adult Population					
	Exited & business closed			Exited but business continues		
	China	Hong Kong	Shenzhen	China	Hong Kong	Shenzhen
2016	2.5%	2.4%	4.72%	1.0%	1.0%	2.24%
2009	4.2%	1.1%	2.5%	2.3%	0.4%	1.5%
2007	6.1%	3.5%	n/a	4.2%	0.9%	n/a

● Table 2.8: Longitudinal Comparison of Entrepreneurial Exit Rates in the Adult Population
in China, Hong Kong, and Shenzhen

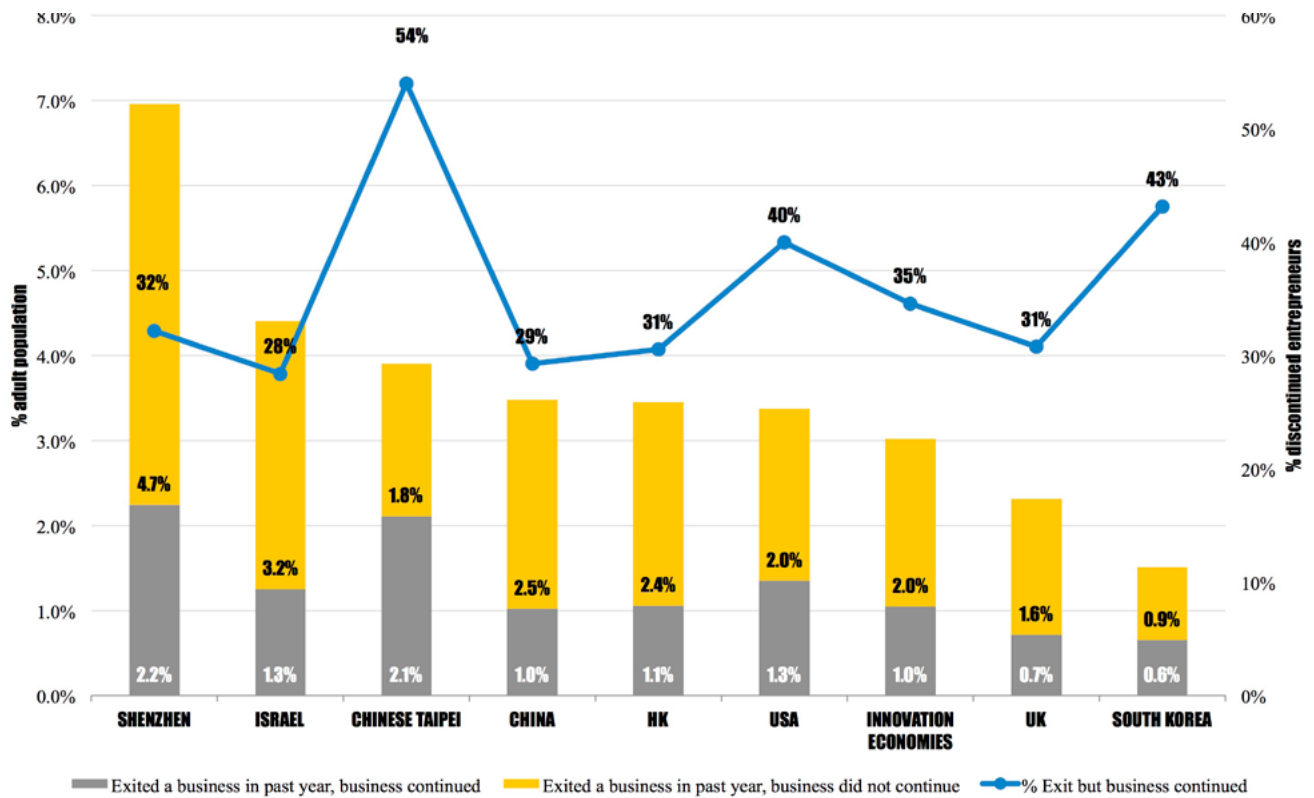
Source: GEM 2007-2016

In contrast, China recorded lowered exit rates compared with 2009. The share of adult population that exited a business was estimated at 3.5%, down by 3.1 percentage points from 2009. This is a continuation of a longer trend that we have observed in the past GEM reports. Moreover, China has also noted an encouraging increase in the opportunity to sell as the primary reason for exit. The proportion of exits in this category rose from 0.5% in 2009 to 2% in 2016. In Hong Kong this ratio has dropped from 2.7% in 2009 to 1.2% in 2016. In Shenzhen, this proportion decreased as well, from 3.5% to 3.2%.²⁴

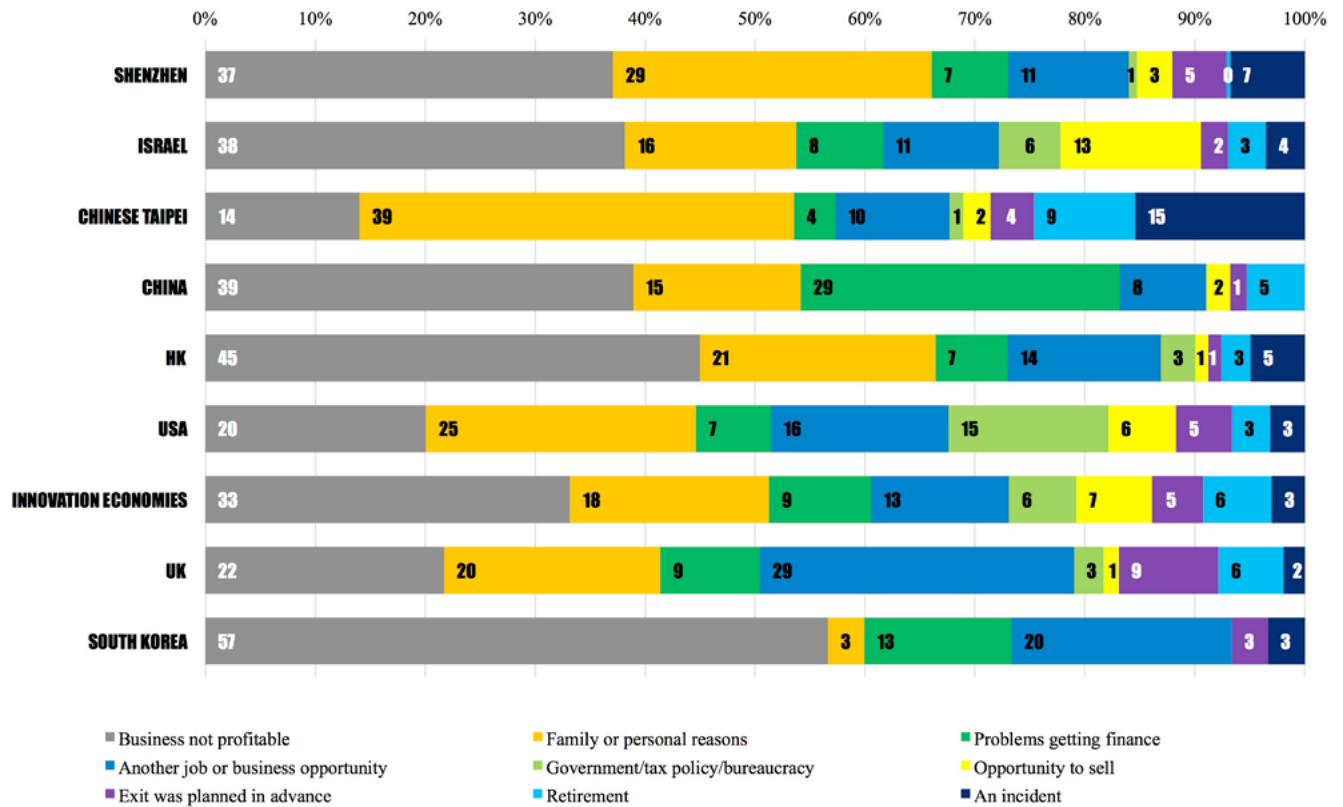
Finally, an interesting observation emerged from comparing exit data from 2009 and 2016. A major shift in Shenzhen's reasons for exit has been noted. In 2009 reasons for exit in Shenzhen were quite different than in Hong Kong; in 2016 these differences almost disappeared.

²⁴ The results are subject to sampling error, as previously noted.

A. Cross-country Comparison of Exit Prevalence Rates by Business Continuation Status



B. Cross-country comparison of Reasons behind Discontinuing Businesses



Source: GEM 2016

Figure 2.33: Cross-country Comparison of Exit Prevalence Rates and Reasons behind Exits



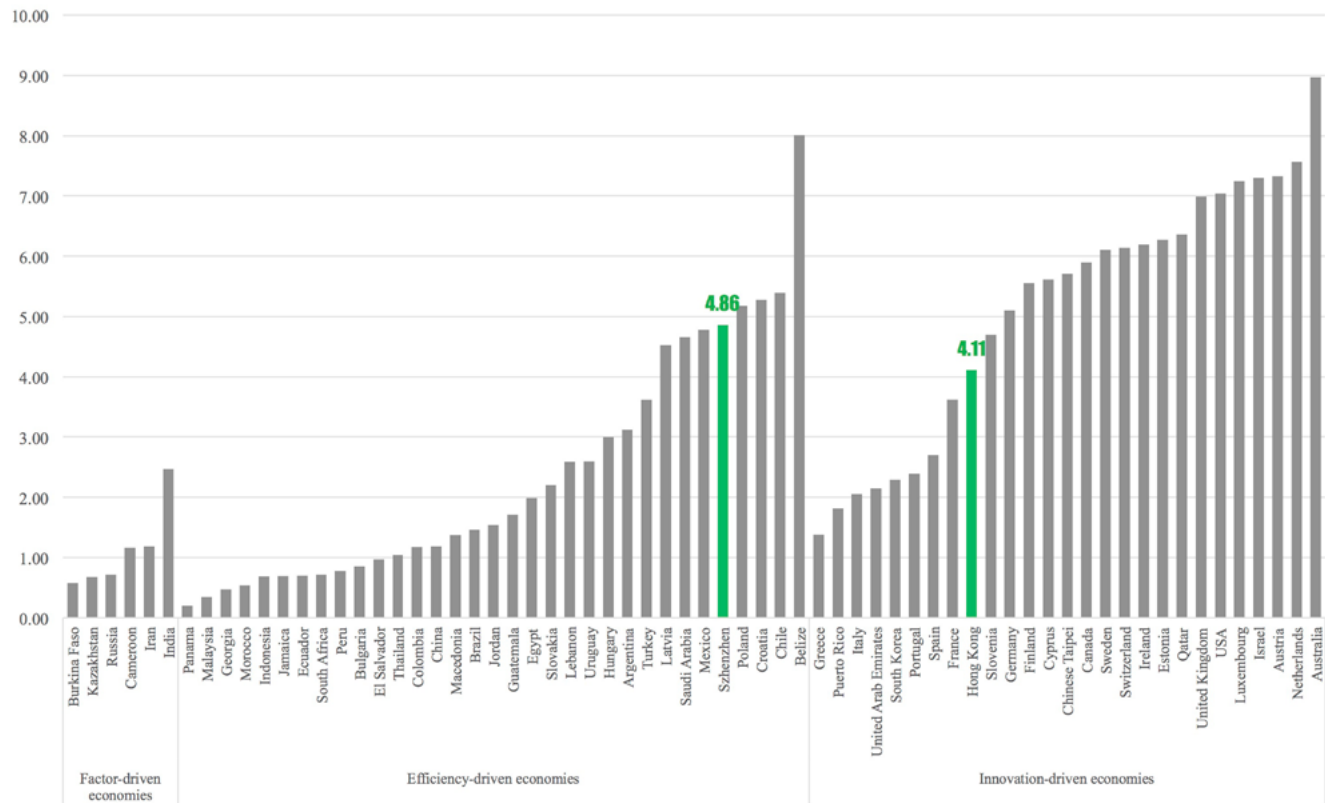
Entrepreneurial Employee Activity (EEA)

One reason why innovation-driven economies experience lower rates of entrepreneurial activity in starting their own businesses is that in more developed countries people also start businesses for their employers. For the first time, we study the entrepreneurial employee activity (EEA) – intrapreneurship – as part of this project. Specifically, we measured what proportion of the adult population took a leading role in developing new business projects for their employers in the past three years. This is equivalent to the early-stage entrepreneurial activity (TEA) of autonomous founders within the economy.

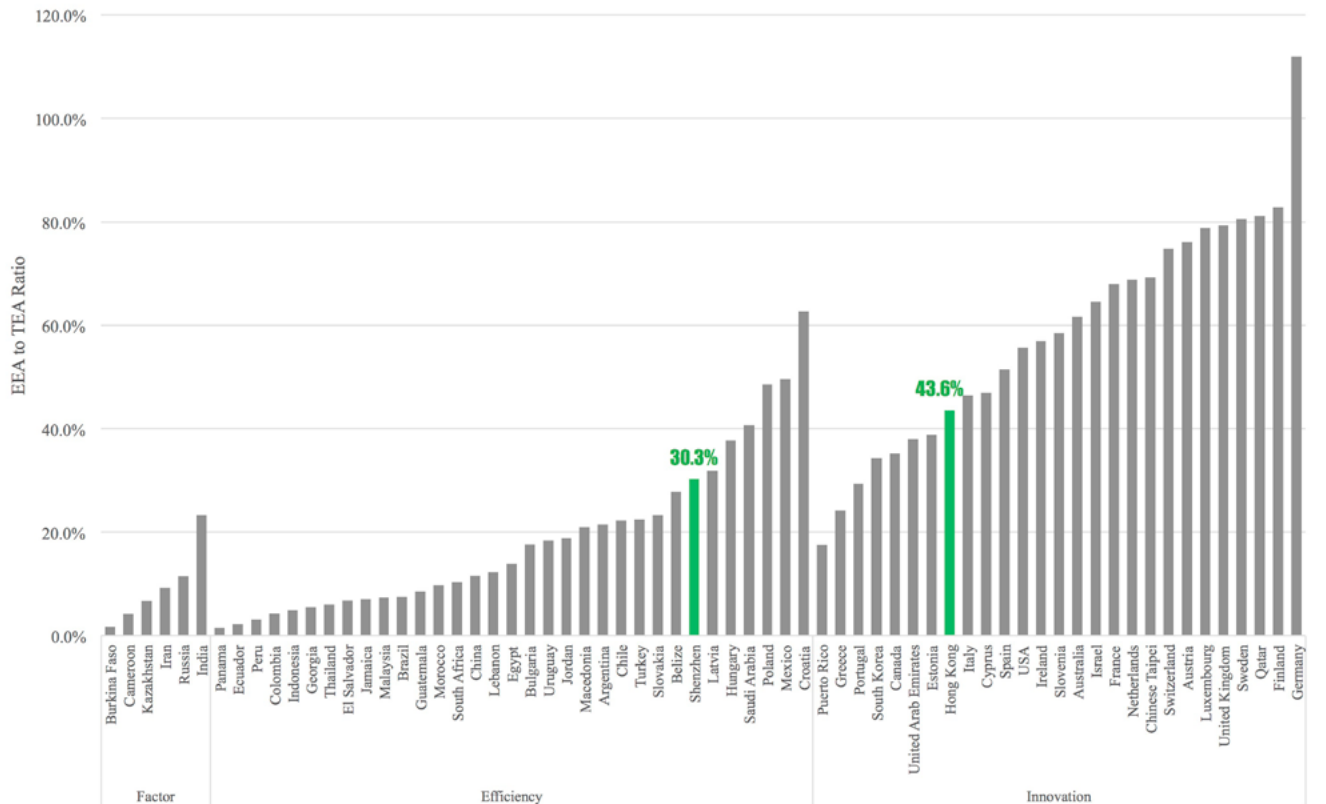
Figure 2.34A presents findings on the intrapreneurship prevalence rates in all 66 economies within the study. A clear pattern of higher intrapreneurship prevalence rates in innovation-driven economies is observable. For Hong Kong, 4.1% of adults from our sample reported they have been engaging in intrapreneurship in the past three years, a share comparable to the average rate within the innovation-driven economies. In Shenzhen, the intrapreneurship prevalence rate was higher than in Hong Kong and above the efficiency-driven economies average: 4.86% within the general population. These findings provide support to our initial observation of the overall entrepreneurial culture prevailing in Shenzhen.

An in-depth analysis has revealed that while in factor-driven and efficiency-driven economies the traditional start-up activities prevail and, on average, the ratio of EEA to TEA is of 9% in factor economies and 18% in efficiency economies, in innovation-driven economies intrapreneurship represents a substantial proportion of entrepreneurial activities. The ratio of EEA to TEA, was, on average, 58% across developed economies. For example, in Germany the EEA rate was higher than the TEA rate in 2016. In Hong Kong, this ratio was estimated at 43.6% – almost four times higher than in China. In Shenzhen, this ratio was estimated at 30.3%. Figure 2.34B provides a cross-country comparison of the ratios across all economies in the study.

A. Employee Entrepreneurial Activity Prevalence Rates (% of adult population)



B. Employee Entrepreneurial Activity to Total Early-Stage Entrepreneurial Activity Ratio



Source: GEM 2016

Figure 2.34: Cross-country Comparison of Employee Entrepreneurial Activity Prevalence Rates

Findings on Entrepreneurial Framework Conditions in Hong Kong

In this section, we are going to discuss the entrepreneurial conditions of Hong Kong. We concentrate on factors that enable or hinder entrepreneurship in the city and provide a series of suggestions on which areas require further improvements. Since many of these conditions have been previously covered in our earlier reports, we will concentrate on selected findings that further enrich our understanding of the entrepreneurial framework for Hong Kong. We will also present the findings on the cross-border relationship between the Hong Kong and Shenzhen start-up ecosystems.

Method & Sample

For this purpose, we have interviewed 39 Hong Kong experts and 37 Shenzhen experts in the field of entrepreneurship. Within the Hong Kong group, 51% declared themselves as entrepreneurs, 31% of experts were female, the average age of our interviewees was 43 years old and, on average, they have spent 13+ years working with entrepreneurs in Hong Kong and abroad. In Shenzhen, 32% of experts were female, 27% labelled themselves as entrepreneurs, their age average was 46 years, and they declared an average experience with entrepreneurship area at 9 years. The sample breakdown by specialization for both cities is provided in Table 3.1. A full list of interviewed experts is provided in Appendix 1.



Expert role in the ecosystem	% in the HK sample ²⁵	% in the SZ sample
Entrepreneur	51.3%	27.0%
Investor, financier, banker	25.6%	13.5%
Policy maker	20.5%	32.4%
Business & support services provider	53.8%	24.3%
Educator, teacher, researcher	33.3%	24.3%
Other	5.1%	24.3%

²⁵ Percent shares do not sum up to 100% because one person could assume multiple roles.

● Table 3.1: Expert Roles in the Hong Kong and Shenzhen Entrepreneurship Ecosystems

Source: GEM 2016

We have administered a standard GEM questionnaire targeting national experts. They have assessed to what extent they agree or disagree with a series of statements within 21 standard categories ²⁶. We have also asked our experts to provide information on the three most important factors promoting and three most important factors impeding entrepreneurship in Hong Kong. Furthermore, we enquired about their recommendations on how to improve entrepreneurship in Hong Kong. Finally, we asked our experts to make the comparison between the ecosystems of Hong Kong and Shenzhen. Specifically, we asked them to name in which areas Hong Kong outperforms Shenzhen and vice versa and to state three areas that enable the cross-fertilization between both cities' entrepreneurial endeavors.

²⁶ The standard categories include: (1) financial support for entrepreneurship, (2) government policies, (3) government programs, (4) education and training, (5) R&D transfer, (6) commercial and professional infrastructure, (7) market openness, (8) cultural and social norms, (9) physical and services infrastructure, (10) capacity for entrepreneurship, (11) economic climate, (12) workforce features, (13) perceived population composition, (14) political, institutional, and social context, (15) the ongoing crisis, (16) corruption, (17) different performing of small, medium, and large companies, (18) internationalization, (19) labor costs, access, and regulation, (20) information, and (21) other. These categories are applicable to all 66 economies in the study.

General Perception of Hong Kong's Entrepreneurial Ecosystem

Hong Kong has a good reputation as an entrepreneurship hub among its experts. Overall, in comparison to other innovation-driven economies, it is perceived as an economy with little government bureaucracy and low taxes, with supportive government programs and policies in general, that is characterized by a robust physical infrastructure and by sound professional and commercial services available to entrepreneurs. Within these categories, Hong Kong scores well above the innovation-driven economies average. Also, the financial environment related to entrepreneurial activity has been performing above the average, which is positive development for Hong Kong entrepreneurs.

Conversely, there are two areas in which the local ecosystem is deemed to underperform in comparison

to other innovation-driven economies: in providing entrepreneurial education at primary and secondary school levels and in its capacity to transfer R&D between established and new businesses as well as between the industry, academia, and public research institutes. In other aspects, Hong Kong is assessed as very similar to other innovation-driven economies in the study.

Shenzhen-based experts deemed Shenzhen to provide an excellent environment for entrepreneurial development, only surpassed by Hong Kong in lower levels of bureaucracy and better physical infrastructure. Overall, in expert opinion, the two cities have developed their own entrepreneurial cultures and ecosystems, aligned with and driven by local policies but independently of the rest of Mainland China's start-up ecosystem. Figure 3.1 illustrates.

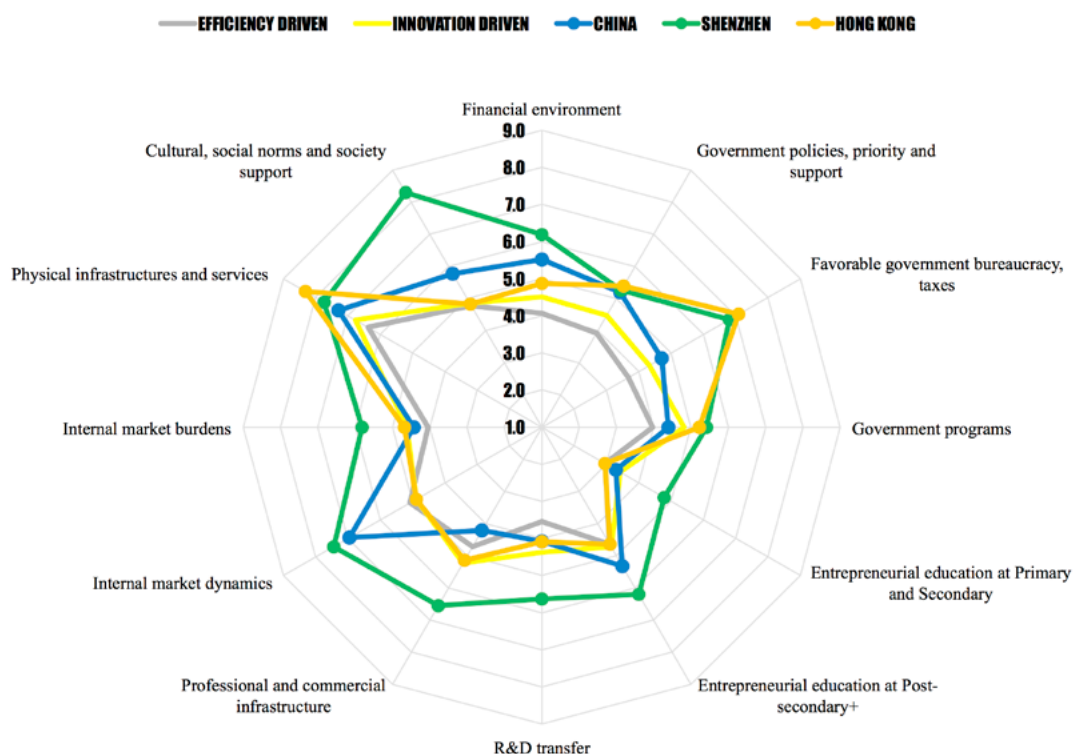


Figure 3.1: Overall Assessment of the Hong Kong Entrepreneurial Framework in Comparison to Other Economies²⁷

²⁷ Note: Experts were asked to rate on a scale from 1 (completely false) to 9 (completely true) to what extent the conditions within each category were supportive of entrepreneurship in a given economy. The mean scores for Hong Kong are presented in the Figure and they are subject to statistical error. For example, for the assessment of the financial environment for entrepreneurship, we conclude with 95% confidence that if we were to interview all experts in Hong Kong, they would report a score between 4.63 and 5.11. The higher the score is, the better the conditions for supporting entrepreneurship are; with the neutral mid-point of the scale being 5.

Changes in the Hong Kong Ecosystem

Comparing to previous years, the evaluation of the entrepreneurial conditions framework by Hong Kong experts recorded the most salient changes in the assessment of government's efforts to improve entrepreneurship in Hong Kong. The assessment score evaluating the government policies, priority for entrepreneurship and its overall support went up by **+58%** from 2009 to 2016. Also, the government programs focusing on entrepreneurship received better scores than in 2009. The only aspect that requires improvement in the eyes of the experts is the inclusion of new firms in public procurement bids. Figure 3.2²⁸ provides a comparison between findings from years 2007, 2009, and 2016, and Appendix 2 provides response details for all conditions.

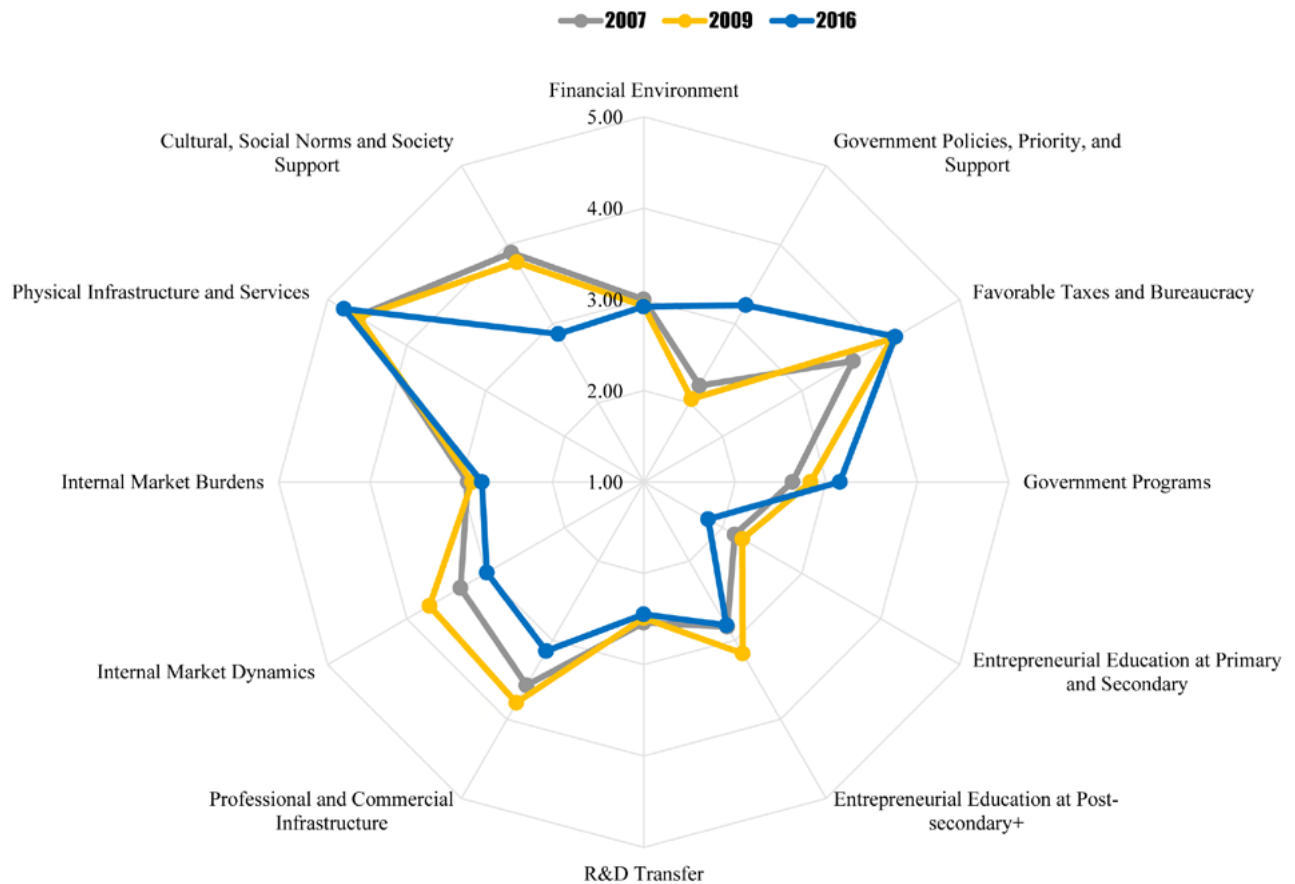
Surprisingly, although Hong Kong entrepreneurs have received much more attention from the media in the past few years and their status had improved in the minds of the general population²⁹, the experts deemed that the cultural and social norms, and the overall societal support for entrepreneurship is not as good as in 2009. The assessment score has decreased by **-24%** from 2009 to 2016, with a particular emphasis on not providing enough encouragement for risk-taking and innovativeness. This may be related to the overall entrepreneurial hype prevailing in many economies around the world, raising the bar for what having a culture that is "start-up supportive" means in each of the economies. Put it differently, Hong Kong society may not be developing its appreciation for entrepreneurship at the same speed as other economies, most notably the neighboring Shenzhen.

The education and training of new generations of entrepreneurs has also received more negative reviews than in 2009. In particular, the entrepreneurial education at primary and secondary school levels received the lowest assessment score out of all categories of the entrepreneurial framework and recorded a **-19%** drop comparing to 2009 figures. The experts concluded that primary and secondary education in Hong Kong does not grant enough attention to teaching creativity, self-sufficiency, personal initiative, and entrepreneurship.

Also, colleges and universities are expected to provide a better preparation for starting up and growing new firms, a change that has been under an ongoing implementation at most of the local universities.

²⁸ Note: Results from 2016 we adjusted to fit a more compact scale from 1 (completely false) to 5 (completely true) to enable the comparison with past results. The higher the score is, the better the conditions for supporting entrepreneurship are; the neutral mid-point on this scale is 3.

²⁹ See findings on the attitudes towards entrepreneurship in this report



Source: GEM 2007-2016

● Figure 3.2: Longitudinal Assessment of the Hong Kong Entrepreneurial Framework by Hong Kong Experts

Another interesting observation is about the professional and commercial infrastructure. In the view of the experts, its accessibility to new firms has declined in comparison to 2009. Quality subcontractors, suppliers, legal advisors, accountants, and consultants are deemed to be slightly less affordable than before and good banking services were assessed as less accessible than in 2009, although still positively supporting the entrepreneurship. Overall, we noted a **-17%** decrease in the assessment score for this category. Also, the experts consider that new firms have more difficult times in making their space on the market due to costs of market entry and established business practices, although they do not see these conditions as hindering or helping the entrepreneurship in general. The score for internal market dynamics recorded a **-20%** drop from 2009 to 2016.

The overall very positive assessment of the physical infrastructure and government tax policies and bureaucracy remained largely unchanged. Moderate scores of financing options for entrepreneurs, and R&D transferability were also similar to previous years. In particular, the availability of equity funding and funding provided by private individuals was assessed as having positive impact on entrepreneurship, while crowdfunding options were still limited. For the R&D transfer, experts were not yet satisfied with the affordability of newest technologies, support provided to engineers and scientists developing innovations, or knowledge transfer between universities, public institutes and new ventures.

In summary, we observe an entrepreneurial shift in Hong Kong's business culture³⁰. Hong Kong already provides stable environment with advanced physical infrastructure, limited bureaucracy, and favorable tax incentives. The next step is to modify the government policies, which already took place and has been noted by the local experts. Transformation of education systems is a long-term consequence of changes in the government policy. Also, educational reforms are a long consultative process that needs public support and a pull from professional bodies, so the change in the government policies is not sufficient to trigger fast changes in the system. To compensate for a longer timeframe in educational changes, innovation inputs, such as hiring R&D personnel, putting R&D grants in place, encouraging or R&D transfers, are being remodeled to benefit from the governmental push. The professional infrastructure support will be

further strengthened soon to benefit from and to stay competitive in the changing economic landscape; financing options are being revamped to provide a boost to the changing economy. We already see fewer exits caused by lack of funding and we observe a significant growth in informal investment among the general population. Societal support takes the longest to change. For societies, it takes time to acknowledge the value of entrepreneurial development within a wealthy economy that reaps the benefits of established businesses.

³⁰ See our past report "Crouching Tigers, Hidden Dragons" for the details of the cycle we previously described.

Strengths and Weaknesses of the Hong Kong Entrepreneurial Ecosystem

In addition to evaluating the elements of the entrepreneurial ecosystem through an expert questionnaire, we have also enquired about the top three strengths and weaknesses of Hong Kong in fostering the city's entrepreneurship. Figure 3.3 presents the overall findings, with percentage of Hong Kong experts naming the following area of focus.

For simplicity sake, our analysis will concentrate on those areas that were quoted in 2016 by at least 25% of experts as either strength or weakness of Hong Kong. We provide comparison to the results from 2009 to track the changes in the assessment of the local ecosystem (Figure 3.4). Two major strengths of Hong Kong emerged from the analysis:

1. Commercial and Service Infrastructure
2. Government Policies

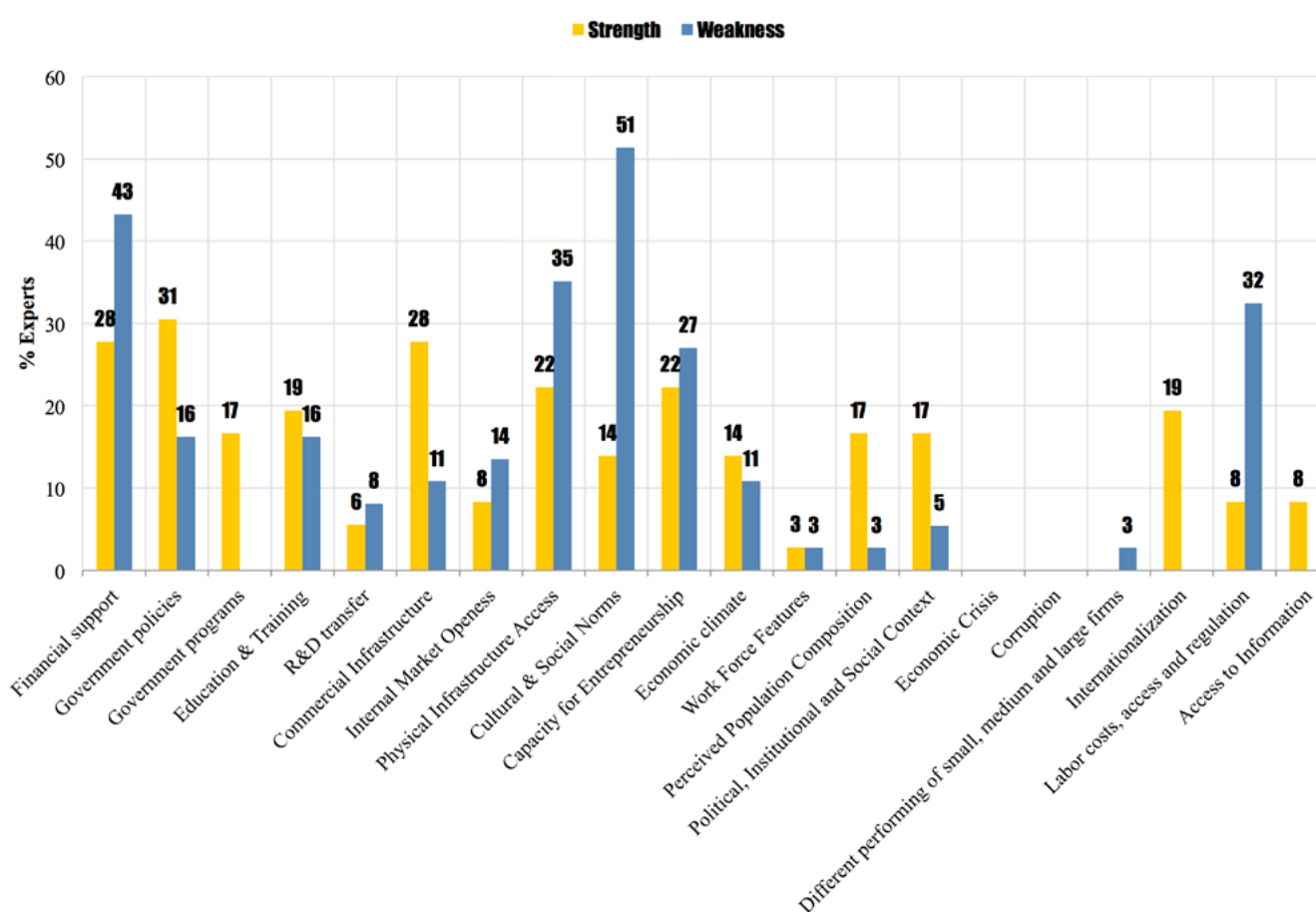
We have also uncovered three constraints on their way to significant improvement as evaluated by the experts in the study:

1. Capacity for Entrepreneurship
2. Financial Support for Entrepreneurship
3. Access to Physical Infrastructure

Finally, two additional constraints have been identified as creating obstacles to Hong Kong's entrepreneurship in general:

1. Social and Cultural Norms
2. Labor Costs, Access, and Regulations

The experts were particularly reluctant about the societal and cultural support for entrepreneurship, an observation we made in our past reports. The share of experts that consider it as a weakness grew and the other group seeing it as Hong Kong's strength declined in comparison to 2009. They were pointing out to parental pressure for younger generations to pursue less risky careers, to the "loss of face" as the mechanism preventing people to learn from each other's failures, and the secrecy surrounding the investment in high growth potential deals. Experts felt entrepreneurship is not celebrated enough and that the local culture somehow restrains the transfer of knowledge and experiences. They saw hope in emphasizing the "can do" attitude prevalent in the city on many other levels. We see hope in the overall attitudes towards entrepreneurship recorded from the general population part of this study.

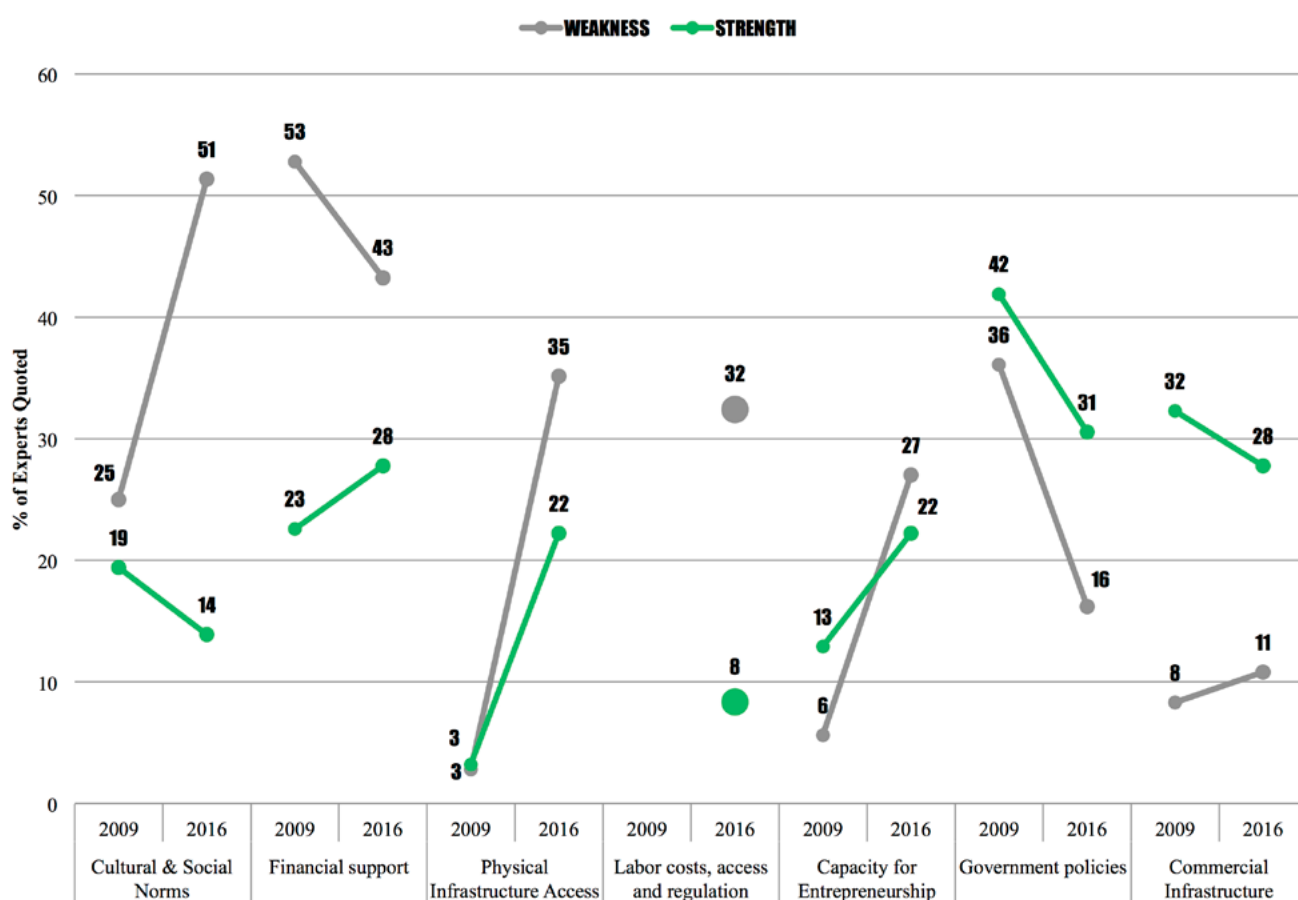


Source: GEM 2016

● Figure 3.3: Expert Assessment of Hong Kong's Entrepreneurial Framework Strengths and Weaknesses

In a similar vein, Hong Kong's capacity for entrepreneurship was being criticized for not having enough entrepreneurs with high growth aspirations and for relying on copycat ideas from other markets, a finding aligned with our observations from the general population survey. Experts have also noted there were not enough mentors willing to work with startups and develop the innovative culture in new and established firms. However, they have also pointed out that the city made a tremendous progress in raising awareness of the importance of entrepreneurship to the long-term economic development, notably though an increased number of entrepreneurship-related events rolling out on almost a monthly basis. There are more young people interested in starting up than before and more international start-ups are considering setting up their headquarters in Hong Kong as a result.

In parallel, experts pointed out to significant improvements in the commercial and service infrastructure available to start-ups. There is still a limited (in comparison to more mature start-up ecosystems) number of mentors and service providers who have experience working with and coaching high-growth start-ups and some professional services were not very affordable to start-ups, but overall, the experts recognized the positive impact of the city's numerous accelerators, incubators, start-up academies, and co-working spaces managed by private entities and their corporate partners.



Source: GEM 2009-2016

● Figure 3.4: Longitudinal Analysis of Strengths and Weaknesses in Hong Kong's Entrepreneurial Conditions Framework

The assessment of financing for entrepreneurs has significantly improved since 2009 – fewer experts cite it as a weakness and more of them perceive it as Hong Kong's strength. The experts felt that business angel networks were still a little bit too exclusive and cohesive, also somehow lacking the foresight to fully benefit from opportunities available on the Hong Kong market. They also pointed out that the banks were not supportive enough of new ventures. However, experts were also praising an increasing availability of government funding for startups, an overall growing interest of investors towards Hong Kong start-ups, and significant improvements in educating investors to create longer-term impact on the economy through their investment decisions. We saw this positive change in the general population data as well.

We also noted a large increase in the assessment of the physical infrastructure as a factor constraining entrepreneurship. The cost of living and rental prices were of major concern to our experts; they accounted for all indications of the physical infrastructure as Hong

Kong's weakness. Other than this, the experts believed Hong Kong's physical infrastructure facilitates setting up a business in the city.

In terms of government policies, we have recorded an overall improvement in the assessment, with fewer experts citing these as obstacles to entrepreneurship. Strong rule of law, the even-increasing ease of starting a business, and favorable tax policies were enumerated as local strengths. The only issue that required addressing was a slight disconnect between the government policy and the private initiatives, especially in supporting start-ups from the financial technology industry.

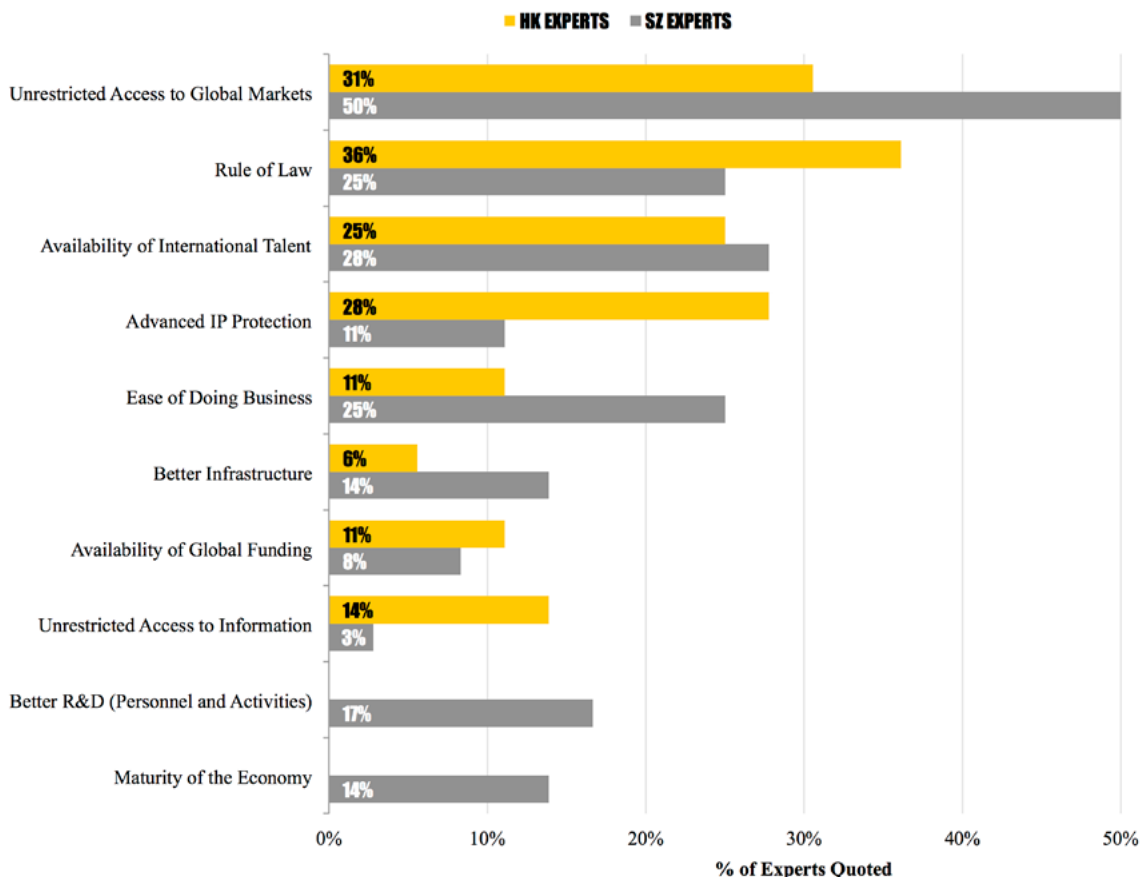
Finally, shortages in skilled labor trained in coding, programming, engineering, and STEM research in general were evaluated as an important constraint to developing impactful start-ups in Hong Kong. The city already has a strong group of talented individuals from the financial sector, so matching them with technology experts would provide tangible benefits to the start-up scene.

Hong Kong vs. Shenzhen: What's the Difference?

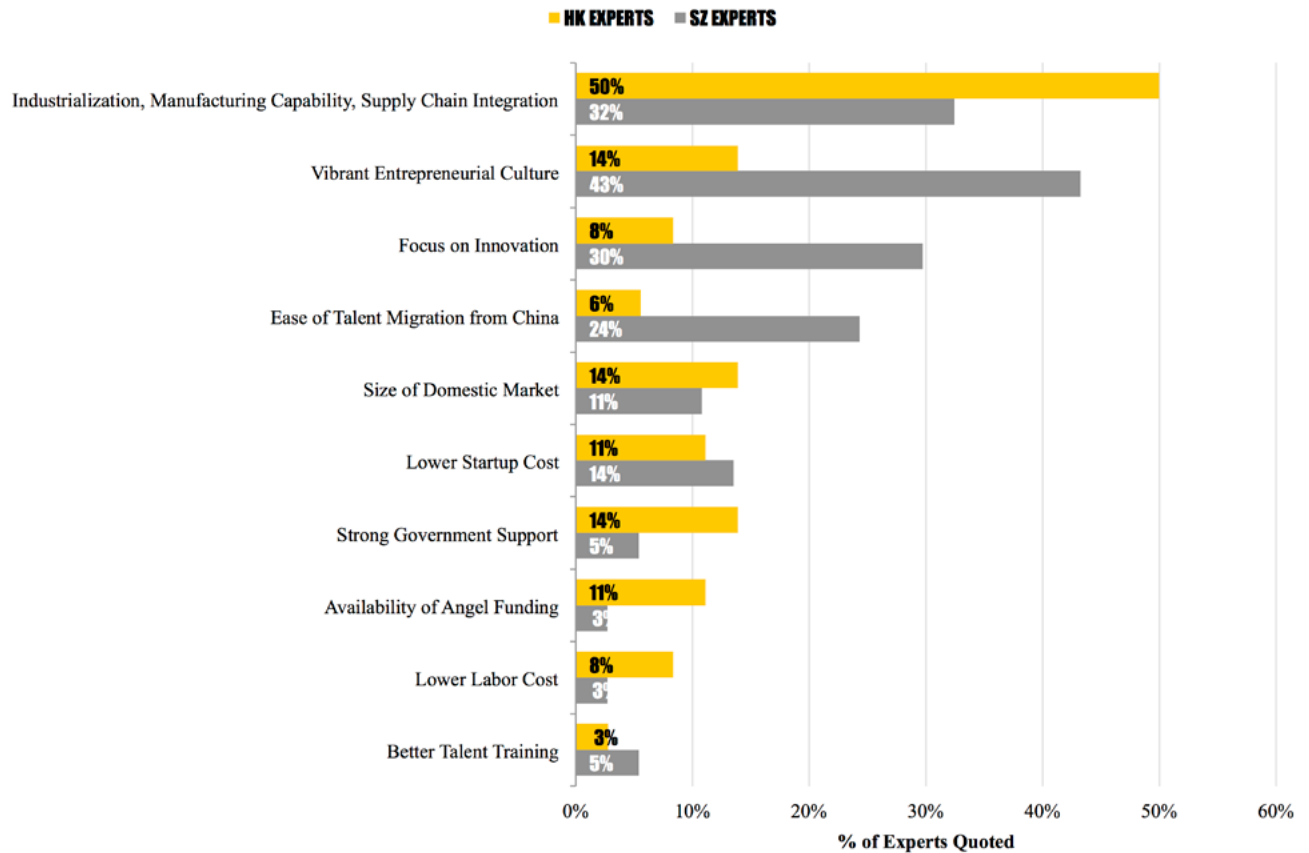
We also asked our experts to compare the two start-up ecosystems of Hong Kong and Shenzhen. Specifically, we enquired about their top pick for the biggest differentiator between the two cities, an area of the entrepreneurial ecosystem in which one city outperforms the other. The experts were not guided in any way with their choices; our questions were open-ended in nature, allowing the flexibility in providing the key strengths for both cities. Figure 3.5 provides a summary of our findings.

Hong Kong's main advantages were closely tied to its international character. Experts named the unrestricted access to global markets, availability and access to a wide variety of international talent, and accessibility of global start-up funding opportunities as the main advantages of the city over Shenzhen. Also, unrestricted access to information and knowledge was an important differentiation point in the eyes of Hong Kong experts, but not so much for their Shenzhen counterparts.

A. Advantage of Hong Kong over Shenzhen



B. Advantage of Shenzhen over Hong Kong



Source: GEM 2016

Figure 3.5: Top 10 cited advantages of Hong Kong and Shenzhen in the Eyes of Hong Kong and Shenzhen Experts

The second group of Hong Kong's advantages was related to its maturity as a developed and well-established economy. Experts cited the stability of the legal environment, including the rule of law and strong intellectual property protection legislation as its key elements. Interestingly, for Shenzhen experts, Hong Kong's key advantage over Shenzhen lies more in the ease of doing business, stronger R&D capabilities, and a better infrastructure, rather than the IP protection.

When describing the advantages of Shenzhen over Hong Kong, Hong Kong experts were mainly focusing on its manufacturing capabilities, supply chain integration, and the overall high levels of industrialization. On the other hand, Shenzhen experts were emphasizing the city's focus on innovation, long-term planning for development, and its vibrant entrepreneurial culture that was acting as a magnet for talent and funding. As one of the experts in Hong Kong has pointed out: "Shenzhen is now what Hong Kong used to be in the 1970s: vibrant, dynamic, and driven by the first generation of immigrants." Remarkably,

Shenzhen experts were very fond of this feature of the city and emphasized its importance to the overall entrepreneurial development of Shenzhen; Hong Kong experts did not see the entrepreneurial culture as the key driver for development to the same extent.

Furthermore, experts from both cities enumerated the overall cost of starting up as Shenzhen's advantage. In their opinion, it is cheaper to start a business there, to hire employees, and to acquire the customers because of the size of Mainland's domestic market.

Overall, while Hong Kong possesses access to global markets and the economic maturity of pursuing the opportunities for development, Shenzhen has more of the innovative spirit and "can do" attitude driving the entrepreneurial mindset that Hong Kong used to have in the past. According to experts, Shenzhen also outperforms Hong Kong with its supply chain integration advantage and with better access to Mainland market for acquiring talent, funding, and customers.

Expert Recommendations for Hong Kong

Recommendations offered by Hong Kong experts mostly match what they believe are local strength and weaknesses. They are also quite similar to what other experts in innovation-driven economies have to offer. Most of them revolve around four areas of focus. First one involves further improving of the financing for entrepreneurs. This would encompass fostering the development of a larger venture capital community, building platforms that connect angel investors to start-ups, enabling low interest loans for start-ups, just to name a few specific actions.

The second area of recommendations includes revamping the education and training in entrepreneurship, especially on the primary and secondary school level. Experts recommend entrepreneurship-centered courses to be introduced in primary schools to help with fostering local creativity and expression. However, the entrepreneurial education should be more available for all ages – experts see the value in setting up a larger number of courses in innovation, design, or coding that foster entrepreneurship. Finally, more emphasis on developing a mentoring culture should help with entrepreneurial knowledge transfer across generations.

The third area involves boosting government programs and policies that contribute to the development of entrepreneurship. In particular, experts would encourage public procurement to consider new and growing firms to apply, would further increase the number of start-up events organized by the governmental agencies, and would introduce land policies that address the issue of high rents for start-up companies and population in general. Additionally, local experts suggest further development of commercial infrastructure to provide a wider range of services to start-ups.

Finally, experts are concerned about the development of entrepreneurial culture in the Hong Kong society, and recommend a wide range of motions that could help with improving the overall cultural acceptance of entrepreneurial risk-taking and creativity. For instance, they encourage a wider media involvement with entrepreneurial stories and a stronger promotion for creative industries. Such changes would help with revitalizing the entrepreneurial culture to match the unparalleled start-up drive of Shenzhen.

Table 3.2 provides an overview of recommendation topics in comparison to other economies in the study.

Recommendation Topic	HONG KONG	SHENZHEN	CHINA	GEM16 AVG	EFFICIENCY DRIVEN AVG	INNOVATION DRIVEN AVG	USA	UK
Financial Support	32.43	35.14	44.00	37.86	40.77	33.86	51.22	30.00
Government Policies	27.03	54.05	64.00	52.57	54.75	52.85	36.59	25.00
Government Programs	43.24	13.51	12.00	24.67	22.87	26.25	24.39	35.00
Education & Training	40.54	21.62	52.00	41.77	43.18	42.11	39.02	45.00
R&D Transfer	8.11	16.22	24.00	11.70	12.69	11.74	2.44	5.00
Commercial Infrastructure	21.62	16.22	12.00	7.67	7.64	7.96	29.27	5.00
Internal Market Openness	2.70	8.11	12.00	6.30	7.35	5.06	7.32	10.00
Physical Infrastructure Access	5.41	59.46	4.00	6.42	7.14	4.23	7.32	5.00
Cultural & Social Norms	27.03	2.70	4.00	12.69	9.70	15.79	2.44	20.00
Capacity for Entrepreneurship	13.51	5.41	4.00	9.21	8.72	8.65	17.07	5.00
Economic Climate	0.00	0.00	4.00	4.03	4.37	1.26	0.00	0.00
Work Force Features	0.00	0.00	8.00	2.42	1.72	3.73	4.88	5.00
Perceived Population Composition	8.11	0.00	0.00	0.84	0.61	1.23	4.88	0.00
Political, Institutional and Social Context	10.81	0.00	24.00	9.21	9.80	6.92	7.32	0.00
Economic Crisis	0.00	0.00	0.00	0.11	0.24	0.00	0.00	0.00
Corruption	0.00	2.70	0.00	2.57	2.85	0.46	0.00	0.00
Different Performing of Small, Medium and Large Companies	2.70	10.81	4.00	3.75	4.79	2.56	0.00	15.00
Recommended Internationalization	10.81	13.51	0.00	4.26	4.13	4.89	0.00	0.00
Labor Costs, Access and Regulation	0.00	5.41	0.00	4.30	3.63	5.89	9.76	5.00
Access to Information	13.51	8.11	0.00	5.68	5.37	5.70	7.32	25.00

● Table 3.2: Recommendations on the Improvement of Entrepreneurial Framework

Made by National Experts ³¹

³¹ Numbers in the table represent the percentage of experts from the designated economy, which made a recommendation towards improving the areas stipulated in the columns. Colors designate the Top 3 most recurring recommendation topics per economy, with the darkest color identifying the most prevalent type of recommendation.

Source: GEM 2016

Hong Kong & Shenzhen

Cooperation Areas

Finally, we asked the experts to enumerate three areas for cooperation between Hong Kong and Shenzhen that would increase their competitiveness on the international arena. Experts could point out any area, given the open-ended nature of our enquiry. Figure 3.6 presents the findings; we report the Top 10 opportunities for collaboration coded from expert responses.

The most frequent recommendation was to leverage the natural industry compatibilities between Hong Kong and Shenzhen. Hong Kong has a strong financial center, good logistics, world-class education institutions and healthcare, and international connections. Shenzhen, on the other hand, has a strong manufacturing base, expertise in hardware development, as well as the access to Mainland customers and talent. Experts suggested joint development of such industries as Internet-of-Things, Smart City, Health Tech, Edu Tech, Fin Tech, or E-Commerce. Such arrangement would permit Hong Kong firms to access Mainland market and Shenzhen firms to internationalize more efficiently.

For this to happen, experts have also recommended joint research and development initiatives aiming at cross-border innovation, sharing of talent (including the encouragement to fund cross-border start-up teams), intensification of knowledge exchange between the two cities, and sharing of resources, financial and non-financial ones. Joint acceleration programs for start-ups and joint start-up events and festivals were suggested to bring the two cities closer together. Also, experts advocated the official formation of cross-border industry associations or the strengthening of collaboration between the existing non-governmental bodies working towards the advancement of entrepreneurship.

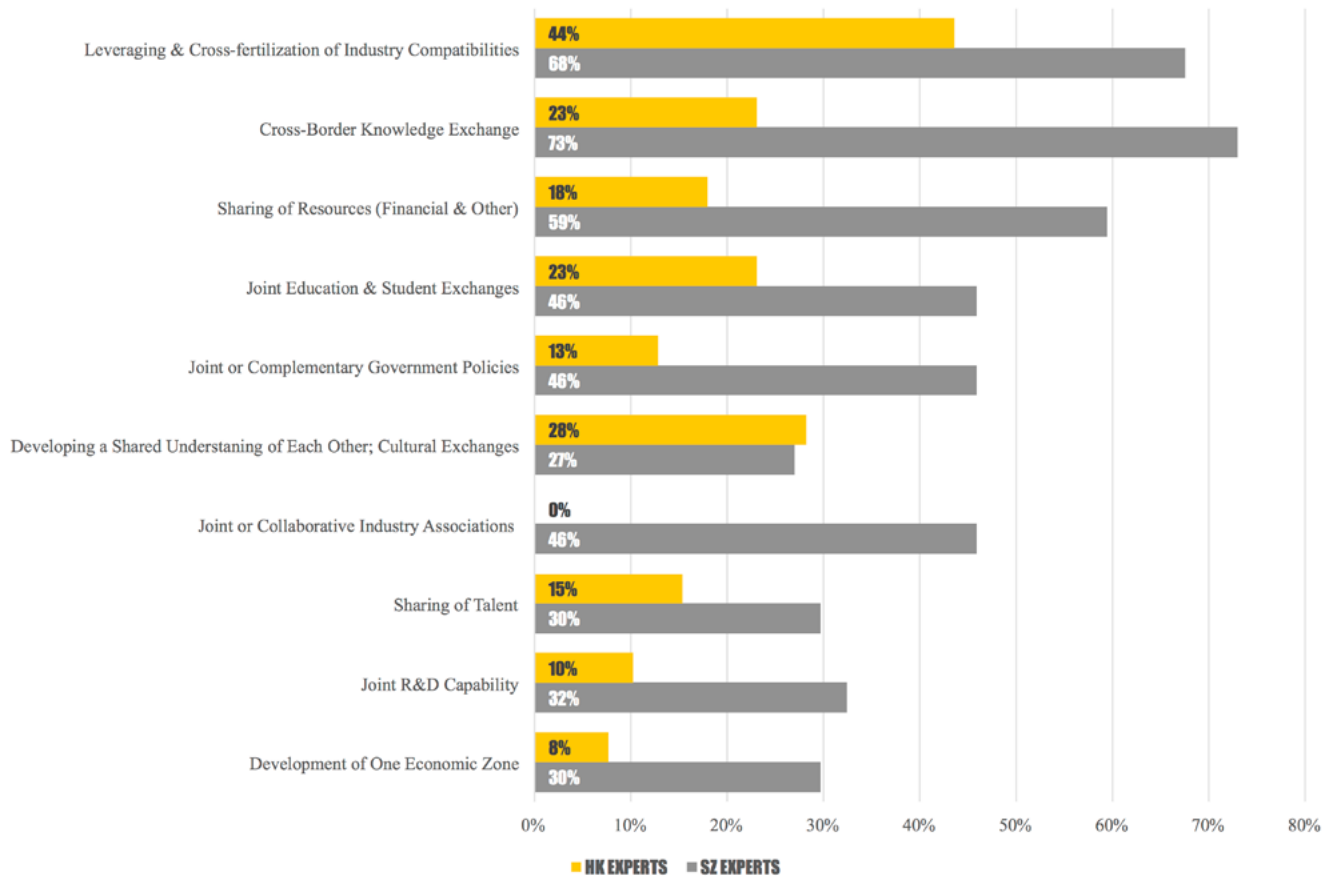
Experts from Hong Kong and Shenzhen also agreed that the two cities would benefit tremendously from developing a shared cultural understanding of each other. They suggest an implementation of cultural exchanges for students to foster a mutual appreciation for the symbiotic relation the two cities are currently developing. Also, experts advocated the introduction of joint or cross-border education, whereby the two cities would invest in

opening more world-class academic institutions catering to students from both sides of the border, or whereby students would be encouraged to complete their education in the neighboring city.

Last but not least, experts from both cities also saw the need for coordinating the government policies for entrepreneurship between the two economies. They argued that joint or at least complementary frameworks and regulations focusing on entrepreneurship could benefit start-ups on both sides of the border. For instance, they proposed joint visas for entrepreneurs that would allow for closer cooperation between the two markets and would facilitate processes for many start-ups with cross-border operations. Some of the experts went even further and suggested the development of a single economic zone that would encompass Hong Kong and Shenzhen, modeled on Qianhai free trade zone. For example, this would include a gradual introduction of the free flow of capital between the two cities.

In the experts' view, if the two cities joined forces in formation of complementary advantages, it would strengthen the international and Mainland competitiveness for both. Their resources and strengths combined, the Hong Kong-Shenzhen duo would unstoppable in the eyes of our experts. We see this as a first step towards the development of the Hong Kong-Shenzhen megalopolis.

³² Numbers in the table represent the percentage of experts from the designated economy, which made a recommendation towards improving the areas stipulated in the columns. Colors designate the Top 3 most recurring recommendation topics per economy, with the darkest color identifying the most prevalent type of recommendation.



● Figure 3.6: Top 10 cited Collaboration Opportunities between Hong Kong and Shenzhen in the Eyes of Hong Kong and Shenzhen Experts

Source: GEM 2009-2016

Conclusions

Entrepreneurship in Hong Kong and Shenzhen is on the rise. Last time we have measured the entrepreneurial rates in both cities was in 2009, in the midst of the global recession. At that time, starting a company was not very popular in Hong Kong and Shenzhen. Since then, everything has changed. We saw an explosive growth in the start-up ecosystem support, followed by a rapid increase in start-up rates. Overall, the early-stage entrepreneurial activity among the adult population was estimated at 9.44% in Hong Kong and 16.04% in Shenzhen. We have also recorded strong intrapreneurship rates in both cities, with Shenzhen prevalence rates being slightly higher than the ones of Hong Kong: 4.86% vs. 4.11%.

Shenzhen was the first one to pick up the pace. We noted a largest increase in the city's new (+284%) and established (+389%) businesses in comparison with 2009 statistics. In Hong Kong, the change came a little bit later; the city recorded the highest growth in nascent businesses: +206% from 2009 to 2016. What is worth noting is that while entrepreneurship rates were on the rise in Hong Kong and Shenzhen, they were declining in other places in China. Both cities have developed a separate start-up culture and entrepreneurial ecosystems that operate independently from the Mainland.

These positive changes were not limited to early entrepreneurship rates only. In general, we observed a major shift in attitudes and entrepreneurial intentions. Cultural conditioning and attitudes towards entrepreneurship, perception of own skills, and exposure to entrepreneurship practices, they all had positive impact on peoples' growing intentions to start businesses in both cities. Although experts evaluating the Hong Kong ecosystem still saw the social and cultural norms as obstacles to entrepreneurship, they have also noted the positive change in the status of entrepreneurs in general. Starting a business became a dream for many, despite of parental pressures for less risk-laced careers. Shenzhen has developed a separate entrepreneurial culture, seen as its major strength by many experts. This entrepreneurial culture is perceived as the key factor for fostering new generations of entrepreneurs.

These new entrepreneurs, who are they? Hong Kong and Shenzhen business owners are getting older in general, but each city has its own entrepreneurial age target. In Hong Kong, early-stage and established business owners tend to be older than in Shenzhen, which is related to the overall maturity of both economies. They are also mostly male, although this is rapidly changing in comparison to the statistics from 2009. Female early-stage entrepreneurs are on the rise in both cities, their prevalence rates in the general population are increasing much faster than for male entrepreneurs, and they are much more likely than men to start their businesses driven by opportunities rather than necessity.

Interestingly, the education levels of Hong Kong and Shenzhen entrepreneurs were very different. While in Hong Kong, early-stage ventures were the most prevalent in individuals with secondary or post-secondary degree, in Shenzhen starting a business was the affair for the highly educated part of the population. In fact, the strongest prevalence rates for Shenzhen were with adults with graduate experience. For established businesses, the situation was reverse; Hong Kong business owners were more educated than their Shenzhen counterparts, again an indication of the differences between the economic histories of these cities.

Finally, starting a business is still mostly reserved for the affluent part of population in Hong Kong and Shenzhen alike. Although things are improving in Hong Kong and the disproportion in start-up rates among the most and least affluent is slowly closing, this is still not the case in Shenzhen. For this reason, we saw a slight increase in the prevalence rates of necessity-driven entrepreneurship in the general populations in both cities. In parallel, both cities have recorded very high levels of opportunity-driven entrepreneurship, with Hong Kong ranking as No.1 economy with the highest proportion of opportunity-driven entrepreneurs.

What are the characteristics of ventures from Hong Kong and Shenzhen? The entrepreneurial teams are getting bigger in both cities for early-stage and established businesses. In fact, they were among the largest out of all 66 economies in the study. Also, the importance of family members in acting as co-founders is diminishing in both cities. Early-stage ventures are relying more on social connections to find co-founders with complementary skillsets, a sign of a further professionalization in local start-ups.

What do they do? Although with a decreasing share in the economy, consumer-oriented services (restaurants, retail stores, rentals, repairs, home sales) still represent the largest industry sector of interest for early-stage and established firms from Hong Kong and Shenzhen, in fact one of the largest among the 66 economies in case of Hong Kong. Business-oriented services are on the rise, but in comparison to other innovation-driven economies, their share in the economy was rather limited. For example, we note an increase in information and communication technology at the expense of wholesale trade or manufacturing. Overall, both cities are undergoing a positive industrial makeover, aligned with the structural composition of other innovation-driven industries, but there is still a long way ahead to complete the transformation.

In fact, firms with profound market impact are still rare in Hong Kong and their proportion has slightly decreased since 2009. More low-impact businesses were founded, providing limited product/ market innovation combined with innovative technologies. In Shenzhen, the situation has improved and it is better than in Hong Kong, although low-impact businesses are still dominant. The share of high-impact businesses is on the rise in Shenzhen and the highest than in any other economy in the study, growing faster than low-impact early-stage firms. Specifically, Shenzhen firm owners tend to report the use of newer technologies than Hong Kong firms. On the other hand, Hong Kong early-stage firm owners declare providing better product/ market innovation combinations than their Shenzhen counterparts.

Both Hong Kong and Shenzhen early-stage ventures are very optimistic about their growth prospects and rank among the economies with the highest job creation expectations in the study, aiming at creating 20+ jobs in the next five years. In Hong Kong, the prevalence rates of high expectations early-stage businesses grew faster than the average overall entrepreneurial activity. In Shenzhen, the high job creation expectations businesses recorded a slower growth rates than the average.

In terms of market expansion, Hong Kong firms are developing the international customer base, while Shenzhen firms are concentrating their efforts on the domestic market. This is closely related to the size of domestic markets for both cities.

What kind of support do they receive? In both Hong Kong and Shenzhen, more nascent entrepreneurs are looking for public rather than private support. Despite their focus on public agencies, entrepreneurs in both cities perceive the private support organizations to be more helpful than the public ones, most probably because there are simply more of them available in both economies. Also, they offer less bounded selection criteria not constrained by bureaucracies and public financing – their help comes with fewer strings attached. The difference between the cities is in the share of entrepreneurs who believe in such help. Shenzhen-based founders are much fonder of the support there are being offered, with 45 and more percent indicating the usefulness of private or public institutions. In Hong Kong, between 27 to 35 percent agree such organizations are helpful to their business.

In terms of financial support, Hong Kong early-stage firms have lower capital requirements than their Shenzhen counterparts, which may be related to the lower technological intensity of Hong Kong firms. Most of this funding comes from the entrepreneurs' own savings; 92% of nascent entrepreneurs declare using their savings to support the development of their businesses. These findings may explain why entrepreneurial activities are so closely related to the high income levels of entrepreneurs in both cities. Not surprisingly, public funding plays an essential role for start-ups with founders having limited

financial resources. The role of the family in financing new ventures is still significant in Shenzhen, but not so much in Hong Kong. Banks are also more supportive of start-ups in Shenzhen than in Hong Kong and so are venture capitalists, which could be explained by higher prevalence of start-ups with profound market impact. In Hong Kong on the other hand, crowdfunding is more prevalent as the source of capital for early-stage businesses, a sign of a more established product innovation.

Aligned with higher entrepreneurship rates, we have also observed a growing culture of informal investors developing in both cities. Shenzhen observed much higher informal investment prevalence rates than Hong Kong: 20.5% vs. 6.5% of the adult population respectively. We have also recorded a dramatic change in the investment patterns for Shenzhen. While in 2009 individuals were rather investing the family members, in 2016 the investment preferences were aligned with the ones of Hong Kong: friends and neighbors being the first choice. Interestingly, strangers with good ideas also became a viable investment choice in Hong Kong and Shenzhen alike, paving the way for establishing a strong business angel culture in both cities. Perhaps the most important finding was about the informal investment sizes for both cities. In fact, Hong Kong and Shenzhen informal investors are one of the most generous among all economies in the study. They reported contributing, on average, US\$ 70,565 and US\$ 76,112 respectively, with Shenzhen investors having a slightly stronger preference for more capital-intensive deals. In comparison, innovation-driven economies' average was estimated at US\$ 30,459.

How many businesses close down? We have recorded a slight increase in the exit rates, which is a consequence of an increased overall churn in entrepreneurial activities. On a positive note, the ratio of business discontinuation-related exits declined in Hong Kong in comparison to 2009, but it slightly rose in Shenzhen. We attribute this to much stronger entrepreneurial churn in Shenzhen that also comes with faster turnover in business development cycles.

Why do the exit? Nowadays, unlike in the past, Hong Kong and Shenzhen entrepreneurs exit their businesses for very similar reasons. The principal reason is still the lack of profitability of the business or personal reasons, just like in other economies in the study. Surprisingly, the share of exits related to the opportunity to sell declined in both cities in comparison to the 2009 statistics. Successful exits are not yet a viable option in either city. However, we have also recorded a decline in exits related to the inability to secure the funding; it became easier for entrepreneurs from Hong Kong and Shenzhen to finance their businesses.

Contrasting these findings with rather average evaluations of the financing for entrepreneurs delivered by the experts in the study makes us question to what extent the financing should still be considered as a drawback of the Hong Kong's entrepreneurial ecosystem. True, Hong Kong still requires improvements in venture capital availability and stronger crowdfunding options, but, overall we see major improvements in the financing options available locally.

We also notice signs of a positive reversal in social norms driving entrepreneurship in Hong Kong. Sentiments in the general population are improving with more media attention given to entrepreneurial stories; entrepreneurs are regaining their celebrated status and young people start seeing it as a viable career option, in part thanks to deliberate changes in post-secondary curricula of local universities and colleges and to an increased number of events organized in support of the entrepreneurial ecosystem. Founders in both cities no longer feel alone in their journey, they have an entire ecosystem to fall back on. Public and private institutions and programs enriched their offer and became strong advocates for fostering economic growth through entrepreneurship.

It will take a few more years to transfer this growing entrepreneurial spirit into the R&D capabilities and STEM talent development. It takes time to train researchers capable of leading innovation in their fields and of commercializing the fruits of their work. For this, primary, secondary, and later education levels require streamlining for development.

On the other hand, Shenzhen should no longer be considered in the efficiency-driven, but in the innovation-driven economy category, not only because of its GDP per capital levels. The recent developments in the entrepreneurial activity and ecosystem brought it much closer to Hong Kong's image; in some aspects, such as levels of informal investment or share of start-ups with profound market impact, it is already stronger than Hong Kong.

Teaming up with Shenzhen could further speed up the transformation processes for both cities. Shenzhen has the access to the unlimited talent pool from Mainland China and the insatiable entrepreneurial hunger. Hong Kong has the market maturity and legislative simplicity to recognize and immediately leverage high-growth opportunities. Also, the natural industry compatibility of both cities could help boosting the combined potential and advantage on international and Mainland markets if combined with compatible policies towards entrepreneurship and an increased cultural exchange. Hong Kong's role as super-connector for a booming Shenzhen will be essential in furthering the development of this megalopolis.

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Appendix 1:

List of National Experts in Hong Kong and Shenzhen

HONG KONG EXPERTS

Anson BAILEY

Principal, Business Development, KPMG China

Atin BATRA

Accelerator lead of blueprint

Matthieu BODIN

Regional Manager Greater China for
Techstars Startup Programs

Jeffrey BROER

Managing Director at Founders Institute (HK)

Jon BUFORD

Entrepreneur and founder of the
first co-working space in HK

Carman CHAN

Founder and managing partner of Click Ventures

Jayne CHAN

Head of StartMeUpHK programme
of the HKSAR Government

Rachel CHAN

Founder and Chief Catalyst of Innofoco, CEO
of Junior Achievement HK

Jonathan CHEE

Former VC and currently a manager
of pre-incubation center at CUHK

Duncan CHIU

Managing Director of Radiant Venture Capital

David CHUNG

Undersecretary at Innovation and Technology Bureau
of the HKSAR Government; former CTO of Cyberport

James DONNAN

Commercial Director for Greater China, Intertrust

Yannick EVEN

Associate Director, Management Consulting,
Responsible for Acceleration Programmes at KPMG

Simon GALPIN

Former Director General of InvestHK

Archit HARI

Head of Customer Experience at Brinc.io,
private IOT acceleration programme

Regina IP

Member of the Legislative Council
of HKSAR Government

Cesar JUNG-HARADA

Director of Scoutbots (LTD in HK),
Makerbay (LTD in HK) CEO of Protei (INC C corp in the USA)

Simon LAM

Director at Centre for Asian Entrepreneurship
& Business Values, The University of Hong Kong

Irene LEUNG

CEO, Senior Citizen Home Safety Association

Holly LI

Managing Partner, Founder of IP Advantages

Michael LIN

Executive at International IP Commercialization Council

Heather LO

Employee of W Hub; resource exchange platform for startups and a startup itself

Rita LUN

Our Hong Kong Foundation, Consultant, specialist on HK startup ecosystem

Theodore MA

Founder of Cocoon, one of the first co-working spaces and incubation programmes, founded with family business help

Tytus MICHALSKI

Founder of Fresco Capital, VC fund from Hong Kong

Charles MOK

Member of the Legislative Council of HKSAR Government; Representing the Information Technology Functional Constituency (2012-2016)

Peter MOK

Head of Incubation programmes at HK Science and Technology Parks

Charles NG

Acting Director-General of InvestHK, Promotion - FDI Agency of HKSAR Government

Jason NG

Writer and columnists to South China Morning Post; writes about HK identity and society

Donna NGUYEN PHUOC

Partner; SPARQ Technology Investors Society, representative of family offices investing in HK startups

Kim SALKELD

Head of Efficiency Unit of HKSAR Government, Secretariat of Social Innovation Fund of HKSAR Government

Gene SOO

Entrepreneur and co-founder of Startups.hk, first startup community in HK and of the first co-working space in HK

Bernard SUEN

Programme Director at Center for Entrepreneurship, CUHK

Alfred TAN

Head of Knowledge Transfer Office at Hong Kong Baptist University

Mingles TSOI

KPMG China, Director of Startup Academy for China and Hong Kong

Elaine TSUNG

Co-founder and manager of Garage Society, leading co-working space in HK

Tony VERB

Director of Metta; first networking platform to connect entrepreneurs and corporations; ecosystem catalyst

Kathryn WANG

Vice president, Business Strategic Planning at DBS

James YAO

Board member of nest.vc, most active VC fund and owner of 3 corporate incubators; business angel

SHENZHEN EXPERTS

Fang, WU

Chairman of Shenzhen Touchwood-pe Investment Management Co. Ltd

Linchuan, GUO

Business Director of Investment Department at Cowincapital Ltd.

Liqing, SUN

Person-in-charge of Shenzhen IECSZ Fund Investment Management Co., Ltd

Jianzhang, WEI

Legal Representative of Shenzhen Shiwei Economic Consulting Co., Ltd.

Guoxi, LIN

Director of First Agency at Invest Shenzhen

Zhandong, XUE

Legal Representative of Shenzhen Meso-economy Consulting Co., Ltd

Xianwei, ZHANG

Associate Professor of School of Economics at Shenzhen Polytechnic

Mr. LAN

Officer of Invest Shenzhen

Wenbin, LU

Director of Shenzhen Development and Reform Commission

Xiong, LIN

Director of Urban Development Division at Development Research Centre of Shenzhen People's Government

Wanmou, DAI

Chairman of Shenzhen Aimeijia Electronic Technology Co. Ltd.

Qilong, FENG

Vice Managing Director of Shenzhen Jingdian Printing Co. Ltd.

Zhikai, LIN

Deputy Director of Finance Office at Shenzhen Finance Bureau

Jun, LIU

Professor, Vice Dean of Entrepreneurship Academy at Shenzhen University, Dean of Management College at Shenzhen University

Zhenzhen, LAI

General Manager of Zizaigongfang Original Design/ Modern Oriental Home Furnishing Brand

Xue, WU

Head of SZ-HK Productivity Training Institute

Ying, FAN

Vice President of Shenzhen Alliance of the Small and Medium-sized Enterprises and Public Service, Executive Vice Secretary-General of Shenzhen General Chamber of Commerce

Lixiu, LUO

Staff of Shenzhen High Tech Industrial Park Service Center, Shenzhen Science and Technology Financial Service Center

Ban, LIU

Director of Shenzhen Promotion Center for Small & Medium Enterprises

Zhen, LIANG

CEO of Shenzhen New Industry Investment Consultation Co.,Ltd

Xiaomei, DONG

CEO of Shenzhen Longgang Service Plaza for Venture Capital Investment

Huaidong, NIE

Councilor of The Industry Alliance of New Motive Power for Constructing China Wisdom Cities

Guanping, TAO

Vice General Manager of Shenzhen Seagen Tech Co., Ltd.

Jinglian, GUO

Barrister, Partner of Zhong Lun Law Firm

Huadian, LIU

Principal Staff Member of Shenzhen Development
and Reform Commission

Lina, YAN

Legal Representative of Shenzhen Juheshuangcheng
Science and Technology Co., Ltd.

Tie, LIU

The Chinese Representative General Manager
of Daiao Metalwork Co. Ltd

Heping, ZHANG

Retired Section-level Researcher
of Shenzhen Policy Planning Office

Xiaohua, WANG

The Chinese Representative General Manager of Daiao
Metalwork Co. Ltd

Zhishan, LIU

Executive Vice Superintendent of Immigration Culture
Research Institution at Shenzhen University

Zhiwen, JIA

CEO of Shenzhen Yingning Venture
Capital Investment Co. . Ltd, Chairman of Shenzhen
Liheqingyuan Venture Capital Co. , Ltd.

Qunying, SUN

Member of Shenzhen Federation of Industry
and Commerce

Yongdong, ZHANG

Member of Shenzhen Industry Association

Fuhua, WEI

General Manager of Shenzhen CIME Co., Ltd.

Shaoying, MAO

Researcher, Academic Director of Culture Research Center
of Shenzhen Special Economic Zone

Wenbin, LIU

Director of Shenzhen Culture System Reform Office

Donghe, HUANG

Deputy Chief Editor of SZ Youth Magazine

Appendix 2:

Hong Kong Responses to National Expert Questionnaire ³²

³² The table presents average responses from all 39 participating experts in Hong Kong. NS = calculated score not significantly different from average at 0 to 95 percent confidence level (neither agree nor disagree), i.e. experts are ambivalent about the statement.

Topic	Statement	Agree or Disagree
Finance	There is sufficient equity funding available for new and growing firms	Agree
Finance	There is sufficient debt funding available for new and growing firms	NS
Finance	There are sufficient government subsidies available for new and growing firms	NS
Finance	There is sufficient funding available from private individuals (other than founders) for new and growing firms	Agree
Finance	There is sufficient professional Business Angels funding available for new and growing firms	NS
Finance	There is sufficient venture capitalist funding available for new and growing firms	NS
Finance	There is sufficient funding available through initial public offerings (IPOs) for new and growing firms	NS
Finance	There is sufficient private lenders' funding (crowdfunding) available for new and growing firms	Disagree
Government policies	Government policies (e.g., public procurement) consistently favor new firms	Disagree
Government policies	The support for new and growing firms is a high priority for policy at the national government level	Agree
Government policies	The support for new and growing firms is a high priority for policy at the local government level	Agree
Government policies	New firms can get most of the required permits and licenses in about a week	Agree
Tax & Bureaucracy	The amount of taxes is NOT a burden for new and growing firms	Agree
Tax & Bureaucracy	Taxes and other government regulations are applied to new and growing firms in a predictable and consistent way	Agree
Tax & Bureaucracy	Coping with government bureaucracy, regulations, and licensing requirements it is not unduly difficult for new and growing firms	Agree
Government programs	A wide range of government assistance for new and growing firms can be obtained through contact with a single agency	NS
Government programs	Science parks and business incubators provide effective support for new and growing firms	Agree
Government programs	There are an adequate number of government programs for new and growing businesses	NS
Government programs	The people working for government agencies are competent and effective in supporting new and growing firms	NS
Government programs	Almost anyone who needs help from a government program for a new or growing business can find what they need	NS
Government programs	Government programs aimed at supporting new and growing firms are effective	NS
Primary Education & Training	Teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative	Disagree
Primary Education & Training	Teaching in primary and secondary education provides adequate instruction in market economic principles	Disagree
Primary Education & Training	Teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation	Disagree
Post-secondary Education & Training	Colleges and universities provide good and adequate preparation for starting up and growing new firms	Disagree
Post-secondary Education & Training	The level of business and management education provide good and adequate preparation for starting up and growing new firms	NS

Post-secondary Education & Training	The vocational, professional, and continuing education systems provide good and adequate preparation for starting up and growing new firms	NS
R&D Transfer	New technology, science, and other knowledge are efficiently transferred from universities and public research centers to new and growing firms	Disagree
R&D Transfer	New and growing firms have just as much access to new research and technology as large, established firms	Disagree
R&D Transfer	New and growing firms can afford the latest technology	Disagree
R&D Transfer	There are adequate government subsidies for new and growing firms to acquire new technology	Disagree
R&D Transfer	The science and technology base efficiently supports the creation of world-class new technology-based ventures in at least one area	NS
R&D Transfer	There is good support available for engineers and scientists to have their ideas commercialized through new and growing firms	Disagree
Commercial infrastructure	There are enough subcontractors, suppliers, and consultants to support new and growing firms	Agree
Commercial infrastructure	New and growing firms can afford the cost of using subcontractors, suppliers, and consultants	NS
Commercial infrastructure	It is easy for new and growing firms to get good subcontractors, suppliers, and consultants	NS
Commercial infrastructure	It is easy for new and growing firms to get good, professional legal and accounting services	Agree
Commercial infrastructure	It is easy for new and growing firms to get good banking services (checking accounts, foreign exchange transactions, letters of credit, and the like)	NS
Internal Market Dynamics	The markets for consumer goods and services change dramatically from year to year	NS
Internal Market Dynamics	The markets for business-to-business goods and services change dramatically from year to year	NS
Internal Market Dynamics	New and growing firms can easily enter new markets	NS
Internal Market Burden	The new and growing firms can afford the cost of market entry	NS
Internal Market Burden	New and growing firms can enter markets without being unfairly blocked by established firms	NS
Internal Market Burden	The anti-trust legislation is effective and well enforced	NS
Physical infrastructure	The physical infrastructure (roads, utilities, communications, waste disposal) provides good support for new and growing firms	Agree
Physical infrastructure	It is not too expensive for a new or growing firm to get good access to communications (phone, Internet, etc)	Agree
Physical infrastructure	A new or growing firm can get good access to communications (telephone, internet, etc) in about a week	Agree
Physical infrastructure	New and growing firms can afford the cost of basic utilities (gas, water, electricity, sewer)	Agree
Physical infrastructure	New or growing firms can get good access to utilities (gas, water, electricity, sewer) in about a month	Agree
Cultural & social norms	The national culture is highly supportive of individual success achieved through own personal efforts	Agree
Cultural & social norms	The national culture emphasizes self-sufficiency, autonomy, and personal initiative	NS
Cultural & social norms	The national culture encourages entrepreneurial risk-taking	Disagree
Cultural & social norms	The national culture encourages creativity and innovativeness	Disagree
Cultural & social norms	The national culture emphasizes the responsibility that the individual (rather than the collective) has in managing his or her own life	NS

PART II:

**Insights Based
on GEM**

**Hong Kong &
Shenzhen**

Report 2016

Status and Background Analysis of Entrepreneurial Activities in Shenzhen

Shenzhen Academy of Social Sciences

Shenzhen is one of the Mainland Chinese cities with the most active entrepreneurial activities. On October 12, 2016, the National Mass Innovation and Entrepreneurship Week (NMIEW) kicked off in the special economic region. During the event, Premier Li Keqiang convened in Shenzhen the 2016 NMIEW Global Entrepreneurial Leaders Forum, which gathered 87 renowned entrepreneurs including such big names as Tim Cook, Jack Ma, Pony Ma and Mark Zuckerberg. According to Mr. Cook, Shenzhen was a perfect place for hosting the NMIEW which fit in well with the innovative spirit of the city's entrepreneurs. Shenzhen has been aiming to develop itself into an international entrepreneurship hub characterized by extensive exchanges, plentiful events, resources and outcomes, and active entrepreneurship. To achieve this, it has promulgated a three-year action plan and policy initiative to promote the development of entrepreneurship. It also has constructed a policy chain for coordinating innovation, entrepreneurship, venture capital and entrepreneurs. Shenzhen has been effective in entrepreneurship and innovation. During the implementation of the Global Entrepreneurship Monitor (GEM) project, the Shenzhen team conducted one-on-one interviews with 36 experts, among which were entrepreneurs, government officials and scholars from universities or research institutions. While the interviewed experts had high praise for the entrepreneurial environment in Shenzhen, they also pointed out the problems existing in the city's entrepreneurial

activities and provided recommendations on how the entrepreneurial environment could be improved.

1. Funding support

Compared to GEM 2009 statistics, Shenzhen saw revolutionary changes in its funding situation. A small number of experts still held the opinion that insufficient funding is one of the constraints on entrepreneurial activities in Shenzhen, as "it is more difficult for small and micro-sized businesses to obtain loans with a lower interest rate. As a result, new businesses have to turn to friends, families, and so on, for financing, or funding sources that ask for higher interest rates, for example, private lenders' funding." Some experts also noted: "The majority of entrepreneurs in Shenzhen obtain their entrepreneurial subsidies mainly through personal fundraising campaigns. It is not common for them to receive funding from banks or the government. Generally speaking, they do not benefit from the government's incentive policies because the government's funding support does not reach the enterprise level."

In comparison, more experts believed that abundant funding supply is one of the drivers of entrepreneurial activities in Shenzhen where there is no lack of liquidity and investors are looking around in the market for projects to invest in. "Shenzhen has a well-developed capital market with a considerable number of funds (private and public), venture capitals (including private and government-

sponsored), and industrial foundations established by the government. Because of this, it is relatively easy for entrepreneurs with good projects to obtain funding support in Shenzhen. For instance, Shenzhen has been the source of funding for a large number of movie and TV projects in China. In the field of high technology, the raising of venture capital can usually be done without big obstacles for enterprises founded by young people, especially those launched by high-tech young people returning to China after their overseas studies. It is not rare for investment funds to find that they cannot invest in their target projects because the projects have already obtained adequate funding from other investors.

Experts attributed the abundant supply of funding in Shenzhen to the following reasons. First, Shenzhen is characterized by a higher proportion of private enterprises and private equity being the first source of capital for starting businesses in Shenzhen. Second, Shenzhen has a better market environment, because of which venture capitals may be more willing to come to invest in here. Third, there is higher abundance of related funding support from the government when compared with other cities. This includes a special fund for the cultural and creative industries, and a technology and innovation venture fund. Therefore, it would be rather easy for entrepreneurs with a good project to obtain capital. Fourth, following the development of large enterprises, many people have mastered technology and when they also know the channel, they can go out and start their own business. The funding source or investment here is relatively easier, a certain pattern can be formed, and professional knowledge can become an asset. Fifth, Shenzhen is very well developed in terms of private lenders' funding. It means that at least there are a lot different channels to obtain loans in Shenzhen, provided that the loan charges are not a question to be discussed. The availability of a large number of small-sized finance companies is a characteristic of Shenzhen.

The availability of good funding support is also related to the high quality of entrepreneurial teams in Shenzhen. Experts said, "The development of the Nanshan District in Shenzhen, the hosting of entrepreneurship forums and competitions, and the cultural exchange between different circles are actually driven and supported by funds behind the scene. Without them, the overall entrepreneurial environment of Shenzhen would not have been so spectacular. This group of people devoted themselves to developing concepts and strategies in

the past and that's why they possess a really good sense of judgment. They are really helpful in driving projects. And in addition to local projects, they also pay attention to Silicon Valley. What projects are available in Silicon Valley? What teams should they associate with? They are also doing these kinds of jobs. They can do things that domestic resources cannot do. Whether it is about getting listed on stock exchanges or about an acquisition, they evaluate the project team and if the team is good, they will fill the resource gap as big resource integrators. If they judge that a project is good, they themselves will invest in it as well. They can really facilitate resource integration. Shenzhen's good entrepreneurship is related to having this group of people behind the scene. They are investors. Many people are doing this. They are very sensitive at identifying good projects. So basically no good project will lack funding. There are so many district-level and city-level entrepreneurship competitions in Shenzhen. Investors identify good projects from these competitions and support them. Compared with other cities across the country, Shenzhen excels not only in the number of good projects, but also in the number of commercialized projects. Furthermore, the financial industry has great support to technology and projects.

2. Government Policy

Overall, the assessment on government policy is moderately positive. It is on one hand related to the policy orientation towards "mass innovation and intrapreneurship" advocated by the Chinese government in recent years; on the other hand, it is related to the philosophy behind Shenzhen's policy to encourage entrepreneurship and innovation in the innovative city.

Experts noted that Shenzhen provides strong policy incentives to startup businesses. For instance, there are more than 20 policies that are related to new and high-technology industries; incentive policies that support strategic emerging industries; policies on headquarters economy, particularly policies related to the development of Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone; and so on. Here is an example: "A friend of mine from Shanghai wanted to open up new horizons in Shenzhen. He has no network or fixed assets in Shenzhen, but still he sent related materials to a business service platform of the Qianhai Authority. After one week or so, he received a notification indicating that he could come to Shenzhen. And soon after he arrived at Shenzhen, he received his business licence. He posted his story on Weixin, saying that it was done just too quickly

and it would not have been done so quickly if it had happened in Shanghai.” Policy-wise, it can be said that Shenzhen encourages innovation and entrepreneurship. For instance, the Committee of Science and Technology Innovation of Shenzhen has specially established an entrepreneur fund to support entrepreneurial institutions, activities and projects. Under the special fund for the cultural and creative industries, there are favorable incentive policies tailored for small and medium-sized businesses (including startup businesses) such as the provision of housing rent subsidies. Also, interest subsidies can be offered to certain good projects at a low barrier level. Basically all good projects that pass declaration evaluation are eligible to receiving interest subsidies.

To some experts, the reason is that on one hand, anyone who has business experience in Shenzhen and in other places of China can clearly feel that in terms of government policies, Shenzhen is more marketized and more governed by law. They can have a higher expectation that the government will implement the rule by law, and they can have a clearer idea on the transparent of doing different things. On the other hand, there is a clearer relationship between the government and businesses. Basically the government does not break the rule and damage businesses unscrupulously, and taxation and law are more transparent and clearer. Thus, a higher grade can be given to the policy environment in Shenzhen.

On the contrary, some experts raised a different view on policy areas such as taxation: “Seemingly commercial registration has become more open, the barrier is lower, and it has become more convenient. However, strict measures have been in place at the same time. For instance, in the area of taxation, if you want to issue an invoice, you have to spend half day at the taxation bureau to do it. You have too tight control on businesses and treat the taxation bureau as businesses’ second finance office. It is a problem. Even though you are providing services with a very good manner, you still have absolute superiority, with all businesses lining up for their turn to see you. When everyone has to make a visit to the taxation bureau to issue an invoice, are you sure that all your taxation officials are so competent and efficient? Are you so heedless of the labor costs of Shenzhen businesses? This is why I think in the era of the Internet, the government should only implement macro instead of micro-management.”

3. Government Projects

As far as government projects are concerned, Shenzhen’s support to entrepreneurship is mainly reflected on its government’s commitment to small and medium-size businesses. Some experts noted: “The government of Shenzhen pays much attention to small and medium-sized businesses, and provides considerable support to businesses in terms of loans, guarantees, technology, and so on. I think a government can be evaluated from two dimensions, that is whether it is a control-oriented or a service-oriented government. Basically the government of Shenzhen is a service-oriented government instead of a control-oriented government, and believes in the powers of the market and commerce. This point remains to be rather clear.”

Some experts also noted that in terms of government planning, Shenzhen indeed attaches importance to small and medium-sized businesses. It not only established the Shenzhen SME Service Department, but also has incentive policies (funding, growth incentive policies, and so on) in place. Nevertheless, it is rather difficult to have them implemented on the ground. They noted: “Small and medium-sized businesses need support because they are small in scale, with only a small staff and little experience. So even though there are favorable government policies in place, they may, in the first place, not know their existence. Second, even though they know their existence, they may not be able to obtain the incentives because too many documents are required and too many things to be done. The right way is to enable eligible businesses to receive them automatically so that businesses do not have to undergo an endless circulation of documents and a marathon of making declarations. And such a lengthy process may cause unfairness – some businesses may be rewarded with the money because of their insistence on going to the authority for the subsidies every day but ignore their business. On the contrary, those who commit themselves wholeheartedly to their businesses may not be able to obtain the support of the government’s incentive policies. All these deserve attention.”

In fact, Shenzhen’s support on entrepreneurship is a close integration of policies and projects. Shenzhen Municipal Government promulgated its “Opinions on Strengthening the Work of Promoting Employment through Entrepreneurship” (深圳市人民政府關於加強創業帶動就業工作的實施意見) in 2015. Following it was the launch of four supporting documents, namely “Notice on Doing a Good Job in Entrepreneurship Secured

Loans” (關於做好創業擔保貸款工作的通知), “Method of Issuing Self-entrepreneurship Support Subsidy in Shenzhen City” (深圳市自主創業扶持補貼辦法), “Notice on Strengthening Entrepreneurship Mentoring Services” (關於加強創業導師服務工作的通知), and “Notice on Strengthening the Recruitment of Entrepreneurial Projects” (關於加強創業項目徵集工作的通知). Subsequently, further documents including “Mechanism to Safeguard against Entrepreneurial Failures in Shenzhen City” (深圳市創業失敗保障辦法), “Guiding Opinions on Entrepreneurial Industry in Shenzhen City” (深圳市創業產業指導意見), “Method of Relaxing Entrepreneurial Barriers in Shenzhen City” (深圳市放寬創業門檻實施辦法), “Method of Managing Small-sum Secured Loans” (深圳市小額擔保貸款管理辦法), and “Method of Issuing Self-entrepreneurship Incentive Subsidy in Shenzhen City” (深圳市鼓勵自主創業補貼辦法) were released. These policies include a lot of project support such as the integration of industrial development plans to support a number of outstanding entrepreneurial projects that are selected from the pillar industries, strategic emerging industries and future industries of Shenzhen on an annual basis.

4. Education and Training

Overall, Shenzhen's entrepreneurship education and training have been marketized with a vast number of businesses and institutions engaging in the business. Corporate training, especially training for small and medium-sized businesses, is the best done area, and all parts of the training system from employee, finance and legal training to training for the president's office, can be provided by commercial training institutions. “Corporate entrepreneurship training usually takes this approach: corporates engage themselves in establishing internal colleges, developing systematic practice-based curriculum systems, providing training for main business employees (mainly inexperienced new recruits and fresh graduates), and work with tertiary institutions for cooperative education that extends from the basis of existing training systems.

The government may not be doing as much as businesses do. This is on one hand due to an insufficiency in the number of professional government-run educational and training institutions such as higher vocational colleges and business schools. On the other hand, it is because businesses are more sensitive and know what kind of training new businesses actually need. It is for sure that the many new businesses in Shenzhen have to

receive training in order to acquire marketing and other business skills. Therefore, some experts suggested: “The government has to provide more subsidies to training itself because training fulfils some kind of public interest. If the government can give some support, training will be more beneficial to the growth of new businesses.”

One of the major reasons causing this situation is that education and training have been a kind of very profitable business in Shenzhen and this market has become relatively mature. “This is related to the needs in the market. In the first place, business can be profitable when demand exists. Educational and training institutions can fulfill this demand better and that's why it is said that this sector in Shenzhen is more driven by the market than by the government. Shenzhen has a number of educational and training institutions like privately run business schools and this is one of the aspects that differentiate Shenzhen from other Mainland Chinese cities. In other words, while Shenzhen is well-developed in corporate skill and management training, related training programs run by the government lag behind market needs. This is an issue related to both the mechanism and the demand supply pattern.

Another reason is that there is not sufficient entrepreneurship education and training available at tertiary institutions. Some experts noted: “Talents trained by tertiary institutions do not meet industrial development needs, or there lacks an all-round system to achieve entrepreneurship education. For example, art schools' furniture design courses may make aesthetics the focus of the drawings, but students may know nothing about product structures. They may also have no idea about the fundamentals of manufacturing, not to mention ergonomics, structural mechanics and the regular standards and sizes of furniture. Because tertiary education is disconnected, businesses require systematic training systems to help new recruits catch up.

Some experts also noted: “A lot of institutions in Shenzhen are doing it. Many industry associations offers training programs and the government provides support. But no systematic educational and training system has been formed. Laid-off workers under the labor bureaus are re-employed. The SME Service Department subsidizes small and medium businesses to carry out training programs. While many departments have related but scattered resources, there is not a mechanism to integrate all the available

resources and form a mentoring and training system for entrepreneurship.

5. Research and Development Transfer

Compared with other Mainland Chinese cities, Shenzhen is particularly strong in research and development transfer. "While there are only a limited number of universities and research institutions, the majority of Shenzhen's research and development projects are carried out in businesses. Therefore Shenzhen's research results are closely linked with the market and the transfer rate is high. Some small and medium-sized businesses also have links with some of China's State Key Laboratories and many national and regional research institutions have direct cooperation with businesses. This promotes the transfer of research results and benefits the basic research of newly established small and medium-sized businesses. Also, a close link with the market ensures that the products produced can fulfill market needs, which is also beneficial to the growth of businesses."

Nevertheless, experts also noted: "This is an area at which Shenzhen is particularly stronger, but there exists a big crisis. Because almost all research efforts are carried out at businesses, there is a serious lack of basic research. This will limit Shenzhen's long-term development in the future." This is the first problem.

The second problem is that the government's input into research and development has not been sufficient. Particularly, it lags well behind those of large cities like Beijing and Shanghai. Some experts considered research and development transfer as both a strength and a weakness of Shenzhen. "Of course we can laud that businesses are the main research force. We can also be proud of the four percentages of over 90% [more than 90% of research institutions are set up inside businesses, more than 90% of researchers are concentrated in businesses, more than 90% of research funding come from businesses, and more than 90% of job-related inventions originate from businesses]. But on the other hand, this illustrates that the government is neither playing a part in nor providing funding to this aspect. The government should play a role in supporting businesses' macro and long-term research but in the end it is done by businesses themselves. If so, why are you, the government, needed? I think government participation is still needed when our business environment is taken into consideration. If you don't do it, you should consider returning this sum of money to businesses. Now we have high praise for

the achievements of Huawei but actually it is a special example. Huawei is in the fast growing communications industry. It is the high growth of this particular industry that supports Huawei's high research input. But such a high level of research input is beyond the means of the majority of businesses. After all, businesses are not research institutions. It is in this regard that Shenzhen fails to input sufficiently into long-term strategic research. I think the government should take the lead and build this platform together with businesses. In this way, the government's funding, resources and the opportunities in the market can be combined organically.

6. Commercial and professional infrastructure

Basically Shenzhen has formed a multi-level system of commercial and professional services. Many experts thought that Shenzhen is uniquely positioned in the use of commercial and professional infrastructure. Shenzhen's commercial and professional infrastructure is unquestionably the best in China. All levels of services (high, medium, and low) are available in the market where there are all kinds of subcontractors, product suppliers and consulting firms. These service providers can be top-class or as small as having only one to two people. And it is this mix of vendors that enables Shenzhen to fulfill businesses' different levels of needs.

One of the reasons is Shenzhen's close proximity to Hong Kong, which is home to the Asian headquarters of many international consulting firms. This is why the reach of their services can be so easily extended to Shenzhen. Also, many large-scale consulting institutions make Shenzhen as their starting point and extend their reach from here to all over the country. So the number is on the rise. Another reason is that historically, Shenzhen is a city that has grown from a small town. While local people are not very powerful, a lot of people come from other cities and businesses and they constitute a very large market. This is different from other Mainland Chinese cities. As these cities are dominated by local people, entry to these markets is relatively difficult for external powers. Only a relatively small number of subcontractors and product suppliers can access these markets. Furthermore, Shenzhen boasts a relatively open market environment, a relatively better market order, a better developed intermediation services industry and a provision of better quality intermediation services including legal, accounting and auditing, and listing services.

Service fees were assessed to be neutral and should not cause a burden to the operations of businesses. "Overall speaking, subcontracting, product supply and consulting fees are within the affordability of new and growing businesses. But the better the subcontractors, product suppliers and consulting firms, the higher service fees will be charged. New businesses may not be able to afford high service fees. But whether a business can find good and professional legal and accounting services depends on how much it pays for these services. It is relatively easier for large businesses and businesses with a good prospect to find good legal services. That is to say, businesses with a good growth potential usually can enjoy better services because they have bigger demand for services and are willing to pay a higher service fees for better services to fuel the development of their businesses. The same applies to consulting services, and it is even more so when it comes to special services like financing and listing services. A business can become more competitive if it is willing to pay higher prices for receiving the better services offered by solicitors from better law firms and for the services of accountants from better accounting firms. It is different for a business to become successful if it cannot afford to pay higher prices for better professional services."

Banking services received many negative comments. It is mainly because the support provided by financial institutions is not sufficient and causes financing difficulties for small and medium-sized businesses. "Because loan handling staff bears personal responsibilities, they tend to avoid lending loans to small and medium-sized businesses. Some private banks and small banks may provide loans to new and growing businesses. However, they will have stricter risk control on these loans by requesting more securities and guarantees. These additional requests bring extra burdens to small and medium-sized businesses."

However, it is easier for growing businesses to obtain banking services. "Growing businesses can obtain good banking services because they are usually considered as quality customers and banks may compete with each other to acquire them." Overall, banks' financing mechanism is developing in a good direction. For example, credit loans for businesses have become better because securities were required in early years. The government has also come up with some initiatives to encourage entrepreneurship. New businesses are given some policy subsidies and bank loan policies have been

relaxed. So overall it is better than it was in previous years. In addition, the new Over The Counter (OTC) market provides a very good way to solve businesses' financing problems.

7. Market Openness

As a window and experimental field of China's reform and opening-up to the world, Shenzhen boasts not only the highest degree of openness among all Mainland Chinese cities, but also a better established market mechanism. "The majority of the people in Shenzhen come from all parts of the country. Different cultures meet with great inclusiveness, and a high degree of openness towards attitude, culture and the way of doing things is seen. This can be reflected in the market – consumers, suppliers and the government all show a very open mind." As far as market entry barrier is concerned, businesses can basically do anything they like unless it is explicitly prohibited by law. Shenzhen has also reformed its business system in recent years. This on one hand results in largely reduced business registration costs; on the other hand, the reform has brought Shenzhen's registration system in line with those of developed countries. Obviously it benefits entrepreneurs in their course of starting up their own businesses.

On the other hand, new and growing businesses have to spend higher costs to enter the market. The higher costs are mainly caused by marketing costs which include not only advertisement costs but also market entry costs. It does not cost much for new and growing businesses to enter the market of consumer goods. Rather it depends how good a product is in terms of quality and how innovative and attractive it is. But entering the commercial product market usually requires cooperation with large businesses, and the product may have to be supplied on the OEM basis in order to be selected for group procurement. These result in higher market entry costs. However, some experts noted: "New and growing businesses usually find it difficult to compete with large businesses in the market because they lack brand awareness. Large businesses have brand advantages. This is reasonable and right. It is right that large businesses have brand advantages because it has spent many years to build up its brand reputation."

Some experts were also aware of the issue of monopoly. They noted that "basically, the antitrust laws have not been effective in tackling monopoly. In recent years, monopolistic Mainland Chinese businesses have been

becoming bigger and bigger through restructuring and integration. Many tender invitation documents also clearly specify the requirements on the size of the business, while designating specific brands is common."

8. Physical Infrastructure

Physical infrastructure – especially communications and logistics, which is an area of strength of Shenzhen – was rated highly in the study. "We don't have to say too much about Shenzhen's communication infrastructure. Shenzhen is among the cities with the most developed communication infrastructure and is home to China's two largest communication equipment and terminal businesses, Huawei and ZTE. Only city-wide mobile communication requires further optimization by, for instance, enhancing the Wifi network to cover the entire city. Transportation is also an area without significant problems. Shenzhen are very strong in airports and seaports, ranking fourth nationwide in terms of airport throughput and fourth worldwide in terms of seaport container throughput. Highways and high-speed rail are also well-developed in Shenzhen.

Land is an issue arousing general concerns in Shenzhen. "The only problem is land space. We all know that Shenzhen is a small city. While its different industries are well-developed, its land space is really limited. This is a disadvantage and creates difficulties for new businesses when they have to acquire land for their business. There is also a good side to it though because it is favorable not only to the high-end development of the industries in the city, but also to Shenzhen's industrial structure adjustment." "The core reason is that the land costs in Shenzhen are rising fast, bringing great challenges to entrepreneurial businesses. Now the government is making attempts to mitigate the problems caused by the fast rising land space costs. For example, to offset the rise in entrepreneurial costs due to increased land costs, the government repurchases assets and leases them at a lower price; establishes funds to support innovation; and provides housing subsidies for talents with an entrepreneurial spirit. The value of land is distributive rather than productive. If the proportion of distributive value becomes too high, the productive value will be squeezed. This is definitely a huge challenge for Shenzhen in the future.

9. Cultural and social norms

Shenzhen is well-recognized for its cultural environment for entrepreneurship. Experts noted that as a special

economic zone, Shenzhen itself is already a product of entrepreneurship. With an entrepreneurial culture deeply rooted in its mind, it positively affects people's entrepreneurial behavior by introducing a fighting spirit that emphasizes the courage to keep exploring and trying. This is rather special nationwide. Shenzhen is a city that places heavy emphasis on efficiency. People are straightforward with each other and care little about social origins. They are more inclusive, more tolerant about failures, more rational, and so on. These are the values that we stress every day. They are favorable to entrepreneurship. Many people in Shenzhen have risen from poverty to wealth and these rags-to-riches stories reflect the "Shenzhen dream".

Experts analyzed this from different angles.

First, the inclusive and innovative spirit of Shenzhen culture favors innovation and entrepreneurship. "Shenzhen is the earliest city in China to reform its economy and open up its doors to the world. This leads to the formation of an open and innovative culture unique to Shenzhen. The 'Top 10 Concepts of Shenzhen' selected by the citizens of Shenzhen a few years ago are all open-minded concepts, such as 'If you come, you're a Shenzhen' (來了就是深圳人), 'encourage innovation and tolerate failures' (鼓勵創新, 寬容失敗), and 'Innovation is the root and soul of Shenzhen' (創新是深圳的根, 深圳的魂). Apparently, such an open culture is particularly suitable for young people to innovate and start their own businesses in Shenzhen. They are free of historical burdens and mental constraints, and are not interfered by the kind of social relationships that some old cities may have."

Second, Shenzhen's migrant culture and contractual concept are key drivers to innovation and entrepreneurship. "Among the five special economic zones, why is Shenzhen the only one to be successful? The core is the new culture formed in Shenzhen, whereas there is no new culture formed in other special economic zones. Of course this is related to the population structure. Basically local people make up more than 60% to 70% of the population of other special economic zones. It means that all migrant people have to integrate themselves into these special economic zones' existing social norms and cultural structure systems before they can obtain the opportunities and resources available in such a system space. Otherwise it is impossible for them. This is an explanation from a cultural perspective.

Shenzhen is different on the contrary. Almost all the population of Shenzhen is migrants who come with their own different cultural habits and behavioral norms. What can be done next? We have to sit down and talk. In this sense, a credit or contractual spirit with market meaning can be generated. This is a new culture and is not a kind of relationship that depends on traditions. Shenzhen is a society of strangers. None of us knows each other's information or expectations. It is only after a particular kind of gaming process, and through a certain kind of contractual spirit, that new behavioral norms can be established. Combining international rules and regulations, new cultural values are forged and this is an enormous driver to entrepreneurship and innovation in Shenzhen."

Third, the "Spirit of Shenzhen Businessmen" (深商精神) has a positive impact on entrepreneurship and innovation. "The core of the Spirit of Shenzhen Businessmen is to value creativity and innovation more than skills and capital. Money is available and the focus is on what you want to do. This is very important. If you come up with a thing that is worth investing in, you do not have to worry about funding because all kinds of investors including venture capitals are watching and looking around for good projects. When you want to take the risk, you have to consider how good your idea is. It is not a matter of daring to do so or not. This is also the reason that makes Shenzhen a leader in creativity and innovation in China."

Unlike previously when almost all comments received were positive comments, experts started to notice negative things in the culture of Shenzhen.

The first thing is the emerging solidification of social classes. For example, some experts noted: "Things have changed dramatically in recent years. This is because Shenzhen Special Economic Zone has been established for over 30 years. As Shenzhen is getting older, its population structure has gradually been formed, with certain interest groups gaining power steadily. Inevitably they have started to protect their interests, resulting in more solidified social interests. This also dampens Shenzhen's entrepreneurial vigor to some extent.

The second thing is the negative impact of incorrect money concepts on cultural values. Some experts noted: "There is a conservative side in Shenzhen's cultural values. One example is that the over-emphasis on money has led to contempt for behaviors without an economic or

profit-making purpose. This is actually worldly, and vulgar, and is not something right as far as entrepreneurship is concerned. It is just too pragmatic but there are just too few ideological people. Some spiritual things are missing, for example, space for poetry, or space for art. There are people who are engaged in poetry or art, but some of the activities they organize still bear a hidden agenda of making money through a so-called business model. This is rather different from cities like Beijing and Shanghai. In Beijing, there are still a lot of people who do literature, or art, simply out of a love for it. In this sense, Shenzhen's cultural level is not high enough. This will restrict the "cultural transformation" of a post-industrial society into post-urban civilization, for example, challenging authority, boundary, and vulgar lives. Right? I need to transcend those things and pursue something higher. As such, Shenzhen is still a worldly city rather than a cultural one. There lacks "heavenly people" who have some foolishness and purity in their character. Nobody is willing to do things that are not making money. Therefore, putting money value in the first place or being too commercial is not always favorable to the entrepreneurial, innovation and creative atmosphere in Shenzhen."

10. Recommendations to Shenzhen

1. Provide funding services to new businesses through intermediate institutions

It is understandable that due to risk considerations, banks less often provide loans to new businesses. Preferably there are intermediate institutions to guarantee loans for businesses. These intermediate institutions do not charge new businesses a fee, while this fee can be subsidized by the government. The government can also establish funds or institutions with a similar nature as angel funds. Although the government has done so, such funds and institutions remain few in number. From past experience, applicants are required to be high technology businesses, and the support funding is basically capped by the tax payable. So in essence this kind of funding corresponds to a tax refund. Some project-based subsidies and discount loans are also available for dealing with particular issues. It is hoped that there can be finer tiering of the subsidized businesses so that businesses of different scales can obtain some support or subsidies through different institutions or projects. A business reaches an important barrier in its development when its marketing and sales amount to RMB10-20 million. Some businesses simply stagnate at this point. So this is an important line in the tiering system and it is recommended to have a support

policy to help businesses overcome this ridge. (Currently, growing businesses can obtain a credit limit by obtaining guarantees from a guarantee agency established by the government. Many of their projects also receive government funding.)

Even though the barrier for small-sized businesses is falling, many support policies and funding support remain to set barriers for applying for them. In fact, despite an abundant availability of funding in the financial system of Shenzhen and in large businesses of the city, the government still has a tendency to provide even more funding support to large businesses. Contrarily, support policies that are specifically targeted at small businesses, particularly those micro and small-sized businesses that are in their startup phase, are limited. Hence, it is necessary for government departments to pay immediate attention to the issue of establishing safeguard measures so that enable small businesses also receive some incentives.

2. Utilize financial tools to promote startup development

While Shenzhen's financial system is more developed than those of other Mainland Chinese cities, early-stage ventures still encounter financing difficulties. In this respect, Shenzhen is very different from Silicon Valley. In our opinion, banks can offer debt financing when returns are sufficient to cover risks. It is because the gross profit margin of some good industries can reach 70% to 80%. Therefore, businesses from these industries can afford floating interest rates. Banks in Silicon Valley also provides loans to businesses without collateral. This on one hand secures a high level of interest yield; on the other hand, there is a possibility for obtaining the businesses' future high-growth yields through the execution of debt-for-equity exchanges realized by exercising preemptive rights or other means. But our banks are not willing to provide loans to early-stage ventures at the beginning or even after these ventures obtain equity financing later. They remain so even the interest rate is raised. This happens not only to industries with higher risks like P2P, but also to other Internet industries with a high traffic. Overseas returnees are no exception. I think that an underdeveloped debt market is not favorable to entrepreneurship development, because equity financing cannot be endless. Why is it so? It is because it is not favorable to stimulating an entrepreneurial team's initiative when the team starts its business with a small number of shares only. Also, if the team only has a small number of shares, it is likely to initiate related

transactions in future, and such examples are abundant in reality. Furthermore, startups are not well supported by financial instruments due to controls and limited variety. In other words, the financial system has not been providing sufficient support to meet the needs of startups. Of course, speaking from another perspective, things will not be possible without the support of the financial system, and startups that cannot use financial instruments effectively will not be able to develop well and quickly. There is no room for such ventures to develop in the market.

3. Improve government's support approach

Although Shenzhen's nascent businesses are strongly supported by the government, there are situations that the government's support is just inappropriate or unhelpful. Some businesses noted that in some aspects and situations, what the government does is actually creating an unfair market with the consequence of crowding out the good. For instance, the area requirement on incubators will easily turn them into real estate projects. In our point of view, it will be better for the government to do nothing than to provide something that is inappropriate or unhelpful. It must be good ideas that should be subsidized; otherwise unfairness will be created. Let businesses compete on one level. Things become simpler where there are no subsidies, as businesses do not have to rely on their relationship with the government. Recommendations:

- It is recommended to trace the effect of government assistance subsidies for technological innovation and entrepreneurship. Establish a scientific evaluation system to carry out and monitor dynamic assessment constantly. This evaluation system has to consider not only the direct effects but also the spillover benefits of government funding. For instance, a government-subsidized business or team may fail, but members of the project team can re-engage themselves in entrepreneurial activities. Would it be a point that deserves reasonable consideration? It is recommended to strengthen policy pre-survey and feasibility analysis.
- The government should provide more support assistance to new businesses. Do not discriminate them. As far as the application prerequisites are concerned, the time of establishment should not be taken as the only criterion. Rather, the work experience or project experience of the entrepreneurial team members should be considered as well. For instance, while startups that are less than one

year of age are not eligible to entrepreneurship coupons, the members of their entrepreneurial team may not be less experienced than other businesses.

- The government should provide assistance to businesses by supporting their projects rather than assisting them in monetary form. As a Chinese saying goes, it is better to teach one the skill of fishing than to offer him fish. That the government purchases more services is better than providing direct subsidies. Why? Monetary subsidies are rewarding in nature with the only effect being to bring non-operating income to the subsidized businesses. On the contrary, the income generated from providing services directly procured by the government or from working for the government on a subcontracting basis is operating income. It not only increases the businesses' cash flow, but also helps businesses to train their teams. Businesses are more willing to polish their teams and enhance their operations amid market-based competition.

- Social funds are encouraged to provide assistance to entrepreneurial activities. The government should set up guiding funds to leverage the input of social funds and encourage private organizations to establish entrepreneurship supporting funds in order to deal with the issue of financing difficulty faced by startups.

4. Attract more overseas talents to start up businesses in Shenzhen

Shenzhen has done an excellent job in attracting talents, taking a leading position even among cities across the world. Shenzhen is one of the first destinations choices for overseas returnees, who have been playing an active part in entrepreneurship in Shenzhen. To these overseas returnees, who are not that familiar with the environment in China, Shenzhen is less well-known than Beijing or Shanghai. So Shenzhen has to take the initiative in attracting overseas returnees in order to gain a head start. As there are only few universities in Shenzhen, talent recruitment is a weakness of the city. As such, Shenzhen cannot just sit back and wait for outstanding students to come. Shenzhen is no lack of money but it has to explore new means and ways to improve its work of attracting international talents, teams and projects to the city.

5. Lower entrepreneurial costs

- It is recommended to control property prices and rents. If the Shenzhen government wants to have better entrepreneurship and a better environment, the first thing to do is to suppress the high property prices and

rents. It is recommended to put in more efforts to make Shenzhen an ideal place of abode for talents so that entrepreneurs and startups can afford the rents and settle down worry-free.

- It is recommended to support small businesses and increase entrepreneurship success rates by lowering taxes and providing employee housing subsidies.

- With respect to the property rent issue, it is recommended to put in more efforts in building public rental housing or providing housing subsidies to entrepreneurs.

6. Strengthen intellectual property protection

When patent protection is not sufficient, businesses will worry about the issue of counterfeiting or stealing of their technology. It is recommended to strengthen intellectual property protection by introducing stricter punishment for the provision of fake products and services.

7. Support innovation and entrepreneurship competitions

Shenzhen Innovation & Entrepreneurship Competition is recognized for having played a good part in the selection of some good projects that deserve to be invested in. Thus, it is recommended to build more platforms of this kind in Shenzhen. At the same time, I think such competitions cannot be organized like a blow of wind. Why did I say so? If such competitions were organized like a blow of wind, after the blow, those non-winning teams or projects would have to go home empty-handed without obtaining or learning anything except a "cold" score, even though they have so well prepared for the competition. That means their efforts are not rewarded proportionally. Then what should be done? It is recommended to strengthen interaction and exchange in order to help participating teams enhance themselves. It is also recommended to provide follow-up entrepreneurial services and strengthen entrepreneurship mentoring and training for projects that can be helped or supported.

8. Strengthen public platforms and improve the level of intermediate institutions

- Compared with other first-tier cities in China, Shenzhen is in short of key universities and national key research institutions. The government should strengthen public platforms and its subsidies to generic technology development.

- It is recommended to establish public information platforms to promote the disclosure of government

information and enhance the public sharing and the transparency of data. It is also recommended to organize entrepreneurship-related press conferences on a regular basis in order to promote the exchange and product matching among commerce chambers, industrial associations and entrepreneurs.

- It is recommended to enhance the professional level of intermediate institutions and the degree of market segmentation so that they can better serve startups with their professional services.

9. Promote entrepreneurial interaction between Shenzhen and Hong Kong

- It is recommended to promote the matching between the universities in Hong Kong and the industries in Shenzhen. Shenzhen has attracted The Hong Kong University of Science & Technology, The Chinese University of Hong Kong, the Hong Kong Baptist University, and so on, to establish schools in the city. But these are only collaborations on the surface and Shenzhen has to learn the mechanisms too. Shenzhen is quick in developing the educational industry but it is not so good in technology transfer cooperation.

- Thanks to well-established institution, Hong Kong remains to be a financial center and we should promote the matching between the financial industry in Hong Kong and the industries in Shenzhen. As the development of Qianhai Cooperation Zone has not yet reached a significant scale, it is necessary to continuously put in cooperation and matching efforts. For instance, there is room for cooperation in making Shenzhen businesses an internship base for Hong Kong's universities. In Shenzhen, 94% of research is done in businesses. Riding on this strength, Shenzhen businesses can cooperate with universities and research institutions in Hong Kong to establish joint research mechanisms or teams.

- It is recommended to leverage Hong Kong's position as an international trading center to promote Shenzhen's products globally. Hong Kong remains to be the most internationalized city in China, ahead of all other cities in the Mainland. It is recommended to make optimal use of Hong Kong's marketing platform and its position as an international trading center to promote Shenzhen's products. Currently, the two cities have not yet been able to complement their strengths. The cities' strengths have not been integrated together and problems exist in the communication mechanism between the two cities.

- It is recommended to strengthen the exchange between the governments of Shenzhen and Hong Kong on entrepreneurship supporting policies with an aim to promote the creation of better opportunities for entrepreneurial and growing businesses. It is also recommended to promote the exchange not only between private institutions in Shenzhen and Hong Kong that are willing to support entrepreneurship, but also between entrepreneurial businesses and growing businesses in Shenzhen and Hong Kong.

The Entrepreneurial Mindset: Lessons about Hong Kong

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"Watch your thoughts, for they become words. Watch your words, because they become actions. Watch your actions, because they become habits. Watch your habits, because they become your character."

– Margaret Thatcher (1925 – 2013)

Entrepreneurship is defined in the Cambridge Dictionary as a skill in starting new businesses, especially when it involves seeing new opportunities. As such, human has been very entrepreneurial since the dawn of time, from the first caveman that realised that he can barter for fresh meats from life-endangering hunts with the stone tools he can manufacture in safety of his cave, to the like of Mr Henry Ford, who can see the profits to be had from mass manufacturing gas engine "iron" carriages to feed the need for human transportation, slowly replacing the horse carriages. Though human can be very entrepreneurial, not everyone is an entrepreneur and more importantly, not every entrepreneur is born with an entrepreneurial mindset. Lucky for us, what we do and learn in life physically changes how our brain rewires itself.¹ An entrepreneurial mindset can be learnt.

One of such entrepreneurial mindset education strategies is the Berkeley Method of Entrepreneurship (BMoE) that was developed by Professor Ikhtlaq Sidhu and his colleagues from the Sutardja Center for Entrepreneurship and Technology at University of California, Berkeley. The BMoE is based on the hypothesis that the mindset of an entrepreneur can be characterised by a set of behavioural patterns and that an inductive game-based teaching approach is a successful vehicle for introducing and re-enforcing these.² The BMoE advocates that the entrepreneurial mindset is a key element in the successful

development of students to be entrepreneurs. A list of ten behavioural patterns of successful entrepreneurs has been proposed in the curriculum of BMoE and these are presented² in List 1.

List 1: Ten behavioural patterns characterising an entrepreneur².

1. **Pay-It-Forward:** This is characterised as "asking the beneficiary of a good deed to repay it to others instead of to the original benefactor"².
2. **Story Telling:** This is characterised as the ability to effectively communicate an idea to others, especially to those who matter most for an entrepreneur – the potential investors, the customers, the collaborators, etc.
3. **Trust:** This is the ability to trust others without expecting anything in return and by trusting those who the trusting party has no direct information – generalised trust.
4. **Accretive negotiation:** This is characterised by seeking to achieve a win-win outcome in all transactions.
5. **Resilience:** This is the ability to accept failure is part of learning and continuous improvement and development; it is not to be accepted as a defeat.
6. **Diversity:** This is the ability to find strength and value in diversity and differences – the ability to accept and leverage diversity, as strength is a very powerful behavioural pattern.

7. *Role Model*: This is the willingness of being the mentor for other. This ability to be a role model for others is a very strong tool to learning new behaviours and to influence the behaviours of others who follows you.
8. *Believe*: This is a strong behavioural pattern related to self-efficacy.
9. *Good Enough*: This is a core behavioural pattern for successful entrepreneurs where there is never a perfect product but always a good enough to go to market.
10. *Collaborate*: The ability to collaborate extend beyond to those who are friends but successful entrepreneurs also collaborate with their competitors.

Although it has been clearly identified² that the behavioural patterns in List 1 are dominant among successful entrepreneurs, there are strong psychology truths behind each of these entrepreneurial mindsets.

Pay-It-Forward

In the Bible, the Lord Jesus himself said: 'It is more blessed to give than to receive.'³ Is this just behaviour of being philanthropic? It is more than that. In his book⁴ on the psychology of persuasion, Robert B. Cialdini made a strong case for the reciprocity rule in its pervasiveness in human culture. As noted by Cialdini in his book³,

"The noted archaeologist Richard Leakey ascribed the essence of what makes us human to the reciprocity system: "We are human because our ancestors learned to share their food and their skills in an honoured network of obligations," he says. Cultural anthropologists Lionel Tiger and Robin Fox view this "web of indebtedness" as a unique adaptive mechanism of human beings, allowing for the division of labour, the exchange of diverse forms of goods, the exchange of different services, and the creation of clusters of interdependencies that bind individuals together into highly efficient units."

Cialdini goes further to stress that we "make no mistake, human societies derive a truly significant competitive advantage from the reciprocity rule, and consequently they make sure their members are trained to comply with and believe in it. Each of us is taught to live up to the rule, and each of us knows about the social sanctions and derision applied to anyone who violates it. The labels we assign to such a person are loaded with negativity – moocher, ingrate, welsher. Because there is general

distaste for those who take and make no effort to give in return, we often go to great length to avoid being considered one of their number."

Hence, it is fair to say that the behavioural pattern of paying it forward is not just innate in us as human beings to best survive as highly competitive and yet interdependent individuals (especially for entrepreneurs), but also we are psychologically wired to do our part to pay it forward. Translating it to the start-up setting, paying forward represents one effective way of fostering new generations of entrepreneurs, enabling growth in nascent businesses through mentoring, and ensuring the continuity of entrepreneurial spirit within the economy.

Story telling

Human being is a social animal and no man is an island. To communicate with one another, we need to tell each other our stories. The need for story telling has been at the core of human civilisation ever since the time of cavemen when they gather in their caves and etch the story of their successful animal hunts as cave paintings that we find today at archaeological sites. Story telling is also core to the traits of a successful entrepreneur as he or she needs to efficiently and effectively convey his or her business and convince his or her audience – may that be the potential investors, potential customers or collaborators, so that they will trust and invest in him or her venture. The best storyteller tells the story from the audience's perspective and priorities – the storyteller cares for his or her audiences. People only care how much you know when they know how much you cared.

In his work², Professor Sidhu noted:

"Narrative, or story telling, is central tool in addressing many of today's key leadership challenges, for example, articulating the risks and opportunities identified by strategic management tools like strategic plans, scenario analysis, and dilemma resolution (Denning, 2006). Story telling can be one way to overcome the communication chasm. It can be used effectively for several purposes of communication; sparking action, transmitting values, explore alternative future scenarios or sharing knowledge."

Trust

Trust is the foundation of any human relationship. Without some basic elements of trust there can never be any interdependency or communication between individuals. Trust also entails generating trust, trusting

others, and being trusted. This is an important behaviour because without trust, we do not share information or resources, and we do not receive feedback or cooperation, hence, we do not learn or grow as quick as others who do trusting relationships.

Adam Smith reminded us that honesty is always the best policy – especially in business. In his book ⁵ on the irrationality of the human mind, Dan Ariely mentioned a story from his MIT student from Iran where “business there lacks a platform of trust. Because of this, no one pays in advance, no one offers credit, and no one is willing to take risks. People must hire within their families, where some level of trust still exists.” We can surely imagine, without trust, no entrepreneur can be successful and no entrepreneurial ecosystem can flourish.

We recently noted a positive development in the Hong Kong entrepreneurial ecosystem that might be attributed to improving levels of general trust. Informal investors from Hong Kong are shifting their attention from investing in their closest friends and family to investing into “strangers with good ideas”. Such attitude is conducive of a healthy change in entrepreneurial culture and promotes further development of nascent businesses locally.

Accretive negotiation

Accretive negotiation is a behavioural pattern that seeks to find transactions that is win-win for all. Accretive entrepreneurs will also build more trusting relations and are more inclined to pay-it-forward. When an entrepreneur is accretive, he or she develops long-term relations that will be rewarding in the future. If people feel “taken advantaged of” by you then they will not help you again. They will also tell all their friends not to work with you and they will do that publicly, i.e. on Facebook. ⁶

Engaging in social entrepreneurship or social innovation are two complementary ways of implementing accretive negotiation. We see more social enterprises growing in Hong Kong in the past few years that are developing with support from the Social Innovation and Enterprise (SIE) Fund, connecting Hong Kong start-ups from different sectors with other businesses, NGOs, academics and philanthropies to create social impact to address poverty and social exclusion. The Fund provides entrepreneurs with financial and non-financial resources in support of research and capacity building and continues to do so throughout the entire life cycle of innovative ventures,

from idea incubation and seed funding to implementation and eventual scale-up. The Fund’s objective is to foster an ecosystem where social entrepreneurs can thrive and innovative ideas, products and services can benefit society by meeting underserved needs and unleashing underutilised talents ⁷. Since its launch in 2015, the SIE Fund has provided funding to 38 innovative ventures with high social impact.

Resilience

Entrepreneurs are very resilient individuals as entrepreneurship has a low rate of success – from 1% to 5% (at most). Successful entrepreneurs never take failures personally, but rather they attribute failures as just part of learning. Professor Sidhu has noted in his work ² that “entrepreneur should repeat, continue after failure and pivot until the chain of stakeholders and commitments converge to a viable new venture (Ries, 2011).” This behavioural pattern is also core in the differentiation between the growth mindset ⁸ of entrepreneurs and the fixed mindset for non-entrepreneurs.

From the current GEM study, it is found that at the across nations level, male participants aged between 18 to 64 of age has a higher tendency for not embarking on entrepreneurship at an earlier age (with the norm age peaking between 35 to 40 years of age) due to fear of failure, when compared to their female counterparts, wherein the norm age is peaking between 40 to 45 years of age (Please see Figure 1). We noticed a positive shift of about 5 years of age in the female participants over the male participants (Please see Figure 2). This is consistent with the peak norm age for fear of failure across the population being found at 40 years of age (Please see Figure 3). In Hong Kong, from the dataset of the current GEM study, it is found that the overall Hong Kong population is quite resilient to fear of failure (i.e. less likely to give up on entrepreneurship due to the fear of failure) with about 60% respondents not being afraid to embark on an entrepreneurial path.

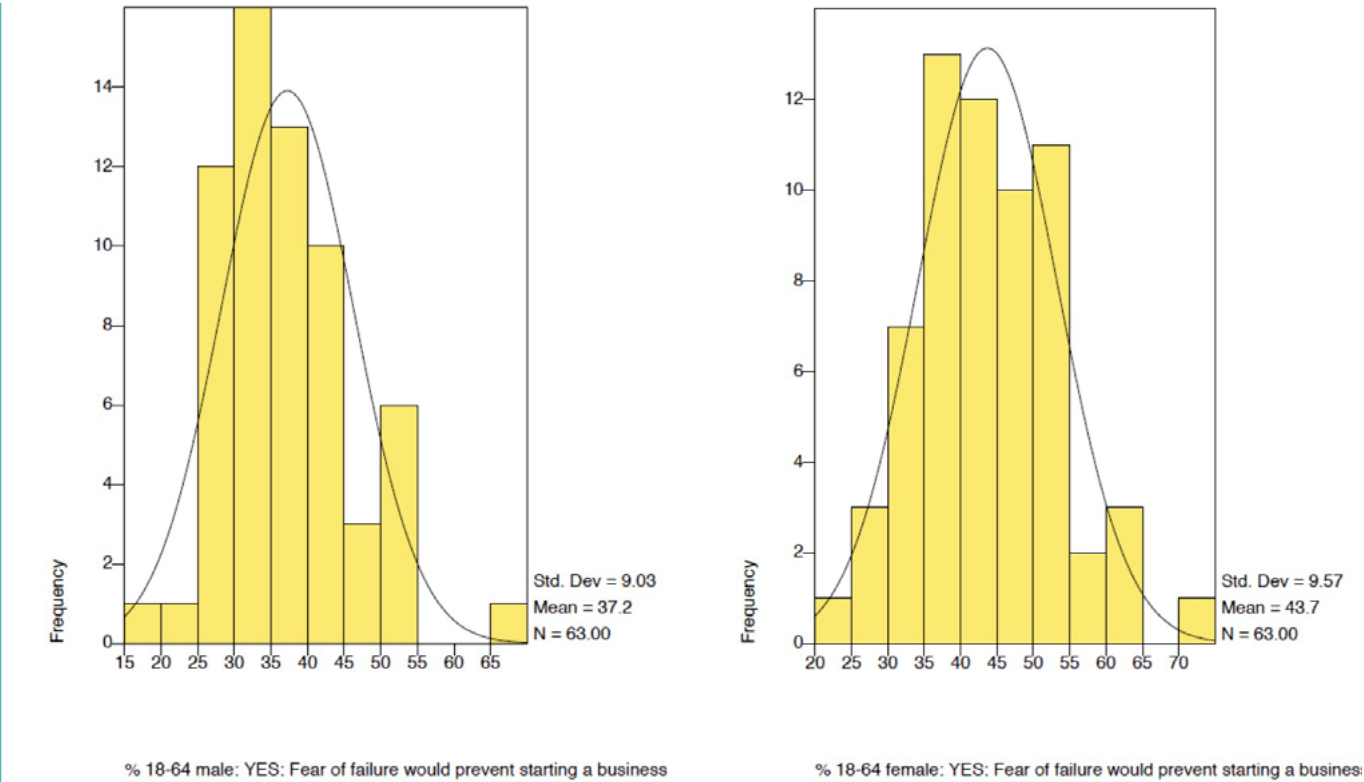


Figure 1

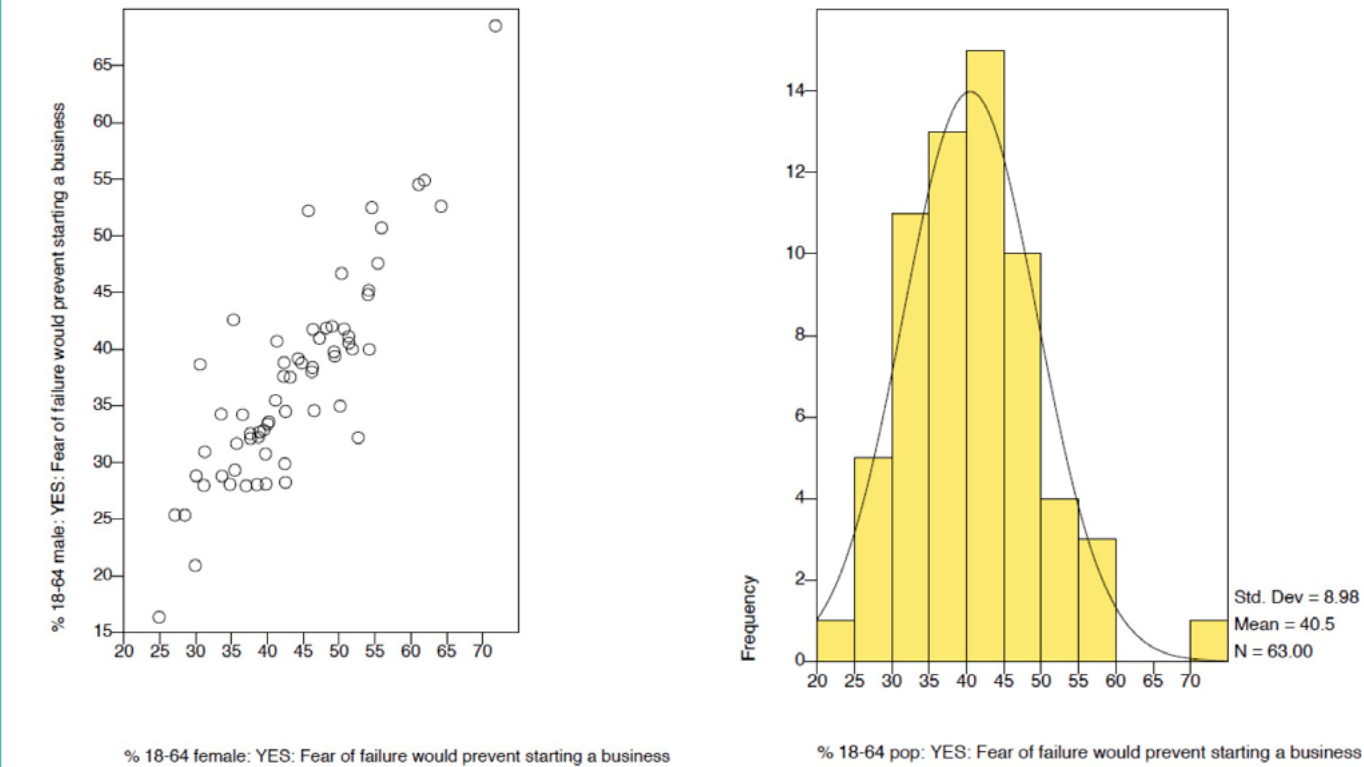


Figure 2

Figure 3

Diversity

This behavioural pattern requires an entrepreneur to lower their social barriers to communicate and work with others who have different cultures, different backgrounds and different thinking⁶. This is a very important trait for a successful entrepreneur because as human beings we are naturally inclined to be associated with those who have similarities with us. Unfortunately, people that are similar with us also share many of our views and values, thus, they present little value in “new” information for us. It is those who are least likely associated with us who are the most “valuable people” for adding value to our thinking⁶.

Data from the Global Entrepreneurship Monitor shows a promising pattern from Hong Kong. The city recorded one of the largest sizes of start-up teams across all economies in the study. This means that Hong Kong entrepreneurs are aware of the importance of diversity in starting up and build their ventures by leveraging skills of multiple team members.

Role model

One of the role models of a successful entrepreneur is to be a role model (mentor) for other entrepreneurs. In fact, Professor Sidhu put it very succinctly as²:

“In a good mentoring relationship, the mentor can be a role model through both words and actions. Assuming the mentor is an entrepreneur with experience and the mentee is a newer entrepreneur. An entrepreneur is constantly breaking rules and making mistakes in an effort to drive its businesses forward. As a new entrepreneur, this is a challenging part, having a mentor in this process can be invaluable. Entrepreneurs are a role model for how other entrepreneurs should see, and deal with, ethics in entrepreneurship.”

Indeed, the analysis of GEM data from Hong Kong has shown to what extent having a mentor drives entrepreneurial attitudes in individuals. Overall, it was found that having entrepreneurial parents or knowing entrepreneurs was one of the predictors of engaging in entrepreneurial activities in Hong Kong. Being a role model or mentor is also the best way for a successful entrepreneur to pay-it-forward in reciprocal to everything that they have gained from the entrepreneurial community.

Believe

Any entrepreneur that does not believe in themselves is not an entrepreneur. An entrepreneur is an innovator

and an innovator without a strong sense of self-efficacy can never convince anyone to believe in them. It has also been found that persons with a strong sense of self-efficacy also have better health, higher achievement, and more social integration². It is widely accepted that successful entrepreneurs view responsibility as responsibility⁹, they believe in their ability to make a difference. From the current GEM study, it is found that at the across nations level, male participants aged between 18 to 64 of age develop their self-efficacy on their own skills and abilities as entrepreneurs at a later age than their female counterparts (with the age for male peaking around 60 years of age compared to the age for female peaking right about after their 40's.) (Please see Figure 4). On the average, entrepreneurs sampled in the current GEM study have indicated that right after the age of 50 is a time when they are most confident in their skills and knowledge to embark on a start-up (Please see Figure 5).

Good Enough

Perfectionism is a death knell for entrepreneurship. Successful entrepreneurs know that a product needs to be good enough and to timely launch to the market. Without that, there is no start-up, the market will move on and resources will dry up. In fact, in his work², Professor Sidhu quoted Guy Kawasaki:

“In the book ‘The art of the start’, author Kawasaki (2004) explains that entrepreneurs should ‘fix, ship, fix, ship’ rather than ‘fix, fix, fix, ship’. The idea will constantly be improved.”

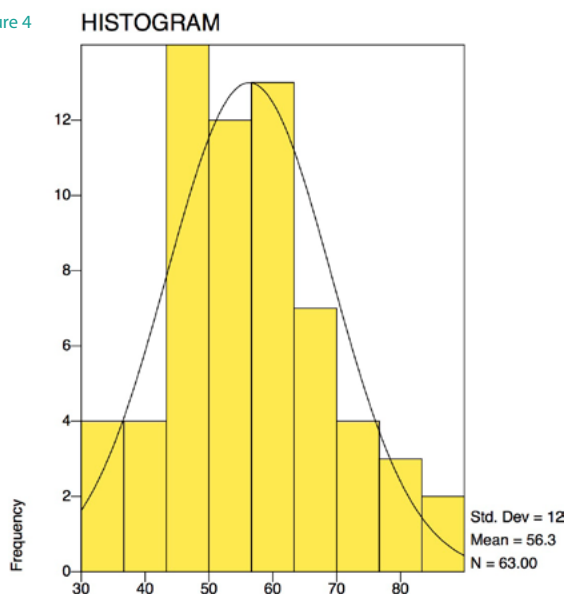
Thus, while successful entrepreneurs continue to improve their ideas, their products are always good enough and timely launched to market.

Collaborate

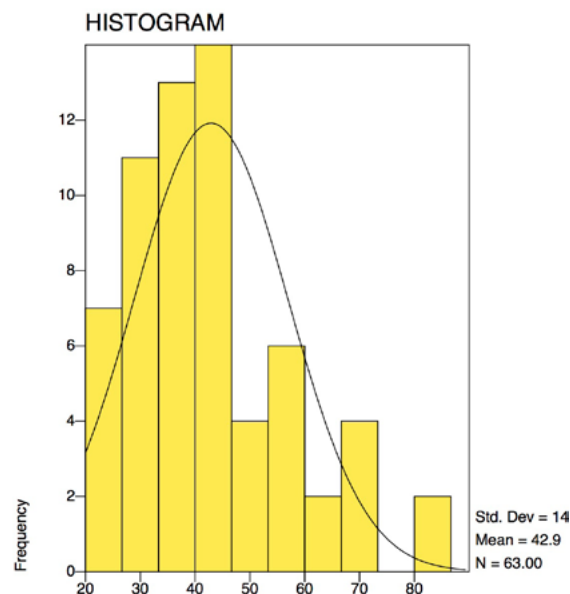
A successful entrepreneur sees everyone around them as a resource and not a competitor⁶. When we collaborate with others, we all win together and we leverage our collective resources, maximise our collective value in diversity and mitigate our risks by creating economic of scale². Successful entrepreneurs collaborate with others by paying-it-forward, by effective and efficient storytelling, by building trust, by accretive negotiation and by valuing diversity in each other.

Such entrepreneurial mindsets are very important to be imparted to our generation of new entrepreneurs. In the recent years, universities and entrepreneurship support centres in Hong Kong have strongly advocated the development of entrepreneurial mindset among

● Figure 4

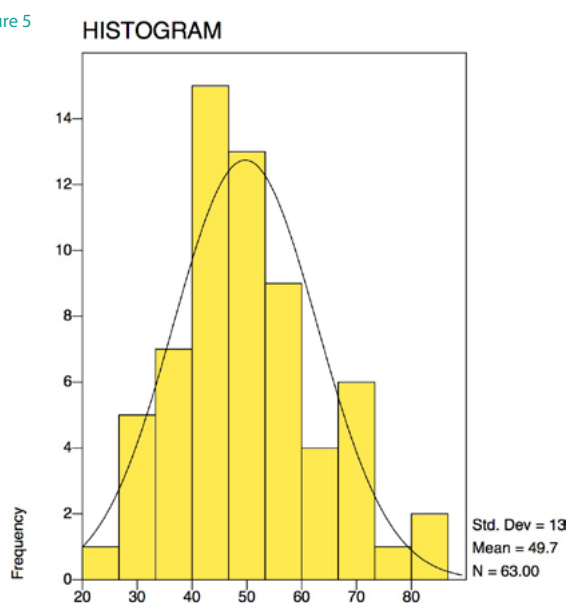


% 18-64 male: YES: Has required knowledge/skills to start business



% 18-64 female: YES: Has required knowledge/skills to start business

● Figure 5



% 18-64 pop: YES: Has required knowledge/skills to start business

Then, we constantly practice these entrepreneurial actions so that they become our entrepreneurial habits, which over time will build our entrepreneurial character.

¹ Medina, J. (2008). *Brain rules: 12 principles for surviving and thriving at work, home, and school*. Seattle, WA: Pear Press.

² Sidhu, I., Singer, K., Johnsson, C., & Suoranta, M. (n.d.). *Introducing the Berkeley Method of Entrepreneurship – a Game-Based Teaching Approach*. 2015 ASEE Annual Conference and Exposition Proceedings. doi: 10.18260/p.24367

³ Bible. In Act 20:35

⁴ Cialdini, R. B. (2007). *Influence: The psychology of persuasion*. New York: Collins.

⁵ Ariely, D. (2009). *Predictably irrational: The hidden forces that shape our decisions*. New York, NY: Harper.

⁶ Slides from BEST1001: Berkeley Method of Entrepreneurship in Hong Kong

⁷ <http://www.sie.gov.hk/en/who-we-are/sie-fund.page>

⁸ Dweck, C. S. (2008). *Mindset: The new psychology of success*. New York: Ballantine Books.

⁹ Covey, S. R. (2013). *The 7 habits of highly effective people: Powerful lessons in personal change*. New York: Simon & Schuster.

the budding entrepreneurs in Hong Kong and we begin to see the difference in attitudes as documented by the GEM study results. Truly, entrepreneurship is not something that can be taught as a head-knowledge subject but rather is an experience and value mindset to be learnt through actions. The BMoE is a good example on how such entrepreneurial mindset can be taught via an inductive game-based curriculum approach. So, it is hoped that with this article and with good efforts like the BMoE that has been recently introduced in Hong Kong into the undergraduate curriculum at Hong Kong Baptist University, let these entrepreneurial mindsets be entrepreneurial words, and let these entrepreneurial words be acted on to become entrepreneurial actions.

Intrapreneurship

By Mr. Brian T.K. CHAN

Partner, Financial Services of KPMG(Hong Kong)

Conceptualizing intrapreneurship

Intrapreneurship is a relatively recent concept that focuses on employees of a company that have many of the attributes of entrepreneurs. It refers to employee initiatives in corporates to undertake something new, often without being asked to do so. An intrapreneur is a person who takes direct responsibility for transforming an idea, through innovation and creativity, into a profitable venture, while operating within an existing organization. Thus, intrapreneurs are sometimes described as inside-entrepreneurs.

As a relatively recent concept that has been separated out from entrepreneurship, intrapreneurship may exhibit different attributes to those of entrepreneurship. One may expect intrapreneurship to be higher in certain countries versus others, employing more capital than entrepreneurial ventures, operating in a larger scale and perhaps creating more jobs. We will explore these in this section.

Measuring intrapreneurship

For the first time, GEM covers intrapreneurship, or entrepreneurial employee activity (EEA), as well as entrepreneurship. Measuring intrapreneurship is not without its challenge. Unlike entrepreneurship, intrapreneurship does not have a distinct boundary in many organizations. Many companies do not necessarily set up a formal business unit to embark on new initiatives. It is common for an idea to be brought up by an existing employee who is encouraged to explore further before the idea evolves into a project. Even when the idea has developed into a project, the project group is likely to be a virtual group comprising of existing employees running the project on a part-time basis. For certain organizations that constantly modify product or service offering, or introducing new products to replace existing ones, e.g., toy companies, the line between new products and business-as-usual can be blurred.

GEM defines intrapreneurs as those who develop new initiatives for their respective employers. The latest GEM

survey measures intrapreneurship by identifying those employees who, currently involve or in the last three years have involved, in developing new activities for their employers such as developing or launching new goods or services, or setting up a new business unit, a new establishment or subsidiary. Having them identified, various aspects of intrapreneurship are measured in the survey to provide an initial profile.

Findings

Intrapreneurial prevalence rates

In mid-2016, 4.32% of Hong Kong employed adult population was actively engaging in intrapreneurial activities at the time of the survey. If the measurement is broaden to those who have involved in intrapreneurial activities in the last three years, the prevalence rate is measured at 5.67%. In other words, approximately one in twenty employed adults in Hong Kong engages in intrapreneurial activities.

Figure 1 puts this in perspective by comparing the Hong Kong figures against China, USA and the average of innovation-driven economies. The x-axis measures the prevalence rate “now” (i.e., at the time of the survey), with the left-hand side using the employed population as the base while the right-hand side using the full population. The y-axis measures the prevalence rate by broadening the involvement in the last three years, with the top using the full population while the bottom using the employed population as the base.

The figure shows that Hong Kong's intrapreneurial activities are much higher than China's but considerably below those of the USA in each of the measured dimension. Comparing to the averages of the innovation-driven economies, Hong Kong is approximately at par.

Figure 2 below reveals the figures in detail by focusing on the employed adult population.

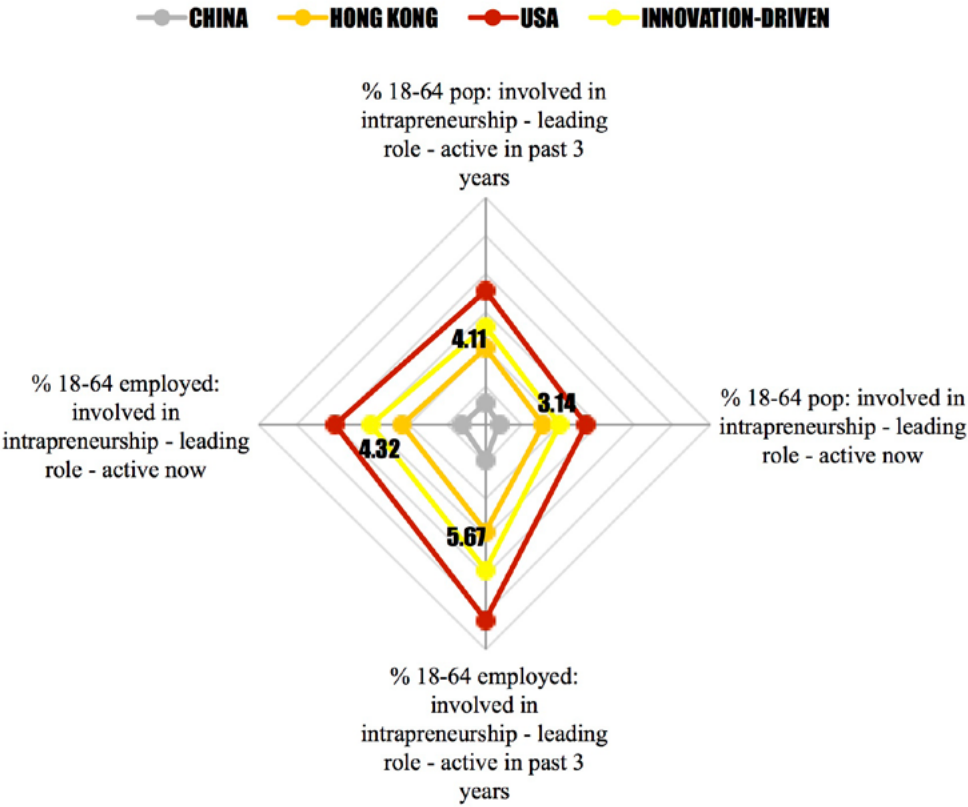


Figure 1

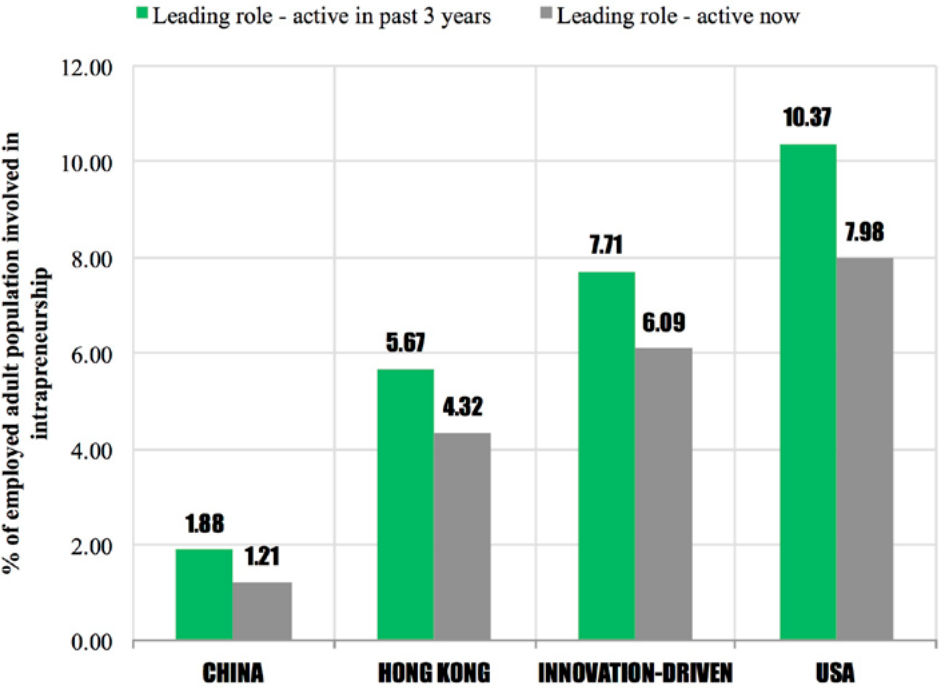


Figure 2

If we study these results together with the cross-country comparison of EEA prevalence rate and EEA to TEA ratio in the previous section, it becomes obvious that innovation-driven economies have higher intrapreneurial prevalence rates, and Hong Kong is among the innovation-driven economies. Innovation-driven economies also tend to be developed economies in which existing corporations have already met existing demand for existing products and services, such that innovation is required to drive sales growth beyond population and inflationary growth.

New products or services, or other forms of innovation, can be carried out either in an existing business, where intrapreneurs make use of the infrastructure that the existing business can provide, or can be carried out in a completely new business driven by an entrepreneur that starts a new platform altogether. The results of the comparison of EEA to TEA ratios across countries suggest that in developed economies, a higher proportion of entrepreneurial activities is observed to take place in existing organizations, where employees carry out the entrepreneurial activities.

Questions may therefore be asked if these activities originate from their employers or themselves, and if originated by the employee themselves, why they did not take the idea outside of the organization to start their own new business.

Activity initiation

Figure 3 shows the proportion of the source of entrepreneurial activity initiation in Hong Kong. While employers initiated the most activities, colleagues and the respondents to the survey collectively accounted for almost half of the EEA initiation. In other words, more than half were initiated by someone other than the employers.

This is an intriguing result. Were the employees able to pursue the new initiative in form of a new business outside their employer's organization? Or, did they prefer to pursue the new initiative within the established organization? These questions are difficult to answer because every case is different. In some cases, capital might be a constraint. In other cases, the business might be so complex that there are too many other hurdles to overcome in pursuing the innovation outside of the existing organization. Where barriers of entry may not be prohibitively high, employers may have in place incentives sufficient to keep the project team in-house.

The employees' personal situation may also play a part. Some may have a higher propensity to stay than others.

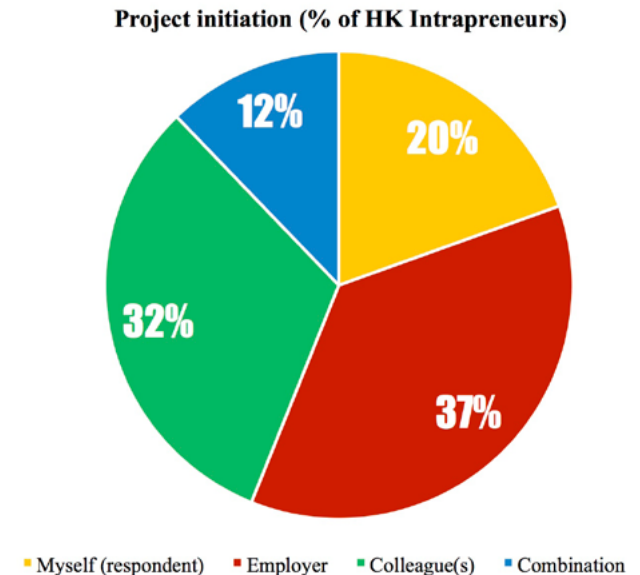


Figure 3

Product or service novelty

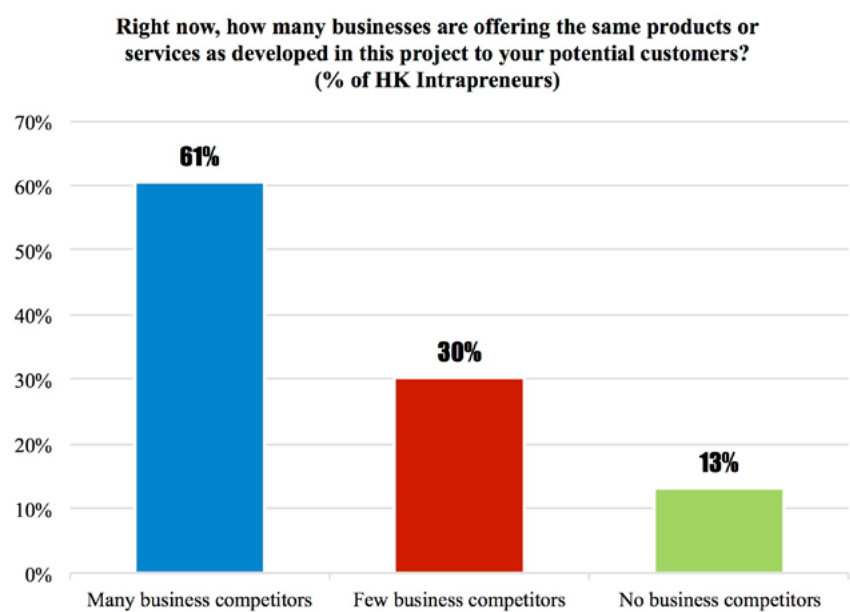
In Hong Kong, approximately one in ten intrapreneurs said that the new initiative that they were pursuing would lead to development of a product or service that is completely new to the market, i.e., not offered by any of their competitors. One-third of them said the market had few business competitors. This leaves approximately more than half of the respondents to introduce a new product that were to face many competitors. In other words, even though the respondents were engaging in intrapreneurial activities, what the vast majority of them were developing something that would not be a novelty product or service. Figure 4 shows the result.

A different question in the survey further confirms the observation. Figure 5 shows that most of the potential customers would find the product or service developed in the respondents' intrapreneurial activities familiar and not new.

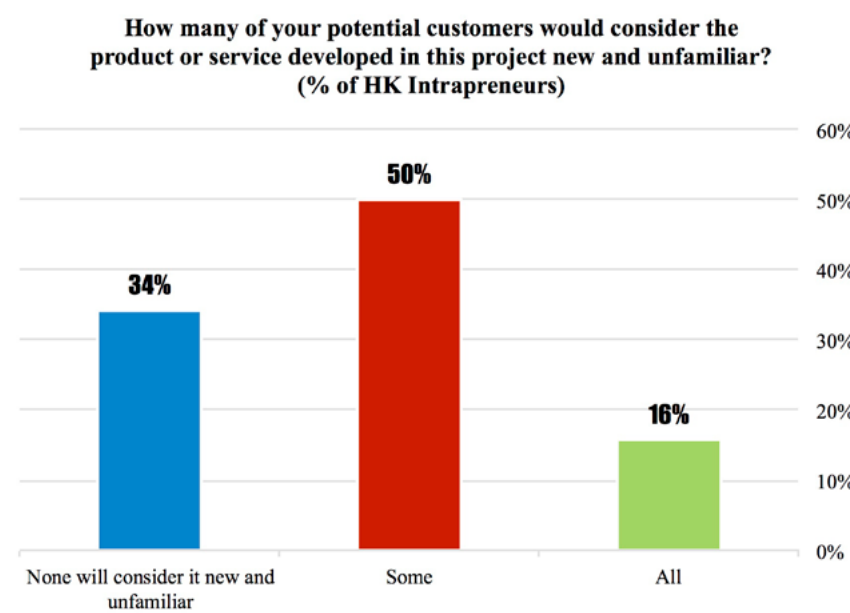
This means that what was being developed by the respondents were products or services already offered by competitors in the market. This is understandable as only the first product or service that opens a new market is a novelty. Potential customers would not consider products or services that subsequently enter into the market new

or unfamiliar, although development of such products or services would still be considered new business by the market entrants themselves.

A large organization is usually set up in a way to avoid risk and failures. By pursuing new business in a market tried and tested by its competitors, a company is more likely to find justification for its intrapreneurship.



● Figure 4



● Figure 5

Internationalisation

Hong Kong is an international city, home to a large number of multi-national corporations' regional headquarters. It has a small domestic market as compared to its neighboring economies, but is a trading, financial and transportation hub for the region. It also has a taxation regime that does not tax profits sourced outside of Hong Kong. It is therefore to no one's surprise that nearly half of the respondents expected the new initiative that they worked on would generate over 75% of its revenue outside of Hong Kong. Figure 6 below shows the survey result in this aspect.

The figure is even more prominent when this is put in perspective. To compare like with like to total entrepreneurial activity measurements in previous sections, focus should be placed on the two bars on the right side of the chart. The total of these two represents the percentage of respondents expecting the new initiative to generate over 50% of its revenue outside of the domestic market. This is approximately twice the rate of early-stage firms in Hong Kong and almost four times the average rate of early-stage firms in innovation-driven economies. Simply, Hong Kong's businesses, especially those established ones embarking on new ventures, are highly internationally-oriented.

In terms of countries where such international revenues were expected to come from, China is the most cited country. However, the responses do not seem to limit to Asian region, but have included North America, Europe and Australia, therefore essentially, worldwide.

If the intrapreneurial activities in Hong Kong were to generate more international revenues upon implementation, would it also demand more capital?

Capital requirement and funding sources

In the previous section, it was found that 70% of Hong Kong's nascent entrepreneurs were able to start their business with initial capital less than HK\$1 million. For established business pursuing a new initiative, the investment is expected to be much higher. With less than HK\$1 million funding, only about one-third of the established business could pursue their new initiative. Figure 7 presents this by separating projects into four groups based on their investment amount. Projects over HK\$5 million capital account for the biggest portion. In fact, some of the projects are expected to be very sizeable, resulting in the average investment amount for established business to pursue a new initiative to cost in excess of HK\$40 million.

This is a major difference between early-stage business and established business. There are many reasons for this. Established businesses are likely to have more financial resources at their disposal. They are also more likely to be able to access external financing, whether through bank loans, venture capital or government funds. Apart from financial resources, established businesses also have other infrastructure in place as enablers for them to take on larger projects.

**What percentage of your annual sales revenues for this project will usually come from customers living outside your country?
(% of HK Intrapreneurs)**

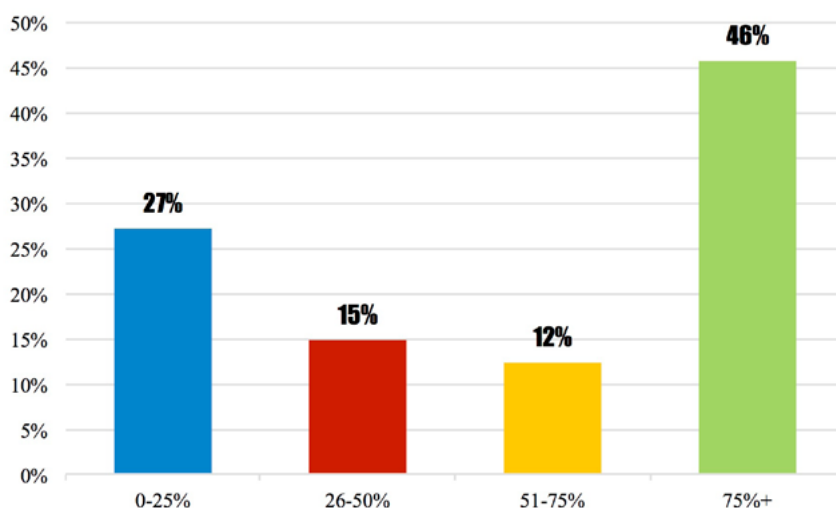
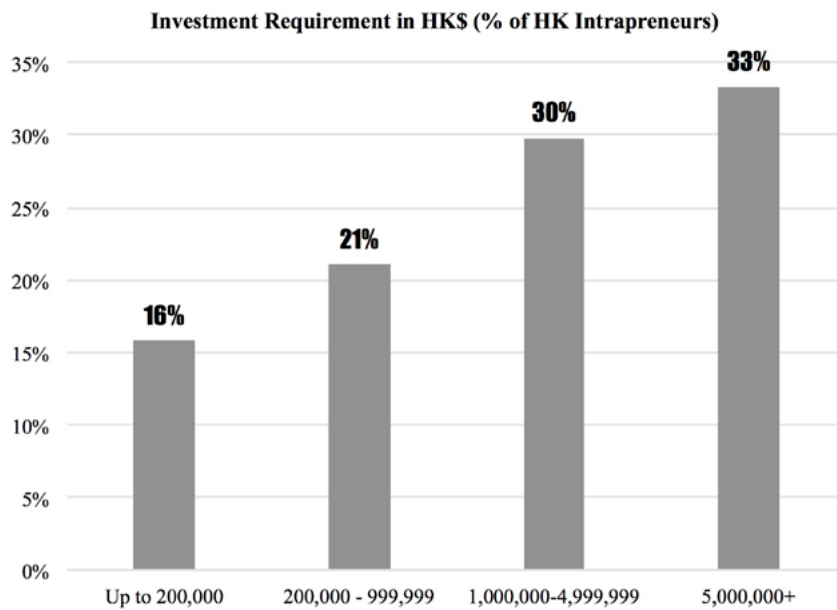


Figure 6

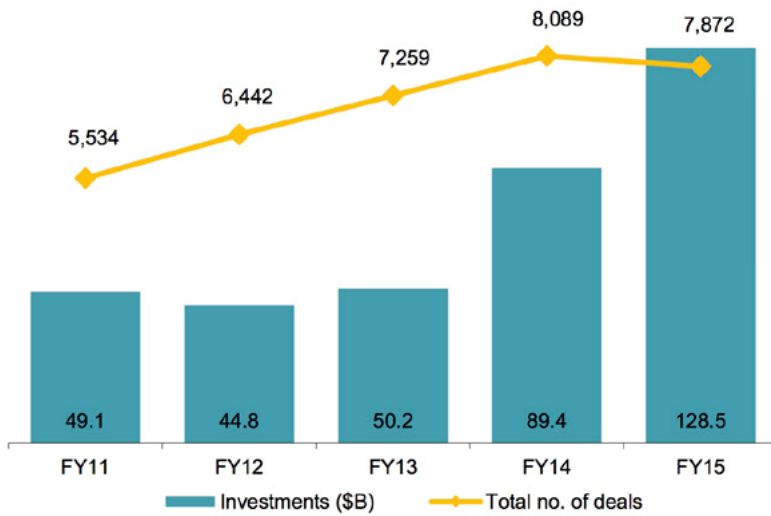


● Figure 7

In analyzing the data from the GEM survey, it was found that re-investing profit is by far the most common means to fund new initiatives, with 73% of the respondents indicated to have funded the project that way. This was followed by employers putting in more capital and bank funding. However, it is important to bear in mind that the funding source percentages from the survey are measured by count, not by monetary value.

From a practitioner's point of view, if funding sources are measured by monetary value, it is expected that a large portion would come from financial intermediaries (i.e., banks, private equity and venture capital funds) or be raised from capital markets (e.g., IPO, rights issue, bond issuance, etc.). The larger the investment amount, the more likely it is funded by institutional money and capital markets. Figure 8 and 9 show the venture capital-backed deal volume and value. In 2015, the average deal size was US\$16 million globally and US\$28 million in Asia. Approximately one-third of these represented seed or angel round of financing, which means that two-third of them were subsequent rounds, in other words, for established businesses.

Global VC-Backed Deal Volume and Value



Source: KPMG analysis.

Figure 8

Asian VC-Backed Deal Volume and Value

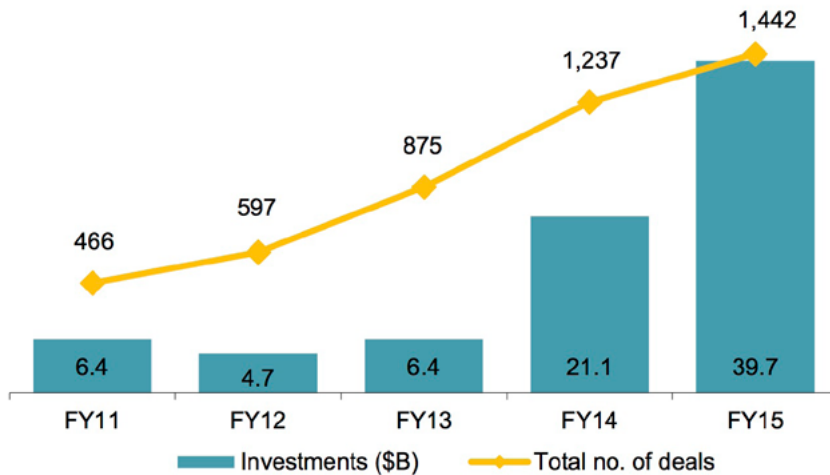


Figure 9

A case study of a Hong Kong-based fintech company below brings together some of the observations discussed above. WeLab was founded in Hong Kong in 2013 and was an early-stage business back then. After operating the internet/mobile-based lending business in Hong Kong for a number of months, in 2015, it raised funds to expand into mainland China. The expansion was proven to be successful and in 2016, it raised a further round of financing to fund its further expansion in China. The 2016 funding was multiple times of the 2015 funding.

Case Study – WeLab Limited

In January 2016, WeLab announced a HK\$1.19bn (RMB1bn) fundraising from a stellar consortium of international and domestic Chinese investors

Overview		Funding Timeline	
Brands	WeLend.hk; Wolaidia		2013: Founded in Hong Kong
Founded	WeLab was founded in Hong Kong in 2013		
Business Description	WeLab is transforming traditional credit services by creating seamless online and mobile lending experiences for China and Hong Kong. WeLab operates Wolaidai (我未贷), one of China's largest mobile lending platforms, and WeLend.hk, Hong Kong's leading online lending platform.		January 2015: Series A round of US\$20m from a group of strategic and financial investors, which enabled WeLab to launch new products in mainland China and solidify its credit risk modelling capabilities with big data solutions.
Investors	• TOM group • Ule E-Commerce • DST Global • Iconiq Capital • Khazanah Nasional Berhad • ING • Sequoia Capital • Guangdong Technology Financial Group		January 2016: The second fundraising of US\$160m is eight times bigger than the first round and combines the support of a leading international financial institution and government funds.
Investment Highlight	The financing represents the first ever fundraising by a Chinese financial technology firm from both an international bank and government investors, and also one of the first financings of an international financial institution in a leading Chinese fintech player.		

1.4 Summary

In summary, Hong Kong is not much different from other innovation-driven economies in terms of both the prevalence of intrapreneurship and its weight in the economy's total entrepreneurial activities. A typical Hong Kong intrapreneurial activity is initiated by the employer, costs over HK\$5 million, funded by the corporate's own profits, generating 75% of revenue internationally by selling products or services new to the company itself but not new to the market or potential customers.

Immigration and Entrepreneurship in Hong Kong¹

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¹ This work is partially supported by the Public Policy Research Scheme of the Central Policy Unit, HK SAR Government (2015.A4.010.15C). See Au, K. (2016). [Immigrant Entrepreneurship among Mainland Chinese University Graduates in Hong Kong: An Empirical Study with Multiple Perspectives](#). Report for the Public Policy Research Grant Committee. Economic Research Centre, HKIAPS, CUHK.

With the aims to promote innovation and entrepreneurship in mind, the government and the public have in recent years arrived in consensus that Hong Kong needs to pursue innovation and entrepreneurship. However, while Hong Kong's environment in many respects is excellent, a large number of its talents are educated and steered to seek commercial and financial success rather than entrepreneurship that usually requires capturing new opportunities using new technology or innovative business models. Hong Kong has not developed enough manpower related to technology and infrastructure conducive to innovation. [Dowejko and Au \(2015\)](#) attribute this problem to an education system that orients students toward examinations rather than experimentation and creativity. Parents are conservative regarding career paths. If parents find that their children wish to start a company, they will usually discourage them because they regard self-employment as too risky and wish them to work for established companies instead. Insufficient talents for entrepreneurship is unlikely a problem that the local systems can solve all by themselves. The educational and vocational systems, as they stand, are unlikely to change quickly to fill the gap and just to reverse the trend.

Looking around the world many governments have adopted immigration schemes to attract foreign talents for filling human resource gaps (see Appendix). In several hi-tech entrepreneurial regions, for example, Israel and Silicon Valley, immigrants have contributed to their ascent ([Saxenian, 2000](#); [Senor & Singer, 2009](#)). Silicon Valley has benefitted from Indian and Chinese students who stayed after their studies. And Israel's high tech ventures sprouted up thanks to Jewish immigrants from the collapsing Soviet Union in the 1990's. When East Asia started to develop, overseas Chinese and returnees established semi-conductor plants and software houses in Taiwan and then China. Many of them used the knowledge and connections they developed during their stay in the Silicon Valley ([Saxenian, 1999](#)). Since Hong Kong has benefited from immigration in the past, replenishing the human resource pool with outside talents may once again spark the entrepreneurship development in Hong Kong.

1. Background and Immigration Schemes and Programmes

Hong Kong is an immigrant society. Throughout its history, waves of immigrants have entered Hong Kong chiefly from the mainland. These waves were the results of the Sino-British relationship, world politics, warfare, and the economic results of Hong Kong being a free port. The capacity to handle influxes of people was always a concern – and the mentality and policy was to restrict entry. Yet, several large waves of immigrants came during the 1940's due to World War II, after 1949 due to the civil war, and in the 1960's because of the social unrest in the mainland. In hindsight, these new population changed the economy and society of Hong Kong in positive ways. The Shanghai industrialists brought know-how and capital which facilitated the early industrialization of Hong Kong (Wong, 1988). The refugees in the 1960's provided a large amount of labor for Hong Kong's economy to take off and became one of the economic miracles in Asia.

Until recent years, however, Hong Kong has taken a passive stance in attracting desired immigrants to come. In fact, since the early colonial governments, the major immigrant policies had been concerned with the restriction of entry (residence). That is to say, these policies only specified how to exclude people from entering and becoming a resident. In contrast, there were no specific policies to entice and let in desirable immigrants. The government has played little part in selecting and attracting qualified people, who were in demand, to come and stay in Hong Kong. Hart and Liu (2010) dismissed this position as a "sit-and-wait" approach. A case in point is the Single-Entry Permit. The PRC Central government has had complete control on sending a daily quota of 150 people from the mainland - leaving the Hong Kong government with little say. The historically suspicious relationships between the British and the China government caused this unpleasant history and policy stance in immigration and, at least in part, created a discrimination against mainland immigrants coming to Hong Kong. In the past,

the immigrants were mostly asylum-seekers, whereas the recent immigrants are more likely opportunity-seekers (呂大樂, 2015). Even though the two groups are very different, such proclivity unfortunately lingers and affects the attitude of the general public towards new comers from the mainland, including young students.

Since the 1990's, the government has begun to implement a number of schemes to attract and retain labor and talent lacking in Hong Kong. Even so, the legacy of restricting entry rather than attracting desirable talent is still observable, subtly and symbolically. As an example, the mission of the Immigration Department is "exercising effective immigration control and enforcing the laws." The emphasis is to control or limit rather than to recruit and manage. This Department is responsible for executing these schemes and still maintains the Chinese label "入境事務處", which literally means "entry affairs department." This label is not commensurate with the meaning of immigration. In 2016, Hong Kong's net immigration rate stands at 1.7/ 1,000 persons ranking it 57th in the world (CIA World Fact). In comparison, Singapore (13.6), the US (3.9), Israel (2.2) and Taiwan (0.9) are ranked 5th, 32th, 45th, and 61th respectively.

The schemes of the Department for bringing in outside talents are grouped under the "VISA" category, as if attracting talent is to issue permits for foreigners to enter. To do its job to highlight its importance, the Department has put an eye-catching sub-category high up on its webpage - "Introduction of Admission Schemes for Talent, Professionals, and Entrepreneurs".² Table 1 lists these schemes.

Programs / Schemes
1. General Employment Policy (GEP)
2. Capital Investment Entrant Scheme (CIES) – Chinese national with permanent residence overseas (Terminated)*
3. Quality Migrant Admission Scheme Investment as Entrepreneurs
4. Admission Scheme for Mainland Talents and Professionals (ASMTTP)
5. Student VISA / Entry Permit for Studying in Hong Kong
6. Immigration Arrangements for Non-local Graduates (IANG)

● Table 1: Immigrant Programs/ Schemes of the Immigrant Department

Source: Hong Kong Immigration Department

Particularly related to entrepreneurship, the “General Employment Policy – Entrepreneurs” Scheme may introduce established entrepreneurs from overseas, but it does not apply to mainlanders. In addition, the “Capital Investment Entrant Scheme” (now terminated) may attract new capital to Hong Kong. However, the investments are directed towards conventional asset classes, like property and stocks rather than channels for stimulating entrepreneurship, say in fund raising for startups. Its benefit is far from direct. Other schemes focus on replenishing professionals and labor in demand. They may help R&D and innovations in established companies and boost corporate entrepreneurship in Hong Kong. Yet their effects are likely to be indirect as well.

The second largest source of potential talents from outside is overseas students. Two-third of the students are from the mainland but those from other countries are substantial as well. Thanks to the “Immigration Arrangements for Non-local Graduates (IANG)” Scheme implemented in 2008, these students can stay in Hong Kong for up to 12 months to work for an employer after graduation. The Immigration Department tends to give favorable consideration in renewing their visa if the employment is to be continued.

In quite a few cases, the graduates are able to use their first year of stay to strengthen their local connections and look for other jobs if they wish. Particularly for

entrepreneurship, because many students need time to accumulate resources if they want to start a business, this Scheme can give them room for maneuver. Also, some graduates who start their company can actually employ themselves using their own company and obtain a visa to stay if the company goes on well. This allows them to stay in Hong Kong and grow their business. Although we don’t have the figure about the startup rate of overseas students, past studies suggested 5%-10% of youngsters in Hong Kong and China would participate in entrepreneurship³. On the other hand, the results of a recent survey suggest that 27% of the mainland students intended to do a startup in the future (Au, 2016). Thus, we shall expect a few hundred to a thousand more young entrepreneurs from the mainland students who stay in Hong Kong.

² http://www.immd.gov.hk/eng/useful_information/admission-schemes-talents-professionals-entrepreneurs.html (accessed July, 2016)

³ See <http://www.gemconsortium.org/country-profiles> (assessed August, 2016)

2. Immigrant Entrepreneurship Research

The United Nations define “Long term international migrants” as “a person who moves to a country other than that of his or her usual residence for a period of at least a year [...] so that the country of destination effectively becomes his or her new country of usual residence”. Globally, immigrants are several times more likely to be entrepreneurs than natives or local-borns. Most immigrants develop mundane businesses but quite a few have grown their businesses into high-impact companies. Successful stories by foreign-born individuals in Silicon Valley, such as Sergey Brin of Google, have received broad attention. In the US, immigrants started 25 percent of the engineering and technology companies during the last decade (Wadwha et al. (2007). Immigrants have also made high profile contributions to engineering and technology entrepreneurship (Saxenian, 2000).

Immigration provokes the concerns that immigrants may lower wages, increase public welfare costs, and cause more divide in the population. Regarding immigrant entrepreneurship, the findings in the US suggested that immigrant-owned businesses paid similar wages to employees compared to that of the non-immigrant firms. Immigrant businesses are also heterogeneous. Immigrants with low skills and high skills tend to go into entrepreneurship. At the one end, 45 percent of the business owners with less than a high school education are immigrants. The majority of them engaged in less profitable and non-incorporated businesses. At the other end, immigrant business owners are more likely to have a college degree (15.7 percent) among all business owners (Farlie & Lofstrom, 2014). These high-skilled entrepreneurs tend to enter technology and other profitable businesses. Hunt (2015) found that immigrants started firms that hired more employees than natives did. She also found that immigrants arriving with a student or work visa were more likely to start a business than those arriving with the purpose for family unification.

In addition, researchers have dug into more complicated subjects. These include whether immigrant entrepreneurs doing technology ventures have spillover effects to the mainstream economy, whether they diversify the product or services, and whether they can expand exports for the host country (Fellbermayr & Toubal, 2012; Kerr & Kerr, 2011). Particularly, immigrants are more likely to engage in transnational businesses. For one thing, they usually maintain relations with and have to fulfill family demand from their home countries. Additionally, their social

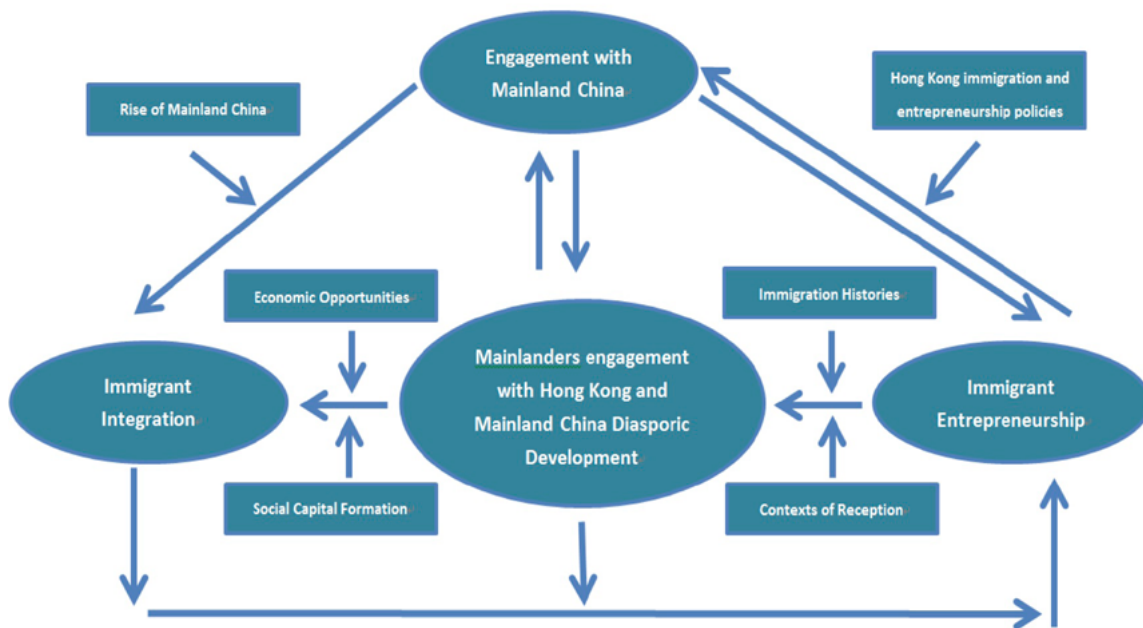
networks and cultural knowledge can facilitate them to tap resources which natives and immigrants of other nations are not able to own or develop. Some of these transnational businesses involve simply the transfer of goods and remittances across countries, such as food, shows, and newspapers desired by immigrants (Hohn, 2012). Other transnational businesses can be prominent in terms of moving technology, machines and special talents, sometimes with a large amount of investment, across borders. Present research has analyzed many factors and their roles in explaining why immigrants choose to engage in start-ups and self-employment. These factors may include human capital, wealth and access to financial resources, parental entrepreneurship, home country business experience, ethnic cluster (enclave), and barrier in formal employment as well as selection effect (Farlie & Lofstrom, 2014). Immigrants being a self-selected group are usually better prepared for uncertainty and grittier in dealing with change and frustration. These are qualities conducive to entrepreneurship.

Many immigrants cling to each other and form clusters when they first settle in the host country (e.g., Aldrich & Waldinger, 1990; Portes & Zhou, 1992). They naturally form ethnic enclaves, and ethnic resources and opportunities become their advantages in going into business and self-employment. Immigrant entrepreneurship could be just small, informal, and family-owned businesses, but their entrepreneurial activities are increasingly heterogeneous in scale, range, intensity, and levels of formality or organization (Zhou & Lui, 2015). They do not just react to the conditions associated with immigration as a way to go head. Instead, they pursue entrepreneurship proactively, taking advantages of globalization, homeland development, and immigrant integration (Zhou, 2004). Consequently, immigrant entrepreneurs have brought new positive effects to the ethnic community, including job opportunities for self-employment and their ethnic peers, serve as role-models, offer training opportunities for prospective entrepreneurs in the ethnic community, and relieve possible pressure on the ethnic groups from the main-stream society.

With rapid globalization and unprecedented development in migrant-receiving countries, immigrant entrepreneurship is to be understood in the context of global capitalism (Vallejo, 2015). Transnationalism is the central theme. In particular, Zhou and Lui (2015) compared the new wave of Chinese immigrants who moved into Singapore and the U.S and argue that

transnational entrepreneurship can benefit both the development of the Chinese diaspora and immigrant integration. Their research framework encompassing immigrant entrepreneurship, diasporic development, state policies, and immigrant integration using mainland immigrants as an example (see Figure 1) ⁴.

We can see that immigrant integration, immigrant entrepreneurship and Chinese diasporic development are interrelated. If we could integrate immigrants better into Hong Kong society, it would enhance their entrepreneurial drives. Stronger entrepreneurship among the immigrants would promote their diasporic development which in turn would improve immigrant integration in Hong Kong.



● Figure 1: An illustration of the relationships between entrepreneurship, diasporic development and integration using mainlanders as example (adapted from Au, 2016 and Zhou & Liu, 2015)

⁴ It can be defined as “the process by which immigrants become accepted into society, both as individuals and as groups....the responsibility for integration rests not with one particular group, but rather with many actors—immigrants themselves, the host government, institutions, and communities, to name a few” (Migration Policy Institute, 2003). The integration comprises public institutions, and religious or cultural institutions of the immigrant groups themselves, and involves language, socio-economic, residential, and political dimensions (OECD & European Union, 2015). Thus, it is a complicated process which takes a long time, even a generation, to realize integration. In any case, the receiving society and immigrants must work mutually, both-ways for building a vibrant, secure, and coherent society (MPI, 2011). See additional information: <http://www.migrationpolicy.org/article/integration-role-communities-institutions-and-state> (accessed July, 2016); <http://www.migrationpolicy.org/research/immigrants-united-states-how-well-are-they-integrating-society?> (accessed July, 2016) ; <http://www.oecd.org/els/mig/Indicators-of-Immigrant-Integration-2015.pdf> (accessed July, 2016)

3. GEM Global data on Immigration and Entrepreneurship Activities

We strived to use the GEM data to shed some light on entrepreneurship and immigration. First, the national data set of GEM may allow us to glimpse into whether immigration is related to entrepreneurship. The data set contains statistics measuring entrepreneurship activities of the participating nations, and we correlated these statistics with the net migration rate ([CIA World Factbook](#)) to find out if migration is related to entrepreneurship activities. The net migration is defined as “the number of persons entering and leaving a country during the year per 1,000 persons (based on midyear population).” In 2016, it ranges between 18.2 (Qatar) and Micronesia (-20.9), where positive values represent net immigration and negative values are indicative of net emigration. It indicates the contribution of migration to the overall level of population change but does not distinguish between economic migrants, refugees, and other types of migrants nor does it distinguish between lawful migrants and

undocumented migrants. Among the 65 nations in the GEM sample, the net migration rate is strongly related to GDP per capita of a country ($r = .78$), which suggests that rich nations draw a net inflow of migrants. We must note this relationship when interpreting the following findings. This finding makes sense as rich nations are well-developed and people from less developed countries would migrate there to seek a better living.

We found that migration rate is related to a handful of entrepreneurial activities as shown in Table 2. A positive relationship would mean that more net migration is related to a stronger likelihood of the particular phenomenon being observed. As shown, migration is related to less necessity-oriented entrepreneurial activities and more intrapreneurship. Despite these findings, we must consider the possible confounding effect of wealth. Above all, wealth is found to cause more entrepreneurial activities. In fact, when we re-ran the above analysis using partial correlation with GDP per capita as a correlate, the above significant correlations all become insignificant. That is to say, after accounting for the effect of wealth, net migration rate has no relationship with entrepreneurial activities. There are two possible reasons. One, it is plausible that immigration exerts null effect on entrepreneurship and the significant correlations are only spurious effect caused by wealth. Another plausible case is that apart from wealth, migration also contributes to entrepreneurial activities, as past research has documented, it is just that wealth, migration, and starting up are inter-related phenomena. In other words, they cause each other mutually.

In addition to the national data set, we look into the Hong Kong data set in which the Hong Kong team have the information of all the individual respondents in the survey. The Hong Kong data set has a variable that indicates whether the respondent is born in Hong Kong or outside, and we used this variable as a rough indicator of being an immigrant.⁵ In other words, we compare those who indicated they were born in Hong Kong and those who were not on a number of information related to entrepreneurial activities. We did find some interesting differences on entrepreneurial activities and attitudes between the two groups in Hong Kong (see Table 3).

⁵ According to the rules of GEM, each country/region team will have access to individual data of its country or region only until two years after the global release of the findings. GEM teams have limited freedom to add new variables to the harmonized questionnaire used in the global survey.

First, the local respondents are more likely to start a new venture compared to the foreign-born respondents. This finding contrasts our expectation and we will try to explain below. Second, in terms of cultural support, the local-born reported that they were more likely to know someone who started a business than the foreign-born. But the foreign-born tended to perceive starting a new business more a desirable career option and a positive social status than the locals. Thus, local-born have more

Correlation with Net Migration ($p < 0.01$)	Correlation with Net Migration (GDP per capita controlled)	Variable in GEM Survey – National Level
-0.319**	0.081	Percentage of all males (18-64): involved in TEA and reporting necessity (no better choice for work) as major motive.
0.451**	-0.121	Percentage of all respondents (18-64): active and leading as intrapreneur in past three years.

● Table 2. Startup and Entrepreneurial Activities and Net Migration Rate

Variable description	HK-born (mean)	Non HK-born (mean)
Can I confirm, have you used any of the following sources to fund this new business? Venture Capital (1 = Yes; 2 = No)	1%	5%
Can I confirm, have you used any of the following sources to fund this new business? Bank (1 = Yes; 2 = No)	15%	27%
Can I confirm, have you used any of the following sources to fund this new business? Family (1 = Yes; 2 = No)	19%	33%
Can I confirm, have you used any of the following sources to fund this new business? Friends (1 = Yes; 2 = No)	21%	33%
Can I confirm, have you used any of the following sources to fund this new business? Co-workers (1 = Yes; 2 = No)	9%	27%
Can I confirm, have you used any of the following sources to fund this new business? Past or current employer (1 = Yes; 2 = No)	3%	11%
Manages and owns a business that is up to 42 months old (0 = No, 1 = Yes)	6%	3%
Actively involved in start-up effort and owner (0 = No, 1 = Yes)	10%	8%
Any Business Owner: Nascent New Established (0 = No, 1 = Yes)	17%	13%
Do you know someone personally who started a business in the past 2 years? = Yes) (0 = No, 1 = Yes)	41%	34%
In Hong Kong, most people consider starting a new business a desirable career choice. (0 = No, 1 = Yes)	52%	64%
In Hong Kong, those successful at starting a new business have a high level of status and respect. (0 = No, 1 = Yes)	59%	76%
Involved in Total early-stage Entrepreneurial Activity (0 = No, 1 = Yes)	11%	6%
TEA: strong international orientation (more than 25% of revenue from outside country) (0 = No, 1 = Yes)	33%	54%

● Table 3. Startup and Entrepreneurial Activities as a Function of Place of Birth [measured as share of adult population]

role models due to the comparative ease to find resources. On the other hand, foreign-born have less resources and may find it more difficult to get ahead on ordinary career paths, so they see having a business to be a more respected option. Also, almost on all paths, foreign-born report more likelihood of getting funding from sources other than their own savings to support business venturing than local-born. This supports the observation that immigrants have to be more resourceful in securing funding from various sources as they may not have good access to governmental funding and locally accumulated wealth compared to the locals. Lastly, because of the connections with outside, foreign-born respondents who had started new businesses are more likely to do export and engage international activities than the local respondents. Just like those in other countries, the former utilize their relative advantages in getting ahead of the game.

Despite some interesting findings above, we note certainly the crudeness of this grouping variable because a person not born in Hong Kong would also include refugees and other types of sojourners who do not intend to immigrate or fulfil the definition of being an immigrant. Also, even the outside-born respondent is really an immigrant, the data do not allow us to distinguish immigrants who are legal or illegal, voluntary or non-voluntary, and their purpose such as foreign students or family reunion. This may explain why local-born seem to be more active than foreign-born to engage in new business formation. We urge more sophisticated research and analysis to be done in the future. Particularly if immigrants to Hong Kong are, in contrast to those in other places, less likely to set up their own business, we may need to review our policies and examine our environment to figure out what cause such a difference, given that most countries encourage immigrants to kick-start entrepreneurial activities.

4. Recommendations

Using the Hong Kong based GEM data and some analysis so far, we found that being an immigrant does not seem to increase their entrepreneurial activities and attitudes. However, once they venture out, they find it easier to receive financial support. Based on our overall understanding of the literature and background, we may want to suggest a few ideas for the government and the public to consider for dealing with immigration and boosting entrepreneurship in Hong Kong.

a. Nuanced, Accessible Data on Immigrant Entrepreneurship

We have experienced difficulties in collecting detailed data about immigrants, particularly mainland students. For example, the IANG statistics have no breakdown on the job industry, gender, etc. Even universities that accept these students keep sparse information about them. They do not run detailed studies about their career and thus have little information if these students have engaged in startups or other entrepreneurial activities. Also, most of the public data show only aggregated numbers of students who come and go each year, but do not track individual students across time. Without such data, research will find it more difficult in teasing out the causal factors behind their behaviors, such as staying in Hong Kong or self-employment. Looking forward, there is certainly a need for government and education units to collect more data and make the data available to the public for analysis. Only with more data can research and analysis be made useful for policy making.

b. Cross-Sectoral Awareness and Collaboration

The government, business corporations, the schools, and other community organizations need to work hand-in-hand and more closely to promote creativity, innovation, and entrepreneurship for mainland students. Past research that discussed human resources and education also called for when need to develop innovation (Hart & Lui, 2010; Wadhwa, 2010). It is not a question of the good intentions of all the parties, but it is questionable whether they have seen the necessity of working together. The education institutes, business associations, and the government set up the programs quite independently. They seem to overlook the fact that their own agenda may run into each other if commenced without adequate coordination. On the other hand, they may not realize the potential benefits to themselves and Hong Kong if they could collaborate in recruiting and supporting mainland students to do more entrepreneurial work. As a case in

point, multiple parties and government units will need to work together to set up something similar to the UK Graduate Entrepreneur Visa.⁶

Meanwhile, whereas they have the interest and advocate their intention to promote entrepreneurship in the students, they may overlook the fact that their existing policies and procedures may have created a negative effect to reduce the motivation of mainland students in entrepreneurship. Ironically, it does happen that the policy for promoting entrepreneurship may inadvertently create an effect that undermines its effectiveness or even causes only the opposing effects (Ding, Au, & Chiang, 2015; Lerner, 2009). Thus, a recommendation is to organize a forum, perhaps through a neutral party like a university, to raise the awareness of relevant parties of immigrant entrepreneurship and encourage an exchange between them for possible multi-sectoral collaboration and the merits and drawbacks of intervention in the near future.

c. Multiculturalism and Immigrant Integration

With a strong middle-class and local identity, new immigrants from the mainland seem to face more and more pressure to follow and comply with the “Hong Kong” ways of doing things or abide with the so-called core values. Such expectation, in our view, resembles the philosophy of the “melting-pot” in the US. In short, newcomers are expected to change and merge with the main-stream. This may reduce immigrant integration and undermine immigrants’ interest in entrepreneurship, as analysed above. One way to go forward is to promote multiculturalism in the Hong Kong society, so that mainlanders as well as other immigrants can feel more secure, accepted and use their uniqueness to contribute to the society at large for Hong Kong. This is certainly not easy to do particularly in the short run. To promote multiculturalism, the receiving society and immigrants must work mutually and both-ways. Successful policies in Singapore, Canada and Australia would be examples for Hong Kong to learn (MPI, 2016). As Hong Kong faces challenges in economic and social development, attracting mainland immigrants should not just be based on “economic principles” or taking a capitalist view. Taking a paradigm shift from the social and cultural perspective is timely.

⁶ Source: <http://www.immigrationintoeurope.com/immigration-faq/uk-graduate-entrepreneur-visa/> (assessed August, 2016)

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Appendix

For the sake of comparison with Hong Kong, we surveyed the schemes / policies of several countries / regions with an eye to see whether they may attract immigrant entrepreneurs. As shown in Table 4, Japan and Taiwan do not seem proactive in attracting this group of immigrants. However, Hong Kong is not alone in taking a less active approach. In particular, Japan may be conceived as not trying to attract foreigners to reside in the country. Contrarily, Canada, the UK, and Singapore take a proactive stance in bringing in immigrants and seeking entrepreneurial immigrants. These countries have managed immigration well and gained from their inflow. Hong Kong can draw lessons from their success.

Counties / Region	General description	Various schemes to attract entrepreneurial immigrants & the goal / requirement of these schemes
Hong Kong	Hong Kong has all along adopted an open and a liberal immigration policy, that's why Hong Kong is regarded as a 'city of immigrants' and has long been found on the list of top destinations to work and stay in the world	The Hong Kong Entrepreneurs Visa (HKEV): For foreign entrepreneurs who wish to operate their own business in Hong Kong. It is essentially a type of work permit that is issued to the owner of a business as an employee of his/her Hong Kong Company. One of the main criteria lies in whether the applicant is able to prove that the business will make a significant contribution to the economy of Hong Kong.
		The Immigration Arrangements for Non-local Graduates (IANG) Under IANG, non-local graduates refer to non-local students who have obtained an undergraduate or higher qualification in a full-time and locally-accredited local program in the HKSAR. They can submit applications to the Immigration Department within six months after the date of their graduation (i.e. the date shown on their graduation certificates) are classified as non-local fresh graduates. Non-local fresh graduates who wish to apply to stay and work in the HKSAR are not required to have secured an offer of employment upon application.
		Plan of the Investment as Entrepreneurs For foreigners who want to establish or join-in start-up businesses in Hong Kong. May consider the application if the start-up business concerned is supported by a government-backed programs with a rigorous vetting and selection process, and the applicant is the proprietor or partner of the start-up company or a key researcher of the relevant project.
Counties / Region	General description	Various schemes to attract entrepreneurial immigrants & the goal / requirement of these schemes
Canada	Canada has adopted one of the most open immigration policies in the world since the 1970s. As of 2010, the foreign-born population makes up 21.3 percent of the country's total population.	Start-up Visa Program Canada launched this program in 2013, with the aim to attract more highly skilled foreign entrepreneurs to move to Canada. The Start-up visa is the first of its kind in the world, linking immigrant entrepreneurs with experienced private sector organizations that have expertise in working with start-ups.

United Kingdom	The U.K. has adopted different entrepreneur visas which allow foreign nationals to start a business in the U.K. and earn a fast-track to UK citizenship, providing that they can meet strict requirements on access to funding, job creation and business success.	Entrepreneurship Visa The independent Migration Advisory Committee (MAC) in Oct 2015 announced that it had “found substantial evidence of low-quality businesses” established by entrants under the UK’s Tier 1 (entrepreneur) visa program. High quality global journalism requires investment. Since 2008, 13,746 individuals have been granted Tier 1 (Entrepreneur) or Tier 1 (Graduate Entrepreneur) visas, only 1,580 active companies have been set up by those granted visas, so there is a need to have a considerable scope to reform the Tier 1 (Entrepreneur) route that government should be more selective about which entrepreneurs to admit under the scheme.
		Graduate Entrepreneur Visa In 2012, the Graduate Entrepreneur Visa was introduced for graduates who have been officially endorsed as having a genuine and credible business idea are from outside the European Economic Area (EEA) and Switzerland.
Singapore	Singapore immigration policy has been closely associated with its economic development in which various policies and incentives are used to attract foreign talent to Singapore from time to time.	The Entrepreneur Pass (EntrePass) Scheme Singapore adopted this Scheme in 2004. It is part of Singapore’s overall plan to become a regional business hub and attract the best business and entrepreneurial minds to the country.
Taiwan	Taiwan has a strict immigration policy and currently there is a very complicated immigration system in Taiwan due to its unique political history with China.	Entrepreneur Visa Taiwan has started to accept entrepreneur visa applications from foreign nationals in 2015. However, there is only a quota for 2000 entrepreneur visas each year.
Japan	Japan has adopted strict immigration from time to time.	Japan rolled out a new point-based system in 2012 to rate immigrants, higher scores would be given to professionals like professors, doctors, and corporate managers, not much attention is put on entrepreneurs.

● Table 4: The comparison of the entrepreneurial immigrant policies among countries and region

Encore Entrepreneurship and Silver Venturing

By Prof. AU Yuk Fai Kevin

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By Mr. Tony XIAO

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Older entrepreneurs are also called encore entrepreneurs, third age entrepreneurs, or seniorpreneurs (Hudson & Goodwin, 2014). As the adage goes, “Older and wiser.” Seniors usually have more life experience, broader social networks, definitely more time and oftentimes fiduciary freedom. The question is whether they make use of their advantages to set up new business more readily than youngsters and young university graduates.

Background

Hong Kong has overtaken Japan to have the longest life expectancy in the world. An average female lives to the age of 87.3 and an average male lives to the age of 81.2. The Statistic Department estimated that forty years from now the life expectancy of Hong Kong people will become 90. Thus, a person retires at 60 will have another 20-30 years to live. If we look at the age of people, those above 65 years are 16% of the population and those above 55 years are 32% of the population. People below 24 years are only 23% of the population. This makes the median age of Hong Kong sitting at 44, which ranks 10th in the world. In comparison, median age of China is 37.1 (ranked 67) and Singapore is 34.3 (ranked 83). Hong Kong has an aging population resembling those of developed nations such as EU and Japan (CIA Fact Book).

Foreseeable dire consequences have alarmed the government and society at large of what may happen to an aging population. Economic growth, manpower, tax income, and investment will slow down while dependency rate will increase. Although worsening economic consequences may be mitigated through prudent fiscal policies, savings, and retirement funds,

more serious social- and community-related problems remain. With an aging population, the health system will be over-burdened as building hospitals and other facilities usually take a long time to materialize. Nursing homes are insufficient and reported to be poorly managed. Even the facilities are in place, decreasing number of youngsters entering the labor market could cause insufficient manpower to care for the health-care and community service needs of the old. As many elderly would be living on savings or social welfare after retiring from work, their psychological and social well-being are going to be daunting tasks many societies have to face.

The government and other stakeholders have started several initiatives in anticipating the future challenges. They have allowed more immigrants, investigated on a universal retirement scheme, embarked on building more hospital and nursing homes, and set aside a “Future Fund” to prepare for an older population. On the other hand, business corporations especially insurance companies and pension funds have issued warnings for companies and citizens to prepare for a longer life span. They have also looked into new products to cater for the needs of people living beyond the past expected age.

Meanwhile, NGOs see the need to move beyond traditional social services and started to promote the idea of active aging. They introduce community programs and mutual support groups among the elderly. More and more organizations have encouraged retirees to serve as volunteers so that they can use their experience and social capital to give back to the society, such as providing mentorship to the younger generation and

organizing philanthropic events. Some social enterprises have promoted continuous employment for the elderly and advanced new services to cater for their social and community needs. For instance, Diamond Cab allows families of aging parents in wheelchair to travel and have a social life. Kinnet is a new breed of club providing F&B and exercise services to middle-class elderly. The silver-hair market is growing in Hong Kong due to these developments (Hong Kong Economic Journal, 2016).

A significant number of the aging population are financially stable and healthy. Many of them are still eager to work and try something they dreamt of when they were young. The public policies and NGOs of Hong Kong may have started exploring the notion of active aging but they have yet to pay attention to encore entrepreneurship. Rarely would the media cover such stories.¹ Lacking information is certainly one of the hampering factors. While other developed regions have set up policies to promote encore entrepreneurship, these chapter reports research findings of GEM to shed light on encore entrepreneurship, make observations, and suggest a few policy recommendations to foster it in Hong Kong.

Research of GEM on senior entrepreneurship

The GEM research findings show that an increasing rate of new entrepreneurs comes from the age group of 55-64. This group now make up a quarter of all new entrepreneurs in the 2015 based on the Kauffman Index in the US. The corresponding share is only 15% in 1997.² In Hong Kong, this group has also shown an increase increased its Total Early-stage Entrepreneurial Activity (TEA) rate since our 2009 study. This trend appears in many of the developed countries. The baby boomers born in the 1950's to 60's have reached retirement age. Years of good life allow them to maintain good health and enjoy monetary freedom. Several decades of stable development have provided

them with ample opportunities to accumulate personal experiences and social capital to develop silver ventures, thus increasing the potential of senior entrepreneurship. Nonetheless, some theoretical research has argued that skewed old age (or age) population can reduce entrepreneurial activities (Levesque & Minniti, 2011). But either way, empirical testing is still lacking.

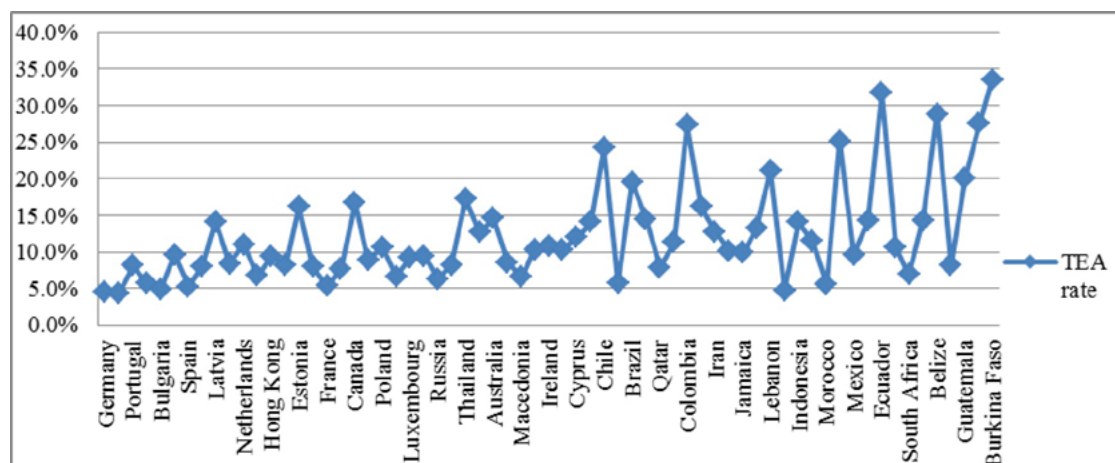
¹ For an exception, see SCMP which covered the story of two retirees, aged 69 and 62, set up a hi-tech venture in the HK Science Park and receiving angel investment: <https://ocw.mit.edu/courses/sloan-school-of-management/15-390-new-enterprises-spring-2013/download-course-materials/>

² <http://www.kauffman.org/blogs/policy-dialogue/2015/december/incentives-for-silver-startups>

Encore Entrepreneurship Revealed in Startups and Established Businesses

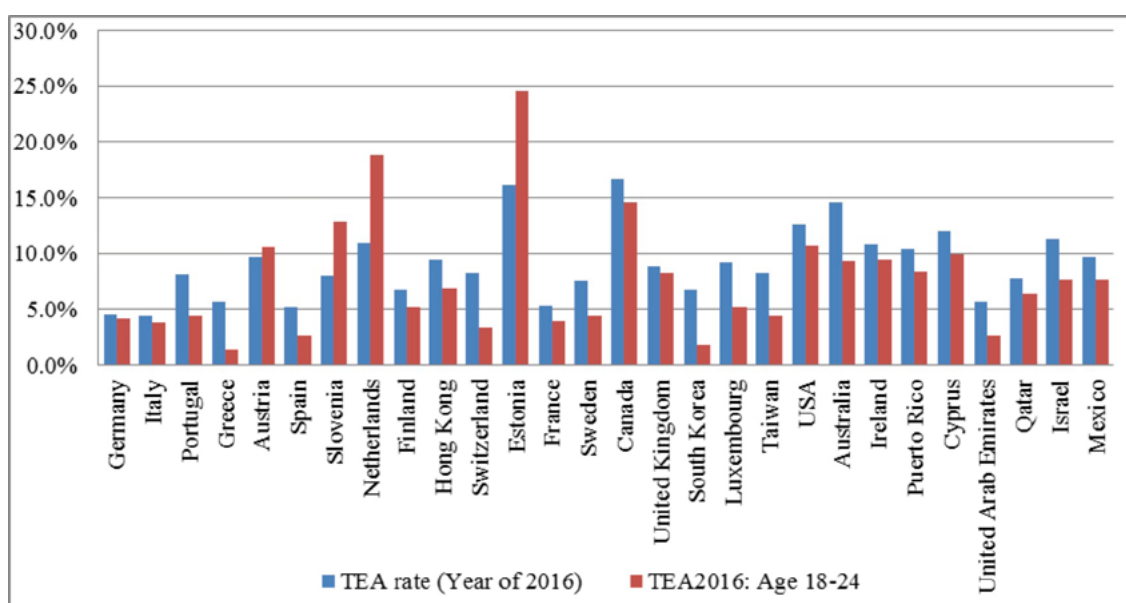
We examined the national data set of GEM in the study. First, the median age of a nation is studied. As illustrated in Figure 1, older countries are associated with lower level of entrepreneurship rate ($r = -.58$). On the left hand side, Germany and other older nations have a lower level of TEA rate. The rate increases somewhat towards the right hand side where younger countries like Brazil and Ecuador are located on the horizontal axis. Since the median age reflects a skewness towards old age people of a nation, such pattern appears because even though an older population usually accumulates more capital and work experiences, older people usually have lower demand on goods and less energy to set up new ventures (Levesque & Minniti, 2011).

Figure 1:
TEA rates across
countries as a
Function of
Age Group

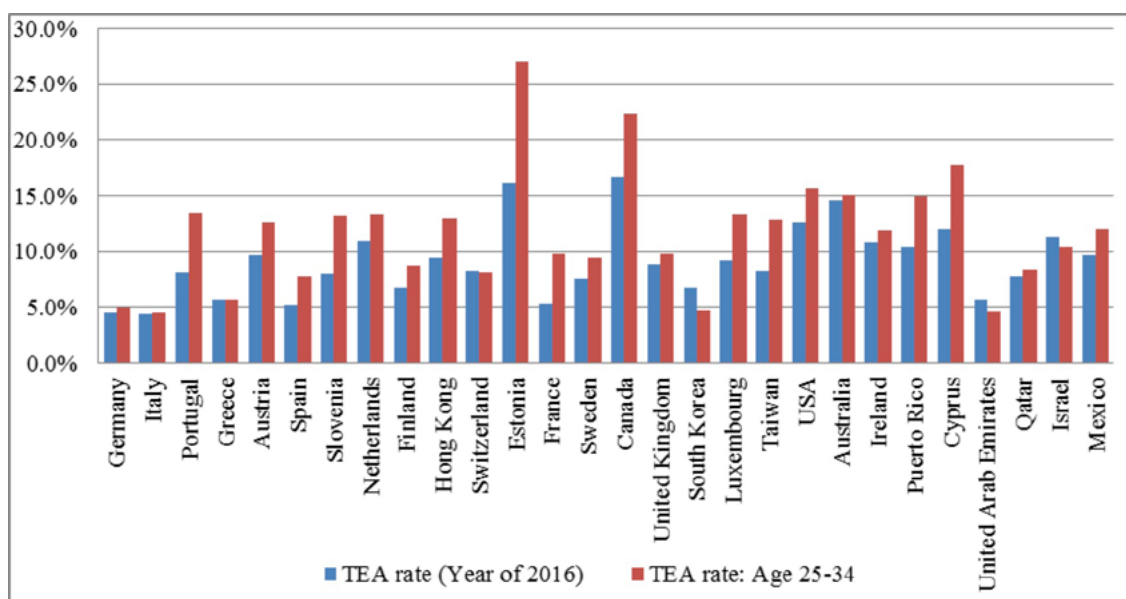


Second, if we compare the TEA of different age groups in innovation-driven economies, it is obvious that the age groups of 25-34 and 35-44 are the most active, usually more active than the national average (Figures 2b and 2c). This is not new. The age group of 45-54 is quite interesting. A number of nations actually exhibit a rate exceeding that of the national average TEA rate in this group, such as Germany, Italy, Australia and even Israel. The group of Hong Kong is a little below the average. Comparatively, the youngest (18-24) and the oldest groups (55-64) are the least active in most nations (Figures

2a and 2e). Having said that, nations vary greatly in these two age groups in their TEA rates. Particularly for the oldest group, while Hong Kong has a rate about half that of the average, several nations actually have their rates only a little lower than the average. In the case of South Korea and it actually has its rates above the national average TEA. It seems that for nations even in the same development stage, their TEA rates for the oldest group can vary quite widely. Encore entrepreneurship may also differ quite greatly.



● Figure 2a: TEA rates across countries and Percentage of respondents who are 18-24 years old and involved in TEA



● Figure 2b: TEA rates across countries and Percentage of respondents who are 25-34 years old and involved in TEA

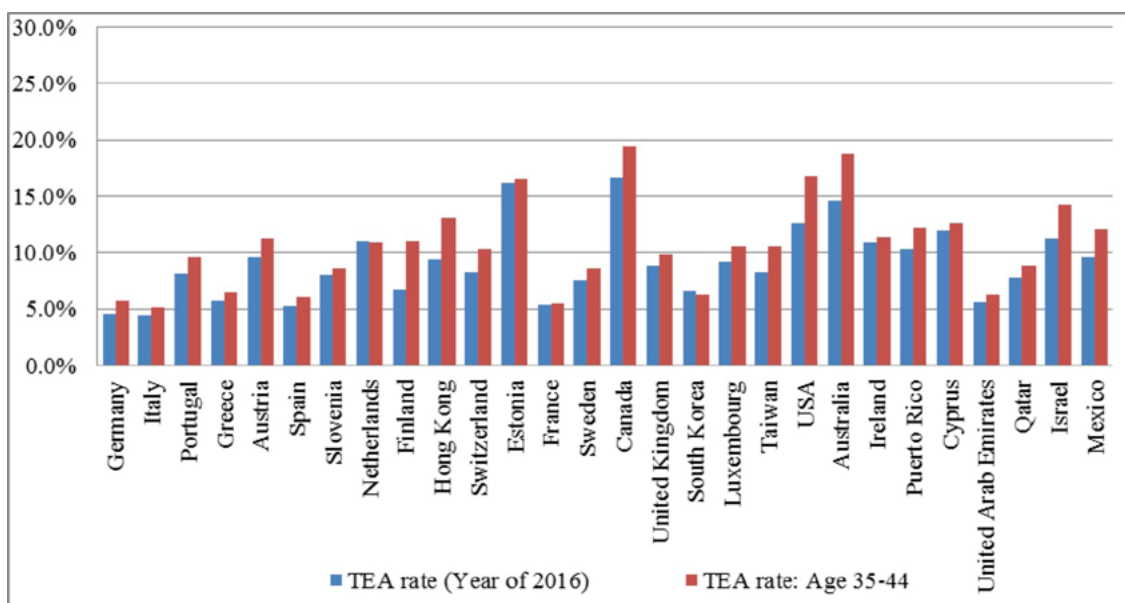


Figure 2c: TEA rates across countries and Percentage of respondents who are 35-44 years old and involved in TEA

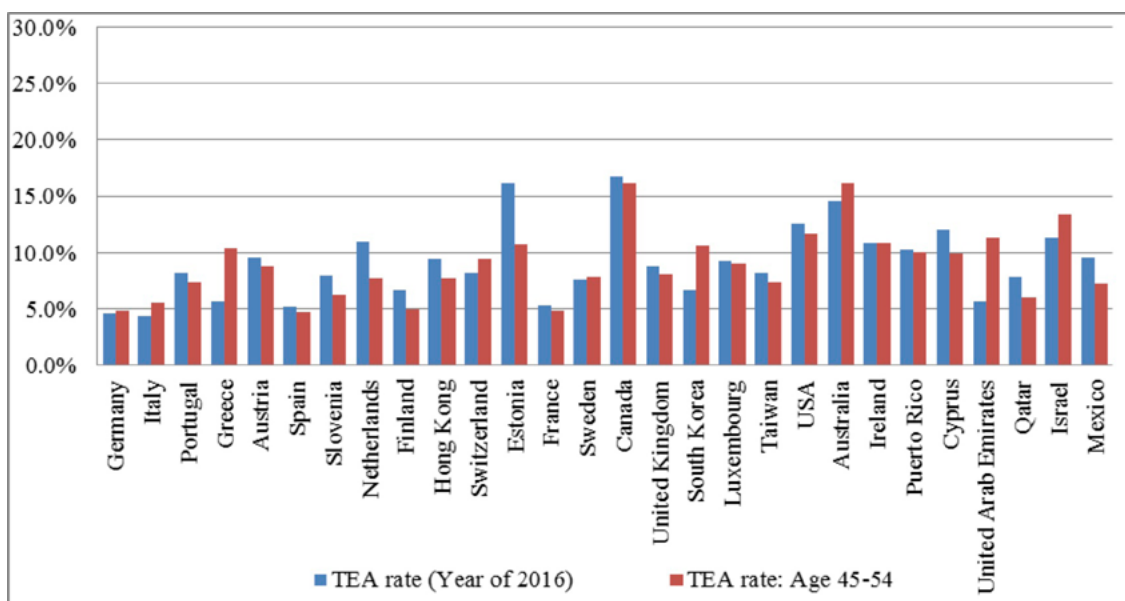
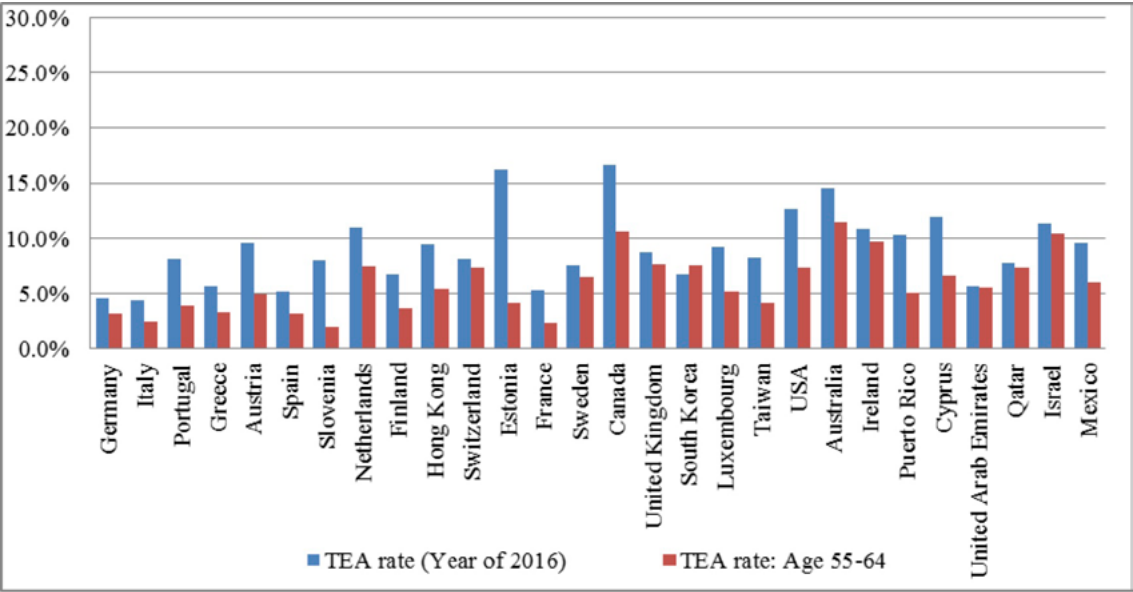


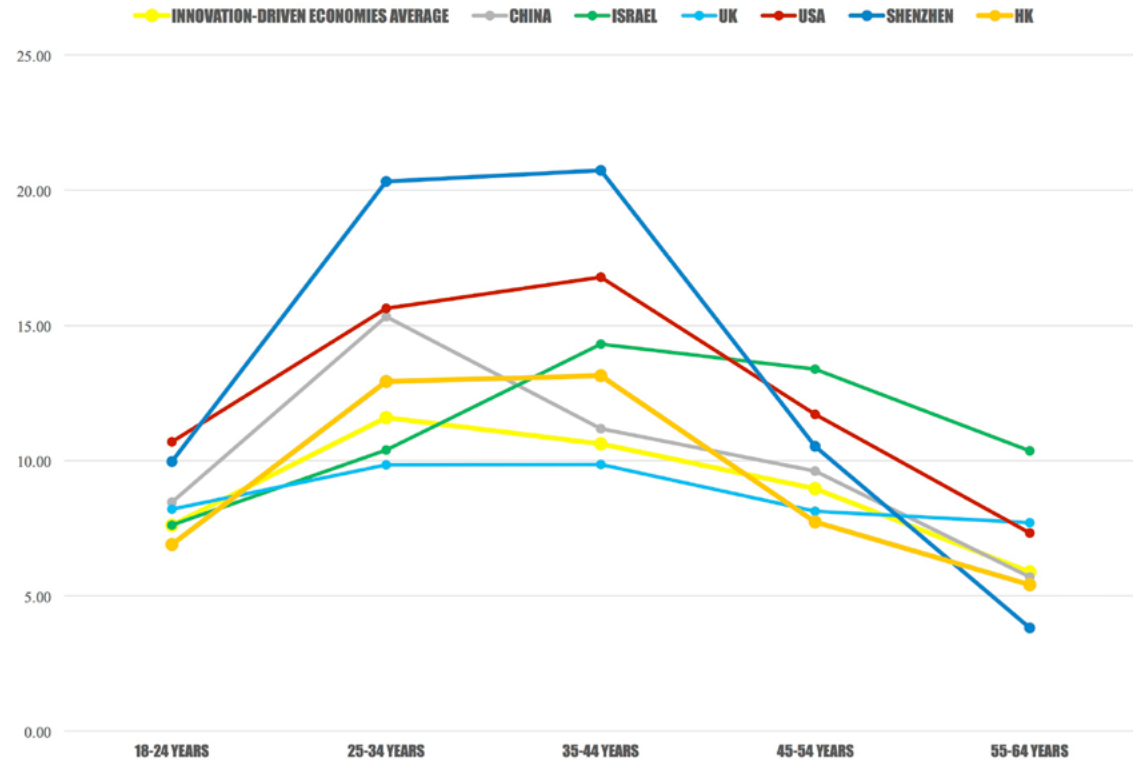
Figure 2d: TEA rates across countries and Percentage of respondents who are 45-54 years old and involved in TEA

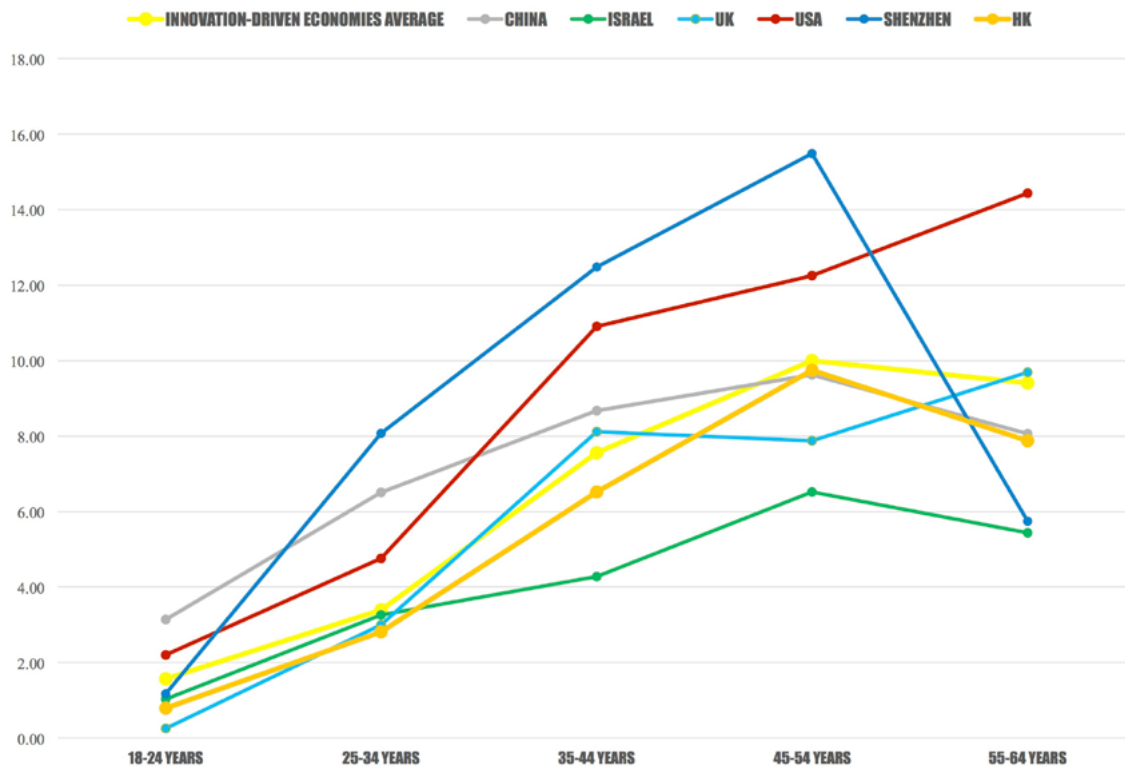


● Figure 2e: TEA rates across countries and Percentage of respondents who are 55-64 years old and involved in TEA

If we examine Figure 2.12 again to compare Hong Kong to a few other participating countries, we can see that Israel's oldest age group actually has a higher TEA rate than its youngest group. While Hong Kong and Shenzhen show

the same age pattern as innovation-driven economies on average, they have a great dip in the oldest age group; Shenzhen has especially a large drop.





The above diagram shows the pattern of established business among different age groups. While the innovation-driven economies show a trend of increasing ownership with age (plateaued in the group 45-54), Shenzhen and to less extent Hong Kong show a decline in the oldest age group. Shenzhen was a young city and residents over 50's are probably those who failed to enjoy the rapid growing period of the city. The US on the other hand shows an increasing business ownership rate as age increases, reflecting its continuous growth in the past few decades.

What concerned us is that if life expectancy and health are maintained well in Hong Kong and Mainland China, there may be cultural, legal, welfare, and other institutional factors that explain why older people in these two places are less involved in entrepreneurship. As Hong Kong's population will step into an increasing pace of aging, exploring silver venturing as an option of active aging could be an alternative apart from increasing community and caring programmes for the resourceful group of elderly.

Recommendations

Youth entrepreneurship catches the current attention of government and community programmes in Hong

Kong and China. Many programs have been set up in universities to promote student entrepreneurship. Older folks are often portrayed as either well-to-do retirees seeking leisure or poor elderly needing support. Rarely are Hong Kong elderly being encouraged to try something new and challenging. The following are a few suggestions that may kick-start a transformation for the seniors:

1. We have observed large differences in entrepreneurship rates across countries. There is a need for policy makers and academics in Hong Kong to learn more about the possible reasons behind and learn the initiatives that promote senior entrepreneurship. For instance, the Kauffman Foundation and Small Business Advocacy have implemented a number of training programs and consulting programs to help seniors in the US to build a business. For Hong Kong, the first step is probably to find out who in the later stages of their life are engaged in entrepreneurial activities and what motivates these people to abandon the comfort of retirement to take on a more adventurous path. What are their odds of success? More importantly, we need to find out the political, economic, social, and cultural implications of encore entrepreneurship to us all.
2. After gaining more insights into the emerging phenomenon, we will be in a better position to initiate

new programmes to raise the awareness among the residents and the elderly the benefits and potential drawbacks of involving in new business ventures. Interesting questions to address in these programmes include: a) Do encore entrepreneurs look for the same return as their younger counterparts? b) What is their risk tolerance level? c) What skills do they need to learn most? d) How do they pick co-founders and business partners as succession is a more pressing issue to them? e) What support or pressure will they receive from their family members? f) How do they view “exit”? The list goes on.

3. The industry experience and knowledge possessed by encore entrepreneurs when combined with the vigor and innovativeness of their younger counterparts can potentially unleash enormous amount of untapped human capital. Many studies have shown that the single strongest predictor of entrepreneurship is parental entrepreneurship. Perhaps, the time has arrived for us in Hong Kong and those in Mainland China to learn a great deal from family business to realize the power of inter-generational entrepreneurship beyond a single family. More works need to be done ahead but the economic and social implications will be substantial.

4. In the intermediate term, policy initiatives to adjust the age distribution and the expectation of endpoint in one's life may be implemented. For example, policies to proactively bringing in younger immigrants from China and other origins.³ These can change the age skewness in the population and may affect how individuals perceive the risk and benefits of being an entrepreneur.

5. Lastly, going into entrepreneurship will require customers and definitely capital. Hong Kong has a number of programs to fund (using grant) youngsters and pair them up with experienced mentors. Some encore entrepreneurs can also use these kinds of support. More importantly, they may use their own money in the pension funds. In UK, since the pension reform gives people more freedom to withdraw their pension pot (free of tax), olderpreneurs have cashed out over 400M pounds to invest in their business.⁴ Hong Kong has a restrictive MPF program that only allow disability, death and immigration as reasons for early withdrawal. While a reform along the line of the UK pension system is a long shot, private insurance and pension funds may have more flexibility to create new products to better serve their customers.

³ Au, K. (2016). Immigrant Entrepreneurship among Mainland Chinese University Graduates in Hong Kong: An Empirical Study with Multiple Perspectives. Report for the Public Policy Research Grant Committee ; also see Our Hong Kong Foundation, <http://ourhkfoundation.org.hk/en/media/38/mainland-hk-economies/> 迎接時代變遷、與內地經濟並進

⁴ <https://www.pensionledfunding.com/press-releases/olderpreneurs-to-cash-in-400million-of-their-pensions-to-fund-start-ups/>

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Hong Kong Economic Journal Monthly

Entrepreneurship Education in Hong Kong

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Freedom and Democracy in the culture of Hong Kong have led to the establishment of unrestricted and self-initiated entrepreneurship education in the tertiary institutions over the territory. With an aim to rebuild the history of Hong Kong's entrepreneurial education development from its beginning, we reviewed historical materials and interviewed seasoned experts and scholars in the field of entrepreneurship education. Surprisingly, our efforts were in vain, and we found patchy discussion at best. Nevertheless, as far as Hong Kong's entrepreneurship education is concerned, it is actually the rational thinking of entrepreneurship education from diverse perspectives and the exploration and attempts at entrepreneurship education from different considerations that have contributed to the distinct characteristics of Hong Kong's entrepreneurship education today.

This study surveyed the progress of Hong Kong's entrepreneurship education in the aspects of general education, integrated education, supportive education, and so on, by various means including conducting in-depth interviews with veteran scholars and front-line teachers in the field of entrepreneurship education, by participating in entrepreneurship education activities for gaining first-hand experience, and by studying entrepreneurship education-related literature. The aim of the study is to provide not only a presentation of how entrepreneurship education is conducted in Hong Kong, but also a summary of Hong Kong's innovations in theories and the experience gained in practicing these

theories. Furthermore, it scrutinizes the bottlenecks and the potential risks in the development of today's entrepreneurship education and tries to forecast the possible trends and directions of Hong Kong's entrepreneurship education development in the future.

1. Special Development Patterns of Entrepreneurship Education in Hong Kong

1.1 General Entrepreneurship Education Based on Cultural Heritage and Innovative Thinking¹

The "Foundation of Innovation and Entrepreneurship" program developed by Dr. Hongyi Sun of the City University of Hong Kong and his research team is a typical example of general entrepreneurship education in Hong Kong.¹

First of all, the program puts forward the results-oriented 3-3-3-3[®] curriculum for entrepreneurship education. The so-called 3-3-3-3[®] stands for "Three Creations", "Three New", "Three Motivation", and "Three Actions". "Three Creations" refers to program contents that are developed using an integrated approach that goes through a process from creativity to innovation and then to entrepreneurship. "Three New" is action-oriented, aiming to "discover new ideas, design new products, and plan new ventures." "Three Motivation" refers to teaching activities that aims to promote "the use of the brain for proactive thinking, the use of the hands for active participation, and the use of the legs for conducting market investigations". "Three Actions" refers

to the requirement for the core capabilities of “problem-finding, problem-solving and cooperation”. The prominent characteristics of the 3-3-3-3[®] curriculum are mainly reflected in its scientific nature and feasibility. In regard to scientific nature, the curriculum is always designed using the expected post-learning behavioral change of students as the starting point. From a horizontal perspective, the teaching objectives, contents and activities, the requirements on students’ quality and capacity, and the criteria of assessment echo and support one another. From a vertical perspective, the content orientations of different phases of the program are mutually differentiated and connected at the same time. In terms of feasibility, the curriculum design is in compliance with the Hong Kong government’s implementation of requirement for results-oriented syllabus since 2005. Instead of sticking to the traditional way of setting vague directions for teaching tasks and objectives, it makes a breakthrough by using specific and foreseeable behavioral changes to state its teaching objectives and tasks. This provides a clear psychological expectation for both the teaching and learning processes, thus benefitting not only teaching activities, but also the assessment of teaching effects and the evaluation of learning outcomes.

Second, the 7P teaching method is proposed based on the PIPE[®] teaching process. The “Innovation and Entrepreneurship Foundation” program advocates the abstraction of complex entrepreneurial activities into simple models in order to lead students to master the basic rules and methods of entrepreneurship. It also makes use of effective teaching methods and tools to restore simple models back to complex entrepreneurial practice for resolving specific real-life issues. On one hand, the program proposes the PIPE[®] teaching method to simplify the complex entrepreneurial process through the “Problem-Idea-Product-Enterprise” model. It encourages students to discover entrepreneurial opportunities in daily life through the process of exploring and identifying problems; to come up with clues and ideas through the process of creating new ideas and solutions; to promote product births through the process of innovative design; and to achieve commercialization through the process of entrepreneurial implementation. On the other hand, the program also uses the 7P teaching method to restore simple teaching models back to complex entrepreneurial activities. By doing so, it not only realizes the organic integration of local and western cultures, but also improves students’ participating and learning initiative.

¹ The content of this part is originated from Future Learn’s “Foundation of Innovation and Entrepreneurship in China” online course, the Innovation and Entrepreneurship Foundation textbook (2016 edition, edited by Hongyi Sun and published by China Machine Press), and the “Foundation of Innovation and Entrepreneurship” public demonstration classes.

1.2 Integrated Entrepreneurship Education with Interdisciplinary Orientation ²

The integration of entrepreneurial and professional education in Hong Kong began in the field of design. In 2008, the Hong Kong Design Centre and The Chinese University of Hong Kong co-organized the “Entrepreneurship for Design & Creative Business” certificate course to provide a brand new education model which integrates entrepreneurship for design entrepreneurs.

First is the establishment of an education system that integrates design thinking and lean entrepreneurship together and covers the entire process of transformation from “design innovations” into “design business”. The course is based on not only the T-Shaped archetype jointly promoted by the US’s Stanford University and design firm IDEO, but also the professional quality training of design students. With an objective to instill lean entrepreneurship into students’ mind through an interdisciplinary approach. The course includes an analysis of the prospect of the design industry, “customer-based” marketing design, reputation-focused brand positioning, sustainable business model, interdisciplinary team building, financial management, project-facilitating infrastructure, and visits to the industrial sector in the Pearl River Delta region .

Next is the establishment of positive “teaching-research” interaction through case-based teaching. For each and every of its classes, the course invites the participation of one to two groups of professionals from different design fields, academia, business sector and related institutions. Such an open teaching model enables the course to overcome the gap between school education and real-world practice by complementing the intrinsic shortcoming of school education in entrepreneurial experience. Meanwhile, the course also uses these cases as important evidence for proposing and developing theoretical outcomes, hence creating an important

link for positive interaction between entrepreneurship education and research. By leveraging the case resources that it masters during its development and establishment process, the course proposes a taxonomy of seven main types of design entrepreneurship. It provides a detailed interpretation of the career roadmap of Hong Kong-based design entrepreneurs to help Hong Kong designers know their strengths clearly and enable them to look for career development opportunities. In this way, it remedies the current inadequacy of diversified development in design entrepreneurship.

² The content of this part is originated from interviews with leading members of the “Entrepreneurship for Design & Creative Business” certificate course including Prof. Kevin Au and Project Director Mr. Bernard Suen of The Chinese University of Hong Kong, and the textual analysis of research information including Eight Lessons in Entrepreneurship for Design and Creative Business 志在創業——設計師創業8堂必修課 and The Career Roadmap of Hong Kong-based Design Entrepreneur and Case Study 香港設計創業路線圖及個案。

1.3 Incubation-based Entrepreneurship Support Education ³

Pre-incubation platforms established in the campus of the tertiary institutions in Hong Kong provide continuous entrepreneurship support education to university students before they start businesses. The Pi Centre of The Chinese University of Hong Kong is a relatively more representative entrepreneurship support education platform. The full name of the Pi Centre is “Pre-incubation Centre”. Established by The Chinese University of Hong Kong in May 2014, it is an incubation platform that was founded to provide entrepreneurship support services to on-campus university students. It is jointly managed by the university’s Center for Entrepreneurship, Office of Research and Knowledge Transfer Services, and Centre for Innovation and Technology. Targeted at teams and individuals with entrepreneurial ideas in the university, the centre offers its beneficiary not only infrastructure support such as working space and facilities, but also technical support and mentoring services in the form of training courses, workshops, and so on.

First is an access mechanism that is both lenient and stringent. It is lenient because all the university’s

undergraduate and postgraduate students are eligible to join the pre-incubation centre without special restrictions on the type of project to be accepted. Also, it takes into consideration the unpolished characteristics of university students in the entrepreneurial development process. Therefore, its emphasis is not on a project’s superiority at its starting stage, but on the future prospect and trend of the project. At the same time, the mechanism is stringent because all projects must undergo strict assessment before it is accepted. Hong Kong entrepreneurial incubators, angel investors and the university professors and scholars in the field of entrepreneurship education are invited to form project assessment committees to seriously screen potential projects in project defense meetings according to a system of indicators including innovativeness of the entrepreneurial project, the degree of reasonableness of the team structure, and the feasibility and future market space of the project. Besides, they also make concrete guidance and feasibility recommendations on the projects submitted.

Second is an incubation mechanism under which mentors are assigned to follow through the whole process. After approving a project, the Pi Centre assigns a mentor to the accepted project team to develop a project proposal together. The mentor also provides guidance and service throughout the entire period when the project is being incubated in the centre. During the entrepreneurial idea inception stage, the mentor conducts practical training in the form of workshops for the entrepreneurs. It is to help them familiarize themselves with the basic process and procedures while guiding them to validate the feasibility of their projects by means of simulation. When it comes to the start-up and implementation stages, the focus of the mentor is put on the “idea-specimen-sample-product” incubation process. This on one hand lowers the difficulty of entrepreneurs to implement their projects during the start-up stage. On the other hand, the success rate of the entrepreneurial projects can be maximized as the gradually progressing process allows the entrepreneurs to continuously align their ideas with customers’ requirements.

³ The content of this part is originated from field research conducted by the Pi Centre of The Chinese University of Hong Kong, interview with the Project Director Prof. Bernard Suen, and the textual analysis of information on <http://www.picentre.cuhk.edu.hk/>.

2. Practical Reflections on Current Development of Entrepreneurship Education

2.1 Relative Insufficiency in Local Studies on Entrepreneurship Education

In view of Hong Kong's academic research results in the past two decades, we can find a clear trend that entrepreneurial study has been becoming more and more popular since the beginning of the century. Tertiary institutions including The University of Hong Kong, The Hong Kong University of Science and Technology, The Chinese University of Hong Kong and The Hong Kong Polytechnic University have all established their own entrepreneurship centres, which gradually become academic communities engaged in the study of entrepreneurship. Unfortunately, although these academic communities have been organizing and participating in the planning and implementation of entrepreneurship education activities to a varying extent, they have not yet been able to pay additional attention to education as a research direction. To date, the historical study of the development of entrepreneurship education in Hong Kong remains more or less a blank page. The Chinese Grand Historian Sima Qian says, "I wanted to delve into the interplay of Heaven and humans, to penetrate in the changes from ancient to nowadays..." Examining historical events not only helps us reflect on the history of the evolution of entrepreneurship education and inherit the valuable experience gained from past education implementation processes. It also guides us back to backgrounds where there were different social formations. Under these backgrounds we can review the development pattern of entrepreneurship education and find out the future development direction of Hong Kong's entrepreneurship education.

America is the origin of entrepreneurship education with readily available historical records. Entrepreneurship education opened its curtain in the US with the introduction of the very first entrepreneurship course, "Management of New Enterprises", by Myles Mace (1947) at the Harvard Business School in 1947. Under the impact of big industry development, however, this thinking was recognized neither in the education sector nor in society. It existed only as a single and isolated course. Only it came to the end of the 1960s, a new kind of economy⁴ that was different from traditional industrial economy emerged quickly. It was after the proposal of the famous "New Growth Theory" by Paul M. Romer (1986) and Robert E. Lucas Jr. (1988) et al. and the emergence of large-

scale practice of high-tech entrepreneurship in "Silicon Valley" and so on, that the power of entrepreneurship as an important engine of economic development was comprehensively demonstrated both in the theory sector and in the field of practice. As a result, entrepreneurship became the fastest growing academic field among tertiary institutions in the US between the end of the 1960s and the end of the 1970s. As in 1980, a total of 163 institutions launched entrepreneurship programs, which further increased to 253 in 1984. Half of the business schools set up systematic teaching programs⁵. Since then, entrepreneurship was incorporated into the educational system of the US and it flourished in every field. Even in Mainland China where entrepreneurship education started relatively late, we can also find historical traces about the development of entrepreneurship education in the country. In *The History of Innovative Entrepreneurship Education in China*, Prof. Wang Zhanren systematically reviews the activating events of entrepreneurship education in China. He also provides a most detailed coverage of the historical background under which Hu Xiaofeng proposed for the first time the philosophy of entrepreneurship education by capitalizing on the opportunity brought by the implementation of the "overall experiment of life education" in 1988. Subsequently, driven by the UNESCO's joint reform project for education that enhances teenagers' entrepreneurial capacity, China reached its first peak in the development of entrepreneurship education in the area of basic education. As you can see, both America, which boasts a long history of entrepreneurship education, and Mainland China, which remains in the developmental phase, place heavy emphasis on the historical study of entrepreneurship education.

On the contrary, as far as Hong Kong's development of entrepreneurship education is concerned, We have not been able to find out related historical materials to verify where, when and why entrepreneurship education emerged in Hong Kong, and what happened afterwards. After tracing the reasons behind, I think it is attributable to two main aspects. First, Hong Kong's colonial cultural characteristics may have restricted the in-depth development of local study in Hong Kong. Between 1842 and 1997, the 150 plus years of colonial ruling by the British government has left a deep mark of western culture in Hong Kong. Such a long-term cultural penetration has gradually diluted the sense of identity, which is being submitted by a global consciousness later on. In the field of entrepreneurship education research, both educators,

and scholars and experts prefer introducing international mainstream educational models for empirical trials in Hong Kong rather than putting in time and effort to conduct local research on entrepreneurship education of Hong Kong. This also explains the fundamental reason why advanced entrepreneurship education methods with a sparkling impact can be seen everywhere in Hong Kong but particular localized education models and new and innovative theories are so rarely put forward ⁶.

Second, the extra-fast mobility of educators makes it inconvenient to conduct historical research of entrepreneurship education in Hong Kong. Hong Kong is a global talent hub in which front-line teachers in the field of entrepreneurship education and scholars and experts engaged in related research come and go quickly. While such degree of mobility facilitates the exchange and learning of internationally advanced theories and experience, it has also created difficulties in collecting historical information, resulting in missing historical clues for the development of entrepreneurship education in Hong Kong.

⁴ This new kind of economy is called "Knowledge Economy" in Post-capitalist Society by Peter F. Drucker.

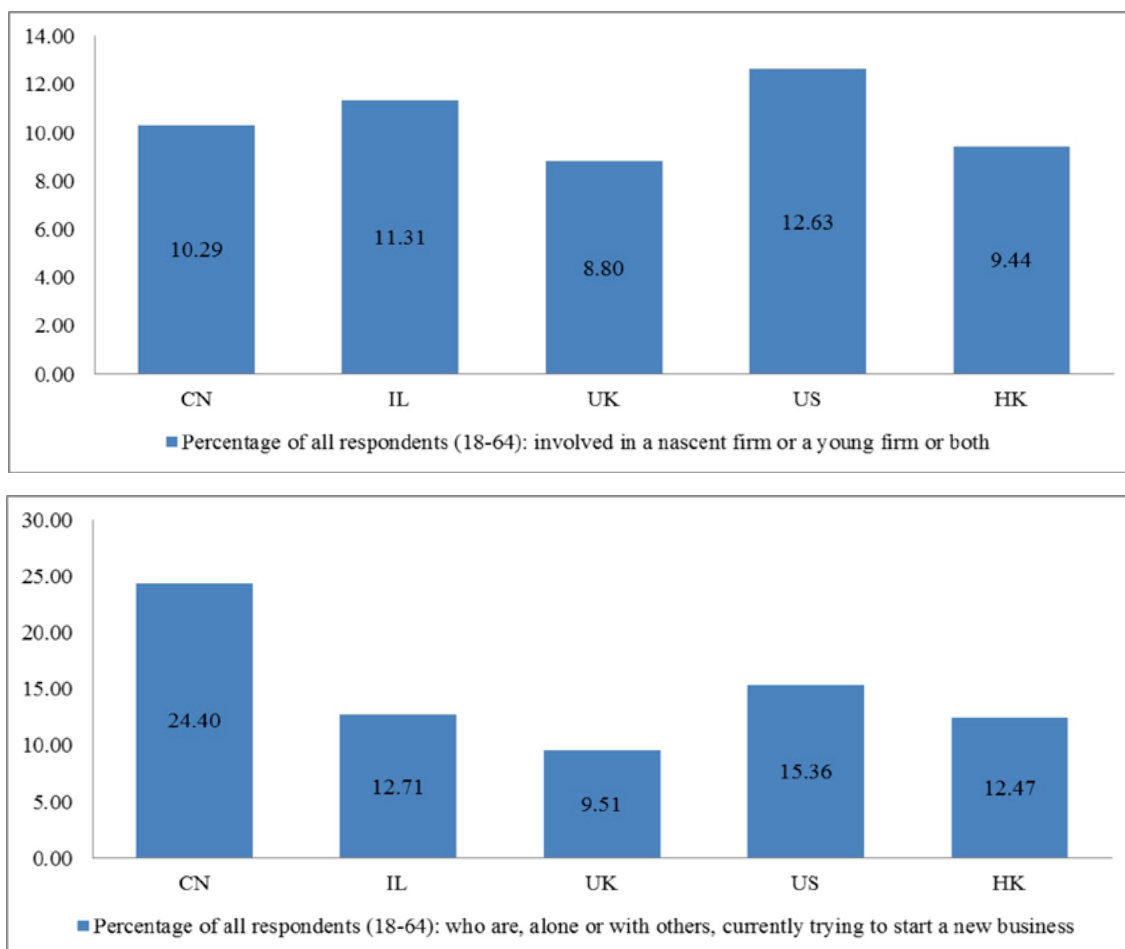
⁵ Vesper, K.H. 1985. *Entrepreneurship Education*. Wellesley, MA: Babson College, p124.

⁶ For exceptions, see Chung, P., & Ip, S. (2009). *The first 10 yards: The 5 dynamics of entrepreneurship and how they made a difference at DHL and other successful startups*. Singapore: Cengage Learning Asia and Kevin Au and Mingles Ts, 中大創業者

2.2 Lacking Preparation for Receiving Entrepreneurship Education by Hong Kong People

Since developed people of Hong Kong have not been very passionate about starting their own business. According to GEM survey data, Hong Kong's entrepreneurship prevalence rate of 9.44% is relatively lower than similar regions (Mainland China, Iran, UK and US). Compared with the US figure, it is 3.2 percentage points lower. At the same time, we also discover from the survey that only 12.47% of the people of Hong Kong are in an attempt to participate in entrepreneurial activities on their own or with a team. This proportion is only half of the proportion in Mainland China. It followed that Hong Kong people have not developed a mindset and value set that advocate and aspire entrepreneurship. Entrepreneurship remains to be a career experience that only a minority of people will give a try. This is why entrepreneurship education has always been considered a niche educational activity only.

The reason can be reflected in two respects. First is the mental constraint to obey the authority, which is formed under the examination-oriented education model. Hong Kong's basic education has been based on an examination-oriented model. This determines that a psychological inertia to believe in and obey the authority is gradually formed when a student is in pursuit of standard answers. However, this inertia largely restrains the development of an entrepreneurial mindset that seeks to break traditions and think out of the box. It also impedes the development progress of people to accept and appreciate entrepreneurship. Second is the contradiction that exists between the "face-saving" problem precipitated in traditional Chinese culture and the "trial and error" process inevitable in the course of entrepreneurship. From ancient to contemporary times, the Chinese have always believed that only being successful can an individual feel satisfied in the "face-saving" issue. However, for entrepreneurship, which is a practical activity full of unknowns and uncertainties, the norm is actually to keep "trial and error". This contradicting relationship between the two aspects determines that the people of Hong Kong have a relatively larger mental conflict in the issue of accepting entrepreneurship. Therefore, the inner entrepreneurial motivation deep inside their heart will be aroused only when they are under an intensive external driving force.



2.3 Lack of Strong Guarantee for Resources for Entrepreneurship Education Development

The development of entrepreneurship education in Hong Kong is a bottom-up course of evolution. Compared with the top-down progression in Mainland China, Hong Kong's development model has an advantage in terms of self-initiation and self-awareness in educational implementation. In Hong Kong, the implementation of any one entrepreneurship education model is originated from a particular evidence-based social need. This provides a strong support to the internal momentum of entrepreneurship education itself. However, the internal drive also requires the protection of external support in order to achieve substantial development. At the moment, Hong Kong's support to entrepreneurship concentrates on the area of business incubation, while high-level projects dedicated to entrepreneurship education or training remain to be relatively limited. During the course of the survey, we observed that although the teaching effect and evaluation of "Entrepreneurship for Design & Creative Business" were outstanding, it has experienced suspension due to the end of support from the Hong Kong Design Centre. The Pi Centre can only

allow students to receive one year of support education. But under the limitations of available resources, it cannot provide continuous education services to students who are still in need. In addition, the Pi Centre can only ride on the network of the members of its management to invite experts from related fields to provide mentoring and services to students at no compensation. But due to its tight budget, the centre cannot afford to employ specialized project mentors for its entrepreneurial teams. As it can be seen, the lack of sufficient operating expenses has become a bottleneck problem that hinders the continuous development of entrepreneurship education in Hong Kong.

Two reasons can be coincided. First, the utilitarian assessment of educational effects has disrupted the balanced development of entrepreneurship education. In Hong Kong, the viewpoint that "entrepreneurship is not only a need of engineering and business students, but also an area of knowledge to be acquired by students of all disciplines"⁷ has received greater consensus within the higher education sector; however, whether a particular entrepreneurship education program can achieve obvious results remains to be a key indicator of

assessment before an educational input is made. But on the question of “what is an effective program”, a utilitarian cognitive bias still exists among the decision-makers and investors of entrepreneurship education in Hong Kong. They are more used to assessing a program’s educational effect using yardsticks such as the number of new business the program has bred, the amount of financing received, and whether the program breeds a listed company. This determines that the input of resources into entrepreneurship education mainly depends on whether a project can be commercialized and can generate market profits in a short time. Therefore, we can see that it is easier for business incubation projects of engineering and technology schools to receive financial support when they are compared with fundamental entrepreneurship education and business incubation programs by human and social sciences schools. Comparatively, the latter group of programs can only receive limited funding support. Second, theoretical confusion has restricted the perception of the higher education sector and society towards the value of entrepreneurship. The logical prerequisite of the legitimacy of entrepreneurship education is that “entrepreneurship is knowledge that can be taught.” In Hong Kong, the academia still has doubt on this fundamental metacognitive question about entrepreneurship education, and discussions are going on to varying extents. Some people think that entrepreneurship is a unique development approach that is achievable only by a small number of individuals with related attributes at the appropriate time. Some people think that understanding entrepreneurship is beneficial to people of all disciplines but they only have to know it briefly without the need to delve into it. From these understandings, we can see that due to a lack of necessary philosophical reflections, Hong Kong society and the higher education sector have not yet reached a necessary consensus on the basic and prerequisite questions about the legitimacy, necessity and practicality of entrepreneurship education. This directly hinders the reasonable input of related resources.

⁷ This quote is taken from the speech of Professor Joseph J.Y. Sung, Vice-Chancellor and President of The Chinese University of Hong Kong, on the first CUHK Entrepreneur Day. It is quoted in a media report titled “CUHK adds new programmes to all disciplines to encourage entrepreneurship” (中大鼓勵創業 各學科增課程), which was published in Hong Kong Economic Times on May 23, 2015.

3. Future Development Trends and Outlook

3.1 Entrepreneurial Belief Education Based on Calls for Return to Humanism

Currently, Hong Kong’s entrepreneurship education is primarily viewed as a kind of instrumental education oriented to entrepreneurial knowledge and skill training. However, in times of information explosion, the acquisition of any kind of knowledge and skills is no longer a difficulty. Therefore, although the lack of experience and skills is the usual direct reason that restricts entrepreneurship development, we can also discover without much difficulty that the cause behind such deficiency is insufficient inner motivation. This deep inner motivation may be called entrepreneurial belief. How to reveal the psychological mechanism of the formation of entrepreneurial belief, how to use entrepreneurial belief to stimulate their inner drive towards entrepreneurial actions, how to use entrepreneurial belief to arouse their social responsibility awareness and ownership spirit, and how to keep up with the development of our times in order to guide the people of Hong Kong to acquire a proactive and positive entrepreneurial belief system, are questions to follow beyond seeing entrepreneurship from an instrumentality perspective, entrepreneurship education as an humanitarian discipline to cultivate a person may be necessary.

3.2 Public Entrepreneurship Education to Arouse “Can Do” Spirit

With an introduction, general theory and summary, the three-part system of “university-wide” innovative entrepreneurship education constructed by Prof. Wang Zhanren completes the onto-hermeneutics of university-wide innovative entrepreneurship education, the construction of the system, and the study of basic questions, providing an important theoretical basis and practice model to the popularization of innovative entrepreneurship education.

He points out that the term “university-wide” has two levels of meaning: “generalization” and “prevalence”. In terms of educational content, “university-wide” can be interpreted as generalized and broadly defined entrepreneurship education. In terms of educational model, it can be interpreted as a kind of educational philosophy and educational model that is different from the “professional”

innovative entrepreneurship education offered to business school students. The core concepts are that it is “oriented to all students”, “combined with specialized education”, and “integrated into the entire talent development process”. The basic objectives are “full coverage”, “layered organization” and “differentiation”. In other words, university-wide innovative entrepreneurship education aims to construct an integrated education system through the systematic offering of “generalized”, “specialized”, “embedded” and “career-oriented” innovative entrepreneurship education, hence consolidating and constructing a functional mechanism that operates on two mutually supportive tracks (“specialized” and “generalized”).

General Theory of the University-wide Innovative
Entrepreneurship Education,
People's Education Press, 2016 Edition

Hong Kong is a free economic and business-centric city. The vision of the government on entrepreneurship development is filled with the expectations for the re-industrialization of Hong Kong. Everywhere in Hong Kong's entrepreneurship support policies, we can easily find policy support and financial input that are dedicated to technological entrepreneurship. In 2014, it was proposed in the Budget of Hong Kong that an annual subsidy of HK\$ 24 million would be provided for three consecutive years to encourage students and alumni to conduct technological entrepreneurship. In 2016, the government spent HK\$ 2 billion to establish the Innovation & Technology Venture Fund and to encourage small-and-medium enterprises to use the information technology-oriented Technology Vouchers for funding up to HK\$ 200,000⁸. However, in the search of economic values, we cannot help asking whether money is the only thing that entrepreneurship brings us, and whether entrepreneurship becomes smooth when it has both financial support and assistance. Obviously both answers are negative. It follows that how to arouse individuals' spiritual demand for entrepreneurship is a brand new proposition for entrepreneurship education in our times. How to re-construct the “can do” “spirit of Lion Rock” and how to integrate the DNA of entrepreneurship into local peoples' spirit are important missions to achieve in the popularization of entrepreneurship education.

⁸ Suen, Bernard. May 5, 2016. Returning to humanity for a return to engineering 工科回歸，還需人文回歸. Hong Kong Economic Journal.

3.3 Specialized Development of Entrepreneurship Teacher Education

The quality of the teacher determines the level of education. The in-depth development of entrepreneurship education inevitably requires all types of entrepreneurship teachers to become more specialized in their fields. Currently, the teachers who are engaged in entrepreneurship education in Hong Kong include: 1) scholars, experts and front-line teachers dedicated to entrepreneurship research and teaching in tertiary institutions; 2) investors and entrepreneurship consultants from business incubators; and 3) veteran entrepreneurs from the business sector. The specialization of teachers inevitably demands different styles of teacher education mechanisms and models.

-For the education of entrepreneurship teachers within tertiary institutions, encouraging research on educational theories and evidence is an important way to drive the specialized development of teachers. At present, research outcomes in the field of entrepreneurship alone can no longer give a boost to the specialized development of teachers. How to encourage teachers to start special research projects on such educational issues as onto-hermeneutics, acceptance mechanisms, operating models and evaluation means, is an effective way to enhance the scientific level of entrepreneurship education while constructing a localized entrepreneurship educational model with Hong Kong characteristics. As far as the education of entrepreneurship teachers outside tertiary institutions is concerned, the establishment of effective motivation mechanisms and qualification certification mechanisms is an important way to the realization of teachers' specialized development. At the moment, the selection and employment of off-campus entrepreneurship teachers mainly relies on the network of related on-campus teachers. The mentoring service of off-campus teachers are also provided mainly on a voluntary basis. This leads to a development bottleneck that these off-campus mentors may not be able to provide specific services. Therefore, how to construct a positive mentor recruitment mechanism that can motivate people with insight to participate in the mentoring of entrepreneurial projects while introducing clear standards to the assessment of off-campus teachers, is definitely a demand on the specialized development of entrepreneurship educators in the future.

Entrepreneurship in APEC and Hong Kong

By Cheung-kwok LAW, Michael FUNG, Michael LEUNG and Ting-hin YAN* (20/12/2016)

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(1) Introduction to APEC's Micro, Small and Medium Enterprises (MSME) Initiatives

Small and medium enterprises (SME) have long been recognized by APEC as a key contributing source of economic prosperity and employment, innovation and a growth engine within the Asian Pacific region. According to APEC ministerial statements from 1994 to 2016, human resource development, information access, innovation and adaptation of new technology, financing, and market access have been key development initiatives. During this period, there had been rapid development of trading technology, a rapid pace of globalization and an increasing number of episodes of regional and global financial instability, leading to new opportunities and new challenges to the sustainable development of SME. Global financial crises and natural regional disasters exposed the vulnerability of SME survival to shocks. To strengthen the SME resilience to crisis and best position them to seize growth opportunities in its aftermath, principles and checklist of financial crisis management for APEC SME were recommended, following the establishment of the APEC SME Crisis Management Center and Emergency Preparedness Working Group.

From 1998 onwards, APEC had been exploring the unique role of e-commerce in conducting business, which remains one of the key development initiatives of SME up to this day. Venture capitals were raised to develop new business models. Technology sharing and enhancement of business linkage had been key focuses. Removal of trading barriers, reducing compliance costs, and developing effective capital markets favoring SME as

well as increasing connectivity in the region have all been important development initiatives.

To foster the sustainable growth of SME in the region, APEC began to emphasize the access of the global market by overcoming trades barriers through connecting the region. Prioritized strategic areas included the enhancement of business environment to promote stable regulatory frameworks; building management capability and promote entrepreneurship by SME; enhancing SME's access to markets through information and capability development of e-commerce; accelerate and promote innovation as a key competitive advantage of SME; increase awareness and availability of financing to SME; and encourage sustainable business practices by SME, remaining continuing directives of APEC since the 1990's.

Since 2010, the issue of corruption was noted as a significant market access barrier for SME that disproportionately impacted their ability to prosper and grow. APEC endorsed principles for voluntary business ethics codes to combat corruptions. The Business Ethics for APEC SME Initiatives was formed to facilitate regional connection and capacity building in fighting against corruption. Concerning the issues of gender and opportunities for young people, youngster and women enterprises are often key emphasized throughout this period. Besides the promotion of SME, APEC also promoted the development of micro-enterprises beginning in 2003 by forming micro-enterprise annual work plan.

In 2016, modernizing Micro, Small and Medium Enterprises (MSME) becomes one of focused issues: (i) promoting innovation and MSME connectivity; (ii) moving forward to integration and development through productive infrastructure; (iii) integration of green MSME into Global Value Chains (GVC); and (iv) internationalisation of MSME and their integration in GVC.

Once again in 2016, Ministers instructed APEC officials to:

(i) Eliminate barriers, reduce trade-related costs and facilitate trading of MSME globally.

(ii) Leverage the digital economy to expand internationalization opportunities for MSME.

(iii) Promote policy, business and regulatory environments by enhancing partnerships, linkages, and networking among innovation centers, research communities, and those involving large and small businesses.

(iv) Urge financial institutions to consider MSME's overall business plans and potential. Collaborate with public and private institutions in widening access to finance and business resilience.

(v) Assist MSME's intellectual property (IP) awareness and protection, develop necessary measures for the effective use of IP assets by MSME.

(vi) Promote MSME's resilience against unexpected events, disasters, and financial crises; build a secure and developed digital economy.

The objective of this short paper is to study the changing performance of MSME in Hong Kong in terms of new business creation, technological innovation, export orientation, female participation as well as household income of MSME owners. Comparisons will be made between Hong Kong, APEC countries (excluding Hong Kong) and non-APEC countries.

(2) Entrepreneurial Activities in APEC Countries and Hong Kong

(2.1) The Data Source of Global Entrepreneurship Monitor (GEM)

We will review the entrepreneurial activities in APEC

countries using data from the Adult Population Survey (APS) conducted by the Global Entrepreneurship Monitor (GEM) in 2009 and 2016¹. The APS is a worldwide telephone survey covering 54 and 65 countries in 2009 and 2016 respectively. As noted in previous chapters, entrepreneurship² is classified into two types in the APS, namely "Total early-stage Entrepreneurial Activity" (TEA) and "Established Business" (EB), based on the development stage of a business.



The APS uses the duration of wage payment to classify entrepreneurship. In particular, TEA covers new businesses that have paid salaries and wages for no more than 42 months, whereas EB covers businesses that have made such payments for more than 42 months.

It should be noted that world-wide, longitudinal surveys targeted specifically at MSME in APEC countries are very rare, if not non-existent. Meanwhile, there is a high degree of overlap between the business classification scheme used in the APS survey and the standard definition of MSME. Obviously, businesses engaged in early-stage entrepreneurial activity (that is TEA) are predominately micro businesses, while small and medium businesses are also likely to represent a significant proportion of established, owner-managed, businesses (that is EB). Therefore, the APS survey should provide important insights into the business activities of MSME in the APEC and non-APEC regions.

¹ Hong Kong only participated in 2009 and 2016 rounds of the APS survey in recent years.

² According to GEM, the definition of entrepreneurship covers a wide range of activities: "Any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business".

(2.2) New Business Creation

New business creation in this subsection is defined as the percentage of working population aged 18 to 64 years old who starts up a business³. In 2016, new business creation was around 12.5% in Hong Kong. Meanwhile, the average new business creation in APEC (excluding Hong Kong) and non-APEC countries were 16.7% and 16.3% respectively, which were about 4 percentage points higher than that in Hong Kong. Overall, in 2016, new business creation was the highest in APEC countries (excluding Hong Kong), followed by non-APEC countries and then Hong Kong.

In terms of the ranking among all countries included in both surveys, Hong Kong ranked 28th in 2009 and went up 6 places to 22nd in 2016. This rate of change set Hong Kong as the 7th fastest improvement in new business creation, and the 2nd fastest among APEC countries in our sample.

³ Considering only start-ups by individuals, i.e. excluding those who are starting up a business for his/her employer as part of the normal job.

New Business Creation in 2016

City/Region	%	No. of obs	Std dev
Hong Kong	12.5	1	.
APEC excluding HK	16.7	13	9.5
Non-APEC	16.3	51	9.8

As the country coverage of the 2009 GEM study was different from that of 2016, we consider only countries that participated in both rounds of study in the table below.

A Comparison of New Business Creation between 2009 and 2016 *

City/Region	2016 (%)	2009 (%)	Change	No. of obs
Hong Kong	12.5	4.4	8.1	1
APEC excluding HK	18.2	11.0	7.2	7
Non-APEC	14.9	11.0	3.9	29

* covering overlapping countries in 2009 and 2016 GEM study only

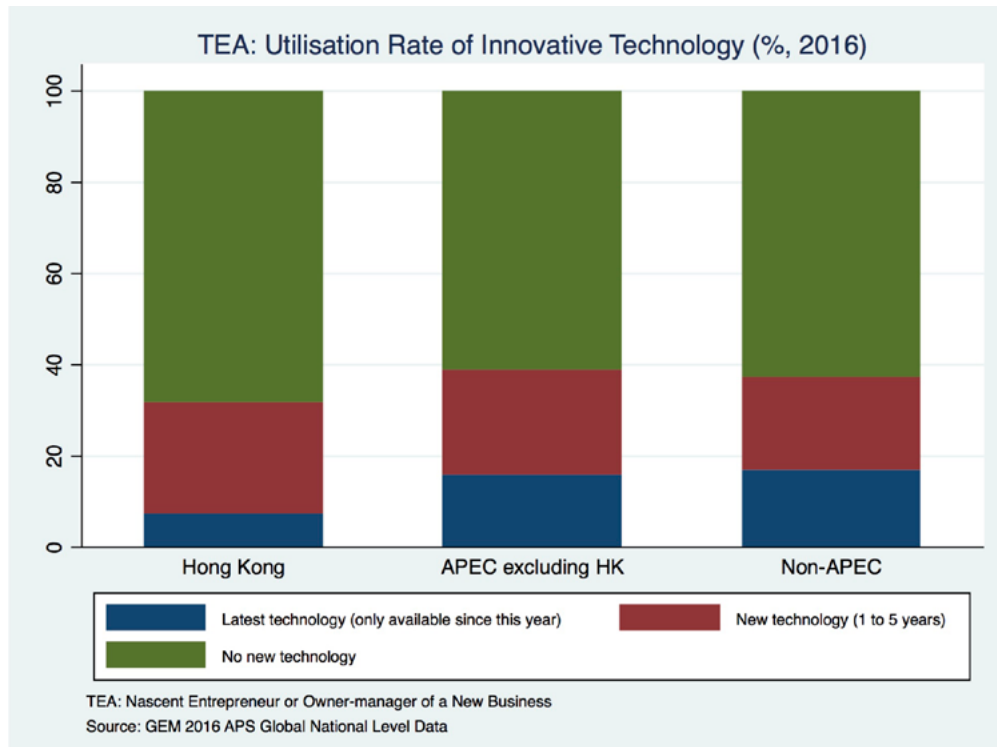
We accounted for a total of 37 overlapping countries in both surveys, among which 7 of them were APEC countries (excluding Hong Kong). Most countries covered in the two surveys recorded improvement in entrepreneurship. The change in average new business creation in APEC countries (excluding Hong Kong) amounted to 7.2 percentage points, which was around twice the change of non-APEC countries in the sample. In addition, new business creation in Hong Kong increased by 8.1 percentage points, which was higher than the average rates of change in APEC (excluding Hong Kong) and non-APEC regions.

Ranking of New Business Creation of APEC Members

	2016 (Ranking)	2009 (Ranking)	Improvement
Malaysia	29	37	8
Hong Kong	22	28	6
Korea	28	31	3
USA	15	17	2
Peru	1	2	1
Chile	5	6	1
China	8	9	1
Russia	35	27	-8

(2.3) Technological Innovation

The GEM data also collects data on the utilisation of new technology by entrepreneurs which in turn would shed light on how innovative businesses are in different regions.

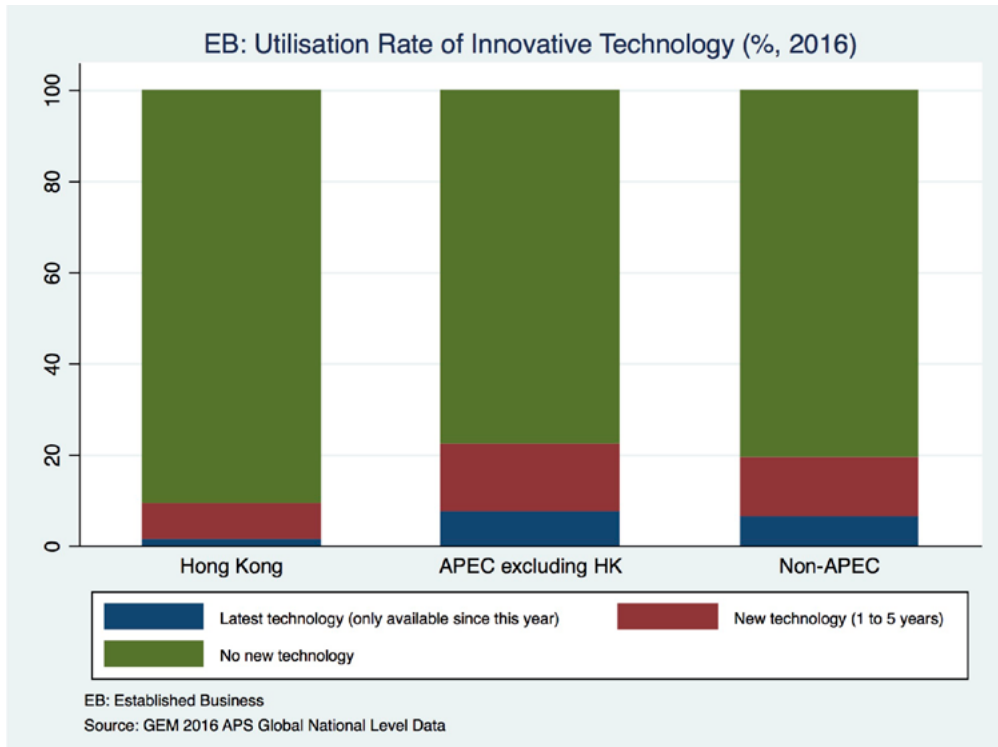


Regarding the performance of *TEA*, the distribution of the utilisation of innovative technology was similar between APEC (excluding Hong Kong) and non-APEC countries in 2016. However, only 7.3% of new businesses in Hong Kong were using the latest technology (defined as technology that is only around for less than one year), compared to 15.9% and 16.8% observed in APEC (excluding Hong Kong) and non-APEC countries.

Utilisation Rate of Innovative Technology by TEA in 2016

City/Region	Latest technology (less than 1 year old)	New technology (1 – 5 years old)	No new technology (> 5 years old)
Hong Kong	7.3	24.3	68.4
APEC excluding HK	15.9	22.9	61.2
Non-APEC	16.8	20.4	62.8

In addition, the proportion of new businesses in Hong Kong which did not employ new technology was 68.4%, which was about 5 to 7% higher than the other two regions.



Furthermore, the proportion of Established Businesses (EB) which employed new or latest technology was much lower than TEA businesses across all three groups. In particular, the percentage of established business which used latest technology in Hong Kong was only 1.5%, considerably lower than the other two groups.

Utilisation Rate of Innovative Technology by EB in 2016

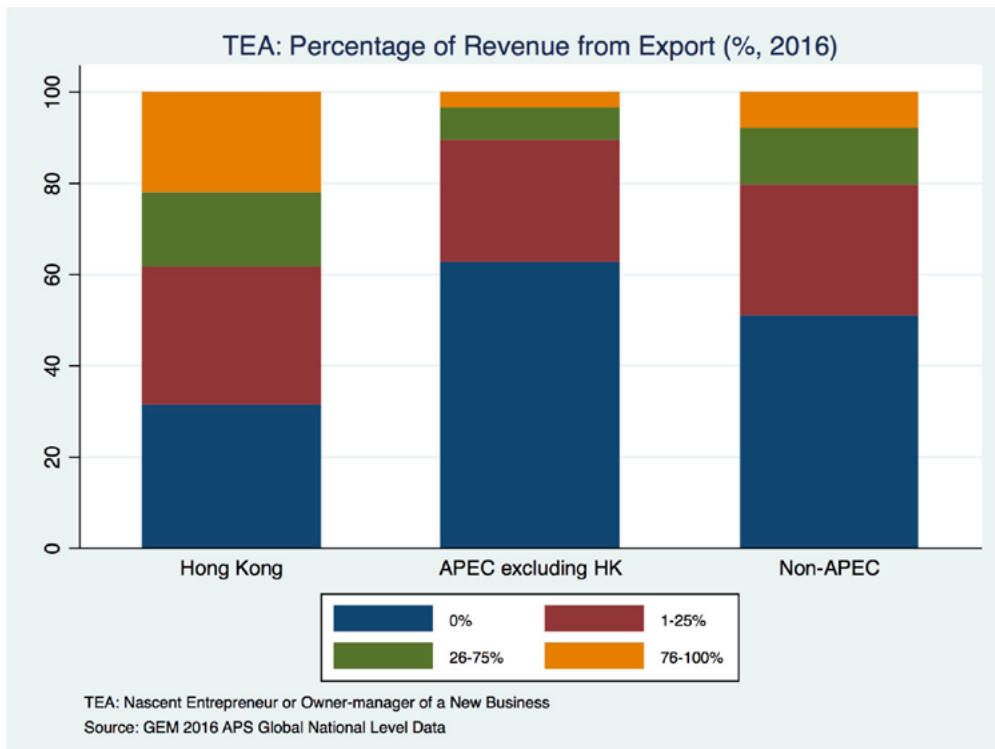
City/Region	Latest technology (less than 1 year old)	New technology (1 - 5 years old)	No new technology (> 5 years old)
Hong Kong	1.5	7.9	90.6
APEC excluding HK	7.7	14.7	77.7
Non-APEC	6.4	13.1	80.5

(2.4) Export Orientation

The 2016 GEM study showed that only 31.5% of Hong Kong TEA businesses relied solely on the local market, which was much lower than 62.7% and 50.9% that were observed in APEC (excluding Hong Kong) and non-APEC countries.

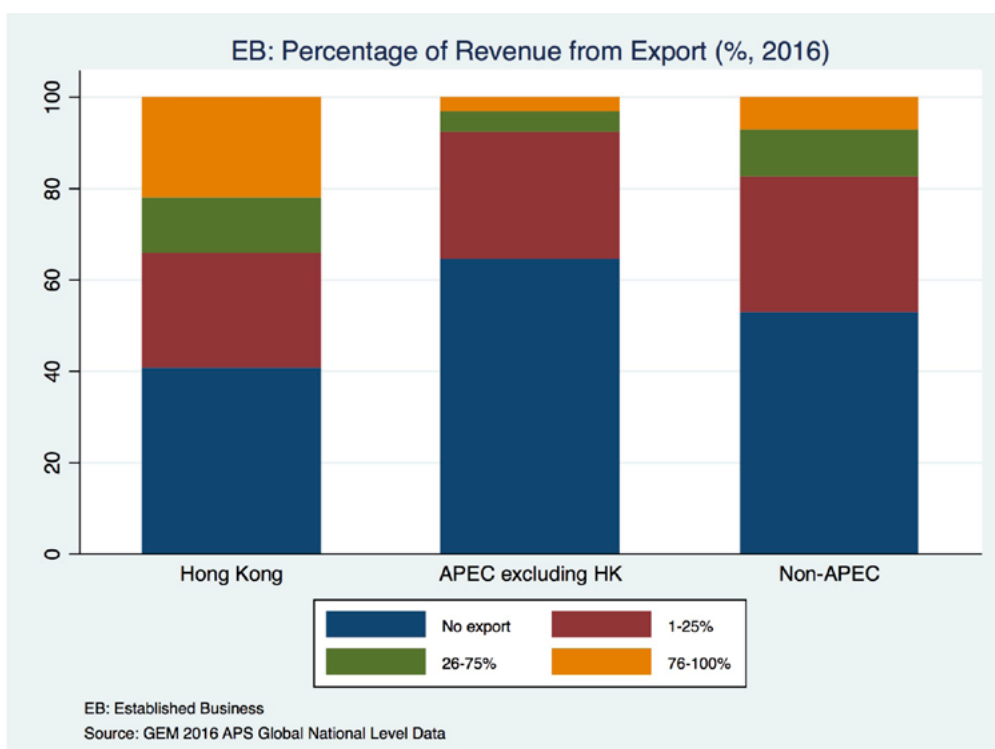
Percentage of Revenue from Export in TEA in 2016

City/Region	0%	1-25%	26-75%	76-100%
Hong Kong	31.5	30.2	16.3	22.0
APEC excluding HK	62.7	26.8	7.0	3.5
Non-APEC	50.9	28.8	12.4	7.8



On the other hand, only 3.5% of TEA businesses in APEC countries (excluding Hong Kong) fell under the highest export-oriented category whereas the equivalent figure for non-APEC countries, at 7.8%, was more than doubled. As for Hong Kong, the proportion of TEA businesses with more than 75% exportables stood at 22%, significantly higher than the other two groups.

Unlike the innovative technology adoption shown in the previous section, the export orientation of the EB sample was quite similar to those observed in the TEA sample.



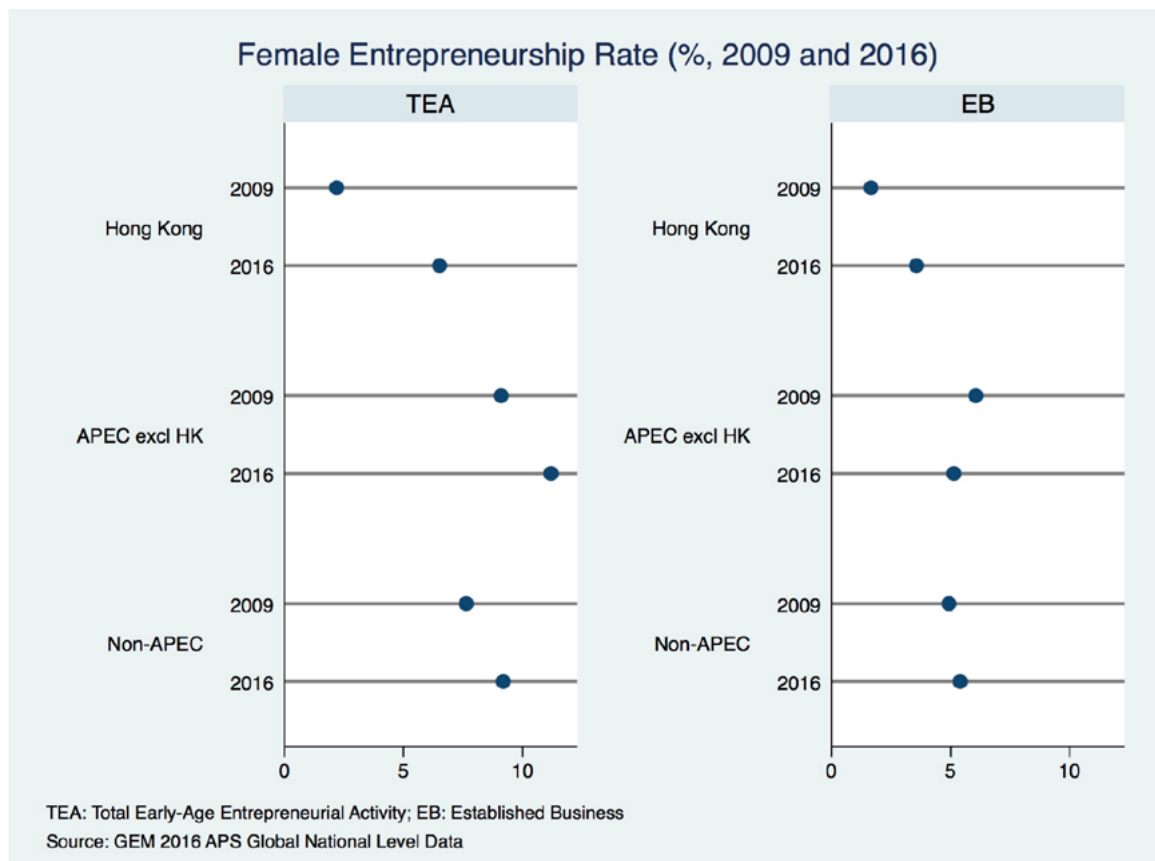
Percentage of Revenue from Export in EB in 2016

City/Region	0%	1-25%	26-75%	76-100%
Hong Kong	40.7	25.2	12.1	22.0
APEC excluding HK	64.5	27.9	4.3	3.3
Non-APEC	52.8	29.8	10.2	7.2

(2.5) Female Participation in Entrepreneurship

Regarding the female participation rate in TEA, APEC countries (excluding Hong Kong) showed the highest average female participation, followed by non-APEC countries and Hong Kong in both 2009 and 2016. However, the female participation rate in Hong Kong experienced the greatest increase by 4.3 percentage points during the period.

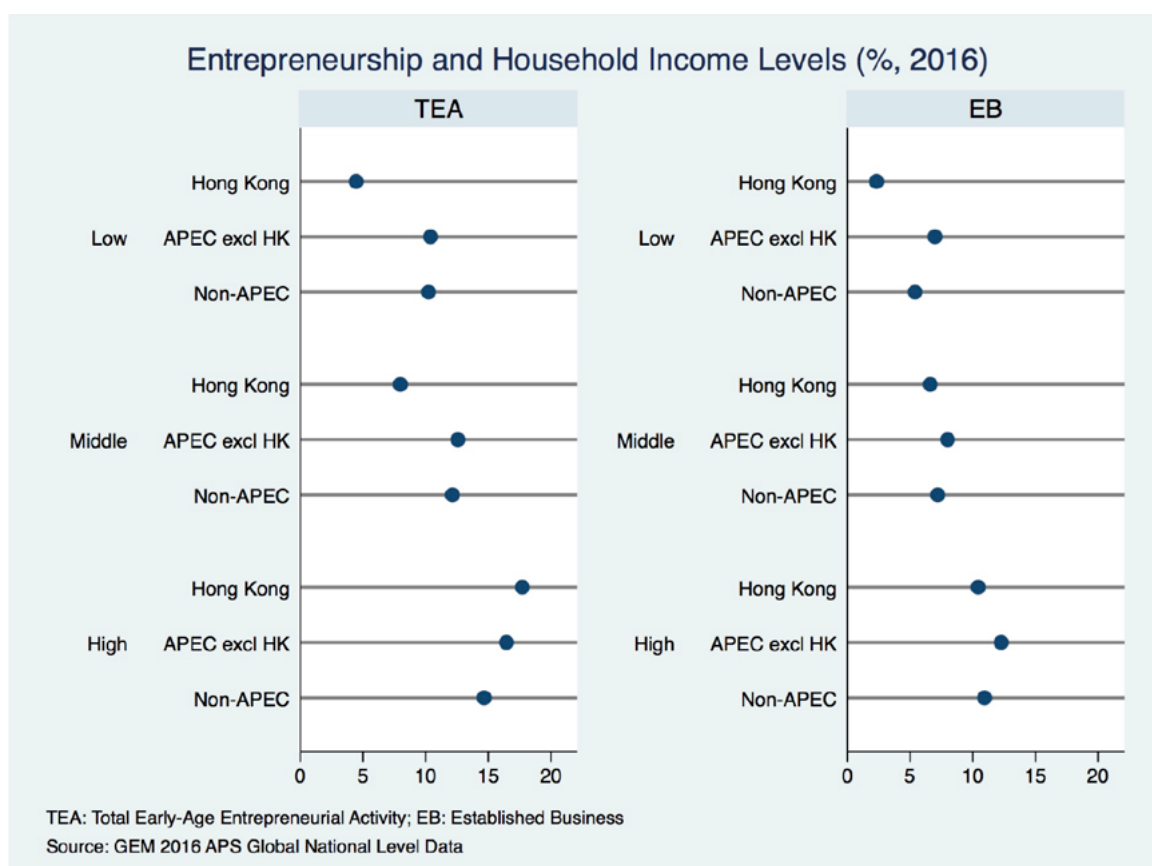
As for female participation in EB, non-APEC countries marginally overtook APEC countries (excluding Hong Kong) to become the highest female participation group in 2016. Furthermore, Hong Kong once again showed the largest increment at 1.9 percentage points in female participation.

**A Comparison of Female Entrepreneurship Rate between 2009 and 2016**

City/Region	TEA		
	2016 (%)	2009 (%)	Change
Hong Kong	6.5	2.2	4.3
APEC excluding HK	11.2	9.1	2.1
Non-APEC	9.2	7.6	1.5
City/Region	EB		
	2016 (%)	2009 (%)	Change
Hong Kong	3.6	1.7	1.9
APEC excluding HK	5.1	6.1	-0.9
Non-APEC	5.4	4.9	0.5

(2.6) Entrepreneurial Activity by Household Income

The involvement in entrepreneurial activity of the APEC (excluding Hong Kong) group was similar to the non-APEC group across all household income levels, and regardless of whether the TEA or EB sample was considered. On the other hand, Hong Kong was especially different from the other two groups in the low income group. In Hong Kong, only 4.5% and 2.3% of the low income group participate in TEA and EB respectively.



Relationship between Entrepreneurship and Household Income Levels in 2016 *

City/Region	TEA		
	Low	Middle	High
Hong Kong	4.5	8.0	17.7
APEC excluding HK	10.4	12.6	16.4
Non-APEC	10.2	12.1	14.7
City/Region	EB		
	Low	Middle	High
Hong Kong	2.3	6.6	10.4
APEC excluding HK	7.0	8.0	12.3
Non-APEC	5.4	7.2	10.9

* Household income groups were classified by the lowest 33th, middle 33th, and highest 33th percentiles

(3) Concluding Remarks

This is an exploratory study about entrepreneurship in APEC, focusing on Hong Kong in particular. We are using the only cross-country, longitudinal data set on entrepreneurship available, which was compiled by GEM. Naturally, there are many unsurmountable problems to fulfill our research objectives (e.g., definitions, coverage, statistical interpretations, relevance, etc.). However, we are able to shed some light on the development and characteristics of MSME in APEC. To a certain extent, our study covers the following five initiatives by APEC for MSME: (i) promoting new business creation, (ii) adopting innovation technology, (iii) promoting export orientation, (iv) encouraging female entrepreneurship, and (v) understanding the relationship between entrepreneurship and income levels. With respect to these five subjects, major findings are as the following:

- (i) As for the case of Hong Kong, we witnessed the highest increase in percentage change in start-ups between 2009 and 2016, as compared with other APEC and non-APEC countries. Most countries in the sample reported improvement in business start-up involvement during the period.
- (ii) Regarding innovation technology, it seemed that Hong Kong's entrepreneurs' adoption of latest technology was rather low and slow.
- (iii) However, on the export-orientation side, a much higher proportion of start-ups in Hong Kong were export-oriented as compared with their counterparts.
- (iv) Given the APEC's initiation to encourage female entrepreneurship for its members, the female participation rate in Hong Kong was still lower than other APEC and non-APEC countries in 2009 and 2016. However, Hong Kong's rate has recorded the highest increment during the period.
- (v) Regarding the relationship between entrepreneurship and income levels, we observed that a much higher proportion of the higher income group engaged in entrepreneurship in Hong Kong (almost four times that of the lower income group), while they were more evenly spread among different income groups for other APEC and non-APEC countries. Overall, the higher income group was still having the relative advantage to venture into their own businesses.

With these limited findings, we offer the following tentative policy recommendations for consideration:

- (i) A much higher proportion of start-ups in Hong Kong were export-oriented. Hong Kong's experience should be reviewed further and lessons could be learnt by other APEC members.
- (ii) As the higher income group is having the advantage in starting their own businesses, APEC members should consider providing more resources to promote entrepreneurship effectively among the lower income groups.
- (iii) As for Hong Kong, the relatively low rate of adoption of latest technology by start-ups and female participation in entrepreneurship should be examined in greater details and relevant policies should be formulated to address the issues involved.

The GEM data set is a very valuable information source for entrepreneurship. We will try to examine more APEC-MSME issues in our subsequent research study. The latest data set covered only 14 APEC members and the next round of the Survey may extend to more APEC members, which could facilitate our research on this subject. This short paper is mostly descriptive in nature. We need another designated research design to complement the GEM approach, in order to derive relevant analytical results for APEC's policy consideration.

Asia-Pacific Economic Cooperation (APEC) is a forum for 21 Pacific Rim member economies that promotes free trade throughout the Asia-Pacific region. More information on the organization is available here: <http://www.apec.org/About-Us/About-APEC/Member-Economies.aspx>

Discussion & Way Forward

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Hong Kong and Shenzhen entrepreneurs are changing and it is a good change. Although each city is moving at its own speed, their respective start-up rates are growing and the entrepreneurs receive more support from public and private sector than before. Both conurbations have also developed their own individual entrepreneurial identities, which are very different from other Chinese cities.

The start-up investing culture is also on the rise and we see fewer startups closing down because of the inability to secure funding. Business angels are much more professional and determined to support local startups than before. They are at least twice as generous as informal investors elsewhere in the world and they are becoming increasingly interested in backing up strangers with good ideas instead of only supporting their closest social circles of friends and family. The venture capital culture is lagging a little behind, especially in Hong Kong. It is mainly because of a still apparent scarcity of opportunity-driven exits, representing 2% of exits in Hong Kong and 8% in Shenzhen. In comparison, in the US they account for 11% of all exits and in Israel for 15%. We attribute this delay to the stage of development of both start-up ecosystems.

Unlike Silicon Valley, none of them is fully mature, with plenty of trial-and-error start-ups being launched in Hong Kong and Shenzhen alike. More established ecosystems attract more venture capital attention, so we expect that with time, this situation will improve and VCs, large corporations and other financial players will soon start sharing a similar level of appetite for local startups as business angels. Certainly, angels and VCs must beef up their sophistication in mentorship to guide and grow new ventures. This would upgrade their first-mover role in becoming the intermediaries poised to help other investors to move away from investing in conventional assets towards riskier but high-return yielding new ventures. The earlier they get here, the

better opportunities they will be able to secure. We are already noticing an increased interest from corporate venture capital in Hong Kong; corporations are setting up acceleration programs with an investment option, which is a sign of established firms gearing up to work with new businesses. The next steps are to engage in providing funds to new businesses, especially at their growth stage of development, and then to start acquiring some of these businesses to complete the cycle of returning the investments to the angels and VC funds.

Crowdfunding is gaining in popularity among local founders as well, and rightly so. In Hong Kong, almost one in five entrepreneurs obtained the funding though seeking support from their potential customers. Crowdfunding represents a mean of evidencing traction for startups and can help them to secure successful exits and large-scale market expansions. For example, CMON, a miniature board games publisher that recently went IPO on the Hong Kong Growth Enterprise Market, attributes its success to multiple successful Kickstarter campaigns (Woodhouse, 2016). Over the past seven years, CMON has produced 42 games and secured a total of US\$ 26 million through Kickstarter, which allowed them to raise US\$ 9 million via GEM board listing in a bid to fund expansion into China and acquire other game companies. We would like to see more local successes on this scale, capable of attracting serious venture capital to a larger share of Hong Kong and Shenzhen start-ups. For this to happen, more training and knowledge sharing on crowdfunding success is recommended. In the intermediate term, appropriate legislation permitting to raise funds through equity and non-equity types of crowdfunding should be enforced in Hong Kong and Shenzhen.

This would also help to provide equal opportunities to entrepreneurs from all walks of life in both cities. For the moment, starting-up is still a rich man's game, with early-stage entrepreneurial prevalence rates being much stronger in the highest income tranches of the

population. This does not come as a surprise, considering that 92% of founders declare to have invested their own savings in their early-stage businesses. Until recently, they had no other choice. These days, with an improving financial support for new businesses, they may be able to look for other options. To begin with, less well-off founders reach out for public support and government funds. Our analysis of Hong Kong data has shown that entrepreneurs who do not invest their own savings declare securing government funding instead. Initiatives such as recently announced in Hong Kong Innovation and Technology Venture Fund (HK\$2B) for co-investing with private venture capital funds will further help to improve the availability of capital to those who have good ideas but no bank account balance to develop them. This shall also complement the startup ecosystem by giving early-stage investors more exit opportunities. For the moment, as research by InvestHK shows, the number of founders supported with public resources is hardly changing and is 50% lower than the number of entrepreneurs supported by private resources (InvestHK, 2016). Incoming new public initiatives are welcome and highly anticipated as they may have a deep impact on the accessibility of the entrepreneurial career option to a wider group of local citizens and help to narrow the income gap in the population.

Overall, we have recorded an unprecedented increase in early-stage entrepreneurship rates and informal investment prevalence rates in the adult populations of Hong Kong and Shenzhen. Shenzhen is definitely a front-runner in this race with 16% of adults engaging in early-stage activities and one in five adults declaring to provide funding to new and nascent businesses. Driven to succeed by public initiatives and special economic zone arrangements, fuelled by talented and highly educated migrants from Mainland China, this city on “start-up steroids” now resembles the hyper-entrepreneurial Hong Kong from the 1970s. Shenzhen is no longer an efficiency-driven economy, as documented with its fast-growing GDP per capita and economic development in the recent years. The city also enjoys strong social and public support to developing the entrepreneurial spirit, which fuels its unparalleled growth in start-up related activities. However, we do not expect this growth rate to be maintained in the long run; there is a natural limit to how much new business can be sustainably supported within the economy. To this end, we need to remain alert whether such start-up hype will not lead to a start-up bubble, similar to what happened in years 1995-2001.

It will still take some time before investors in Shenzhen learn to differentiate low quality ventures from the high potential ones, and this learning process could potentially lead to serious financial capital waste. Considering this, we expect this growth to cool down as the ecosystem matures and to be redirected towards fewer opportunities with more profound market impact.

To complete this learning, Shenzhen may look up to Hong Kong for guidance. Other Chinese cities are unable to provide such support. Not only do they have a very different entrepreneurial culture, much dissimilar from what we observe in Hong Kong and Shenzhen, but they are also unable to provide the same level of compatibility in terms of location, industry structure, attracting talent, and international market access or knowledge. After all, Hong Kong is an essential constituent of Pearl River Delta Megalopolis¹ and it has been recognized as one of the key global cities serving advanced service niches for the global economy². To further capitalize on this, experts from our study suggest building stronger ties between the two neighbouring cities that would help to build synergies across the two start-up ecosystems. However, whilst Hong Kong experts focus more on immediate benefits in their vision for cooperation, Shenzhen experts are particularly supportive of a long-term exchange-driven and partnership-building solution that would bring the two cities closer. Overall, in their eyes, Hong Kong's and Shenzhen's strengths are very highly compatible and they compensate for each other's weaknesses. This provides an excellent leverage to both cities.

Both sides agree that together they should create more opportunities to leverage the natural industry compatibilities between the two cities and enable cultural exchanges to strengthen the bond and mutual understanding of each other's environments. This could be achieved through enabling the flow of students and professional talent between the two cities. Shenzhen experts go one step further and suggest that combining research capabilities, setting up joint or collaborative industry associations, and enforcing joint or complementary government policies would help to generate opportunities of greater value to new firms from Hong Kong and Shenzhen alike. In addition, such arrangements would permit Hong Kong firms to access Mainland market and Shenzhen firms to internationalize more efficiently.

The perfect match is in the making. Shenzhen is strong in providing the youthful energy and refreshing entrepreneurial spirit; it is packed with high growth potential start-up ideas from highly skilled and self-selected talent. On the other hand, Hong Kong is unparalleled in providing the know-how and capabilities in taking ideas to the next level, in ensuring their long-term sustainability through well-established market mechanisms, and in taking them to international markets. Crea-preneurs of Shenzhen and develo-preneurs of Hong Kong working together is what both cities need in the long run.

Moving forward, Hong Kong plus Shenzhen may jointly develop ventures providing sophisticated producer services, and which other known megalopoli already have in their start-up portfolios. For instance, New York City and its Northeast Megalopolis are closely following Silicon Valley in rankings as start-up breeding ground because of their branding capabilities, creativity, and superior services. In fact, NYC has produced unicorns like Tumblr (blogs), Warby Parker (eyeglasses brand), BuzzFeed (new media), Etsy (handmade designer products), Zocdoc (medical services), or Shazham (music services), just to name a few. One common denominator of these companies is that they embrace new technology in delivering traditional services in disruptive ways. The Hong Kong – Shenzhen city team could follow a similar route of building start-ups that cater to well-established product/ service needs through new technological means or inventions.

Neither city can do this alone –to provide a serious alternative to Silicon Valley or New York City. Together, they stand high chances of growing their combined, highly synergistic competitive advantage into the strongest start-up hub in the World. Hong Kong's role as super-connector for a booming Shenzhen will be essential in furthering the development of our megalopolis.

¹ [https://en.wikipedia.org/wiki/Megalopolis_\(city_type\)](https://en.wikipedia.org/wiki/Megalopolis_(city_type))

² https://en.wikipedia.org/wiki/Global_city

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