



**APEC Study Centre**  
The Chinese University of Hong Kong

# Hong Kong Startups Ecosystem, Technology and GBA Interactions

By Cheung-kwok Law and Chung-Yi Lam

**CUHK-APEC Study Centre**  
2019-9 Working Paper Series - 05  
[www.cuhk.edu.hk/hkiaps/apecsc](http://www.cuhk.edu.hk/hkiaps/apecsc)



**Dr. Cheung-kwok Law is the Senior Advisor of the APEC Study Centre of the Hong Kong Institute of Asia Pacific Studies, CUHK and Mr. Chung-Yi Lam is a Research Assistant of Economic Research Centre, CUHK.**

Copyright © 2019. All right reserved

ISBN-13: 978-962-441-723-4

PUBLISHED BY HONG KONG INSTITUTE OF ASIA-PACIFIC STUDIES  
THE CHINESE UNIVERSITY OF HONG KONG

OFFICIAL WEBSITE: <https://www.cuhk.edu.hk/hkiaps/apecsc/>

**Contact person:** Dr. Cheung-kwok Law  
Senior Advisor  
APEC Study Centre of the Hong Kong  
Institute of Asia Pacific Studies  
The Chinese University of Hong Kong  
Email: econrc@cuhk.edu.hk

---

---

# Contents

<b>1</b>	<b>Introduction</b> .....	<b>1</b>
1.1	A Brief Literature Review	2
1.2	Data Collection Methodology and Limitations	3
<b>2</b>	<b>Descriptive Analysis</b> .....	<b>5</b>
2.1	Demographic and Other Characteristics	6
2.2	Technology Level	16
2.3	Business Operations	18
2.4	Funding and Overseas Sales	35
2.5	GBA Interaction and Operation	47
2.6	Business Prospects	56
<b>3</b>	<b>Probit Regression Analysis</b> .....	<b>68</b>
<b>4</b>	<b>Policy Recommendations</b> .....	<b>70</b>
	<b>References</b> .....	<b>74</b>

---

## Introduction

Micro, small and medium enterprises (MSMEs) have long been recognised by APEC as a key contributing source of economic prosperity and employment, innovation and a growth engine within the region. Overall the years, APEC's MSMEs policies have been evolving to cover a broad dimension of relevant issues. Since 2016, modernization has become one of the focusing issues, including: (i) promoting innovation and MSMEs connectivity; (ii) moving forward integration and development through productive infrastructure; (iii) integrating green MSMEs into the Global Value Chains (GVCs); and (iv) internationalization of MSMEs and their integration in GVCs.

In the latest 2018 APEC Ministerial Chair's Statement, the importance of MSMEs' integration into GVCs in service industries was acknowledged. APEC will further promote technology startups, entrepreneurship and innovation amongst MSMEs, and foster MSMEs capacity building and participation in E-commerce. As 80% of global trade take place through GVCs, implementing policies that facilitate MSMEs accessing to GVCs is a step in the right direction.

In this respect, Hong Kong is a very service-orientated economy with vibrant entrepreneurship. The nature of internationalization and trade-orientation offers ample experiences for sharing with other APEC members. The development of MSME policies in Hong Kong and the Greater Bay Area (in the Pearl River Delta of the southern part of Mainland China) could also provide insights regarding policy issues.

The APEC Study Centre of the Chinese University of Hong Kong undertook a preliminary study regarding the development and challenges of startup businesses in Hong Kong in the first half of 2019. The objectives of the study are the following:

- (i) understanding the operating status, technology and ecosystem of startup businesses in Hong Kong;
- (ii) reviewing their interaction with and operation in the Greater Bay Area; and
- (iii) assessing their short-term business prospects, challenges and opportunities.

Research findings will be provided to the relevant authorities of Hong Kong and the Greater Bay Area for their policy considerations.

## 1.1 A Brief Literature Review

Startups are considered as the locomotive of economic growth and job creation in recent years, while large corporations' performance become less promising. Recently, Hong Kong government has been promoting startup development in a bid to rejuvenate and diversify Hong Kong's economy. In particular, technology-intensive startups are placed as one of the top policy priorities such that Hong Kong government allocated HKD 50 billion to enhance the innovation and technology industry in 2018 (new.gov.hk, 2018).

While Hong Kong has been rapidly enhancing the tech-startup ecosystem and praised as the freest market for many years, it has relatively little experience in startup development compared to other similar developed economies such as Singapore. Hong Kong tech-startup ecosystem ranked below the top-20 and is still far from being self-sustainable. Furthermore, the World Economic Forum's global competitiveness report stated that innovation was the weakest aspect of Hong Kong's performance.

There are relatively limited literature regarding the ecosystem of the Hong Kong startups. Very recently, Compass (2015) assessed Hong Kong startups ecosystem and commented that Hong Kong should be evaluated according to its uniqueness in the global perspective such as its international financial centre identity, specific political setting and geographic location. The Report identified three input inadequacies for Hong Kong, mainly in terms of funding, talent and policy.

Compass's Report highlighted that Hong Kong did not have sufficient active angel investors. Many local startup firms were not able to obtain funding in their last stage of development, implying that their foreseeable market potentials were limited. The Report also commented that Hong Kong startups had difficulties in accessing local technical talent and were not able

to attract their desired talent from overseas and Mainland China. Lastly, Compass observed that Hong Kong startups did not have sufficient experience in developing their business models and targeting international opportunities.

In the international context, Startup, Genome (2018) evaluated the ecosystem internationally. The Study concluded that mindset and local connection were positively associated with the outcome of startups. Many startup firms focused on artificial intelligence, block-chain and advanced manufacturing robotics, and expected that these sectors would be expanding rapidly in the next decade.

Regarding Hong Kong's ecosystem, the Genome Report found that the funding activity in Hong Kong had increased very rapidly over the last few years. Local startup supporting organizations, including Hong Kong Cyberport, HKSTP, StartupHK and FAHK, have been flourishing. There would be more potentials for Fintech, HealthTech and Consumer Electronics in Hong Kong. Regarding the major startup parameters, there were six areas where Hong Kong's ranking had been below the global averages, namely talent attributions, number of woman founders, the number of startups, startup outputs, ecosystem and early-stage funding.

These reports and major findings were largely in line with the InvestHK's annual report. According to Startmeup, InvestHK (2018), the top-three dominating sectors were fintech, e-commerce and IT. Health tech has been relatively rare in Hong Kong. The Report identified that there were 2,625 startups in 2018, 18% more than 2017. The total number of staff of startups increased over 50% and startup workstations increased by more than 100% in 2018.

## 1.2 Data Collection Methodology and Limitations

A questionnaire was designed and distributed online with the promotion and assistance from various organizations. These included the Trade Development Council, Invest HK, the Entrepreneurship Centre of the Chinese University of Hong Kong, several startup corporations and platforms.<sup>1</sup> Firms joining these platforms and networks directly are likely to be more active, better-informed, forward-looking and technology-related businesses.

The research subject is in particular targeted to business owners of startups and micro businesses, with technology content (those small retail shops located in the traditional shopping centres of residential areas were not included). However, as there is no comprehensive data base available on the subject, the approach for data collection tended to be incomplete, ad-hoc in nature and not

---

<sup>1</sup>In particular, we would like to thank Mr. Gene Soo of StartupHK and Mr. Raymond Mak of EntreLink for their great assistance and participation in this study.

ideal. In particular, the conventional online survey is known to be inefficient for the data collection. To mitigate the problem, the research team promoted the survey by participating in relevant seminars in order to reach the right audience.

We define a startup as a business operating less than three years. In our survey, we also covered some firms with more than three years of operations. We will put less emphasis in their interpretations and would use it as a control group for comparison with the startup-group.

Due to the time, manpower and budget constraints, the study only obtained a total sample of 120 firms. The sample consisted of 74% of startup firms. Although the sample size was relative small, this is likely to be the first attempt to understand the important questions about the current operating status of startup firms, the startup ecosystem in Hong Kong and their interactions and prospects regarding operations in the Greater Bay Area (GBA)

---

## Descriptive Analysis

We define startup as a business operating less than three years. In our survey, we also covered some firms with more than three years of operations. We will put less emphasis in their interpretations and would use it as a control group for comparison with the startup group. We have an overall sample of 120 firms, comprising of 89 startups and 31 non-startups. Among the 89 startups, 63 of them were technology-related firms.

Table 2.1 Sample Size

Business nature	Startup		Non-Startup	
	N	%	N	%
Technology	63	70.8	26	83.9
Non-Technology	26	29.2	5	16.1
Total	89	100.0	31	100.0



## 2.1 Demographic and Other Characteristics

### 1. Age

- (a) Overall, data showed that most of the business owners were around 30–49 years old (68.4%). Relatively, there were more non-startup owners (75.2%) in this middle-age range, compared with their startup counterpart (66.2%).
- (b) Startup businesses had slightly more participants at their young age (below 30), close to one-fifth (19.1%) as compared with 12.9% of non-startup firms.
- (c) Within the startup businesses, 65.4% of the non-tech firms and 66.7% of the tech firms were having the age group between 30 to 49.
- (d) There is neither a statistical significant difference associated with age between startup/non-startup businesses nor between tech/non-tech for startup businesses.

Table 2.2 Age

Age	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
<20	1.12	0.00	0.00	3.85
20-29	17.98	12.90	17.46	19.23
30-39	40.45	54.84	39.68	42.31
40-49	25.84	19.35	26.98	23.08
50-59	13.48	6.45	14.29	11.54
>60	1.12	6.45	1.59	0.00
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### 2. Nationality

- (a) Although most of the business owners in our full sample were having nationality as “Hong Kong/China”, there were about 30% owners from overseas. Foreigners’ nationalities were extremely scattered. This pattern was more prominent for the tech firms.
- (b) There is no statistical significant difference in the nationality between startup and non-startup businesses.
- (c) Yet, there is a weak statistical significant difference (P-value=0.065) in the nationality between tech/non-tech for startup businesses. There were relatively more entrepreneurs from overseas starting

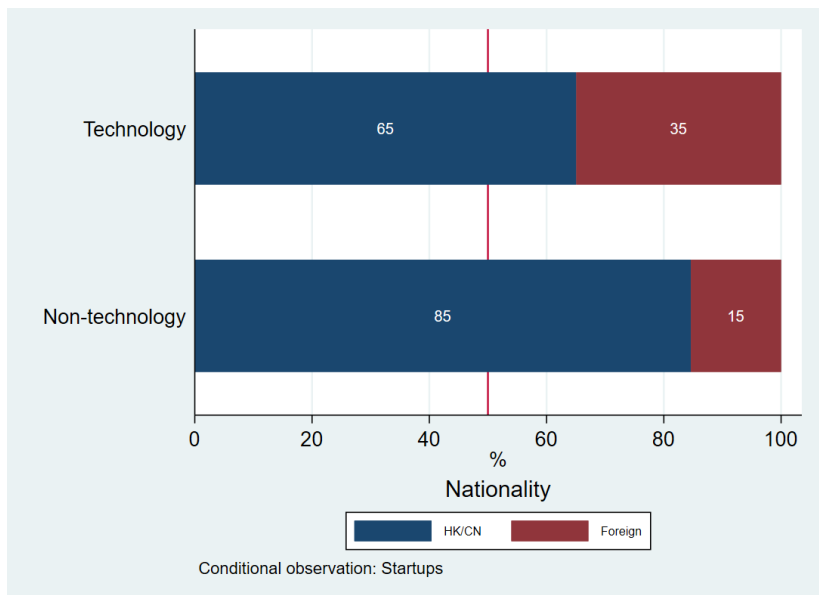
their tech firms in Hong Kong.

Table 2.3 Nationality

Nationality	Overall		Startup**	
	Startup %	Non-Startup %	Technology %	Non-technology %
HK/CN	70.79	74.19	65.08	84.62
Foreign	29.21	25.81	34.92	15.38
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.1 Startups - Nationality



### 3. Gender

- Overall, nearly 80% of business owners were the male gender.
- There is no statistical significant difference in the gender between startups/non-startups.

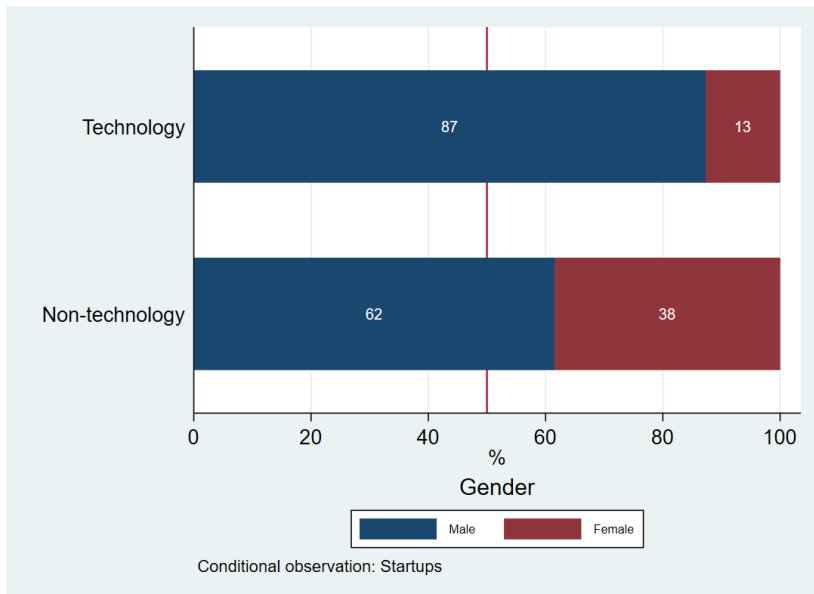
- (c) Yet, there is a strong statistical significant difference (P-value: 0.006) in the gender between tech/non-tech for startups businesses. The tech-businesses were more dominated by the male gender.

Table 2.4 Gender

Gender	Overall		Startup**	
	Startup %	Non-Startup %	Technology %	Non-technology %
Male	79.78	74.19	87.30	61.54
Female	20.22	25.81	12.70	38.46
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.2 Startup - Gender



#### 4. Academic Qualification

- (a) Business owners most likely held at least an undergraduate degree (95.8%). Nearly all (90%) of the doctoral degree holders participated in the tech business.
- (b) There is neither a statistical significant difference in the education level between startup/non-startup businesses nor between tech/non-tech for startup businesses.

Table 2.5 Academic Qualification

Qualification	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Post secondary qualification	2.25	6.45	1.59	3.85
High School	1.12	0.00	0.00	3.85
Bachelor degree	44.94	45.16	42.86	50.00
Graduate degree	42.70	41.94	44.44	38.46
Doctoral degree	8.99	6.45	11.11	3.85
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

#### 5. Having Relevant Business Experience Previously

- (a) Overall, business owners were roughly equally divided into the following three types in terms of related business experience: Type a: “none” (35.8%); Type b: “little-moderate” (<1 - 5 years, 27.5%) and Type c: “substantial” (more than 5 years, 36.7%).
- (b) For the tech-startup businesses, Type a (36.5%) and Type c (41.3%) dominated the sample. Type b only accounted for less than a quarter (22.5%). There was a high proportion of educated, middle-age men ventured into tech-related businesses without directly relevant experience and there was a similar proportion having very substantial relevant experience.
- (c) There is neither a statistical significant difference in relevant business experience between startup/non-startup businesses nor between tech/non-tech for startup businesses.

Table 2.6 Having Relevant Business Experience Previously

Related business experience	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	40.45	22.58	36.51	50.00
<1	8.99	9.68	9.52	7.69
1-2	7.87	16.13	7.94	7.69
2-5	5.62	16.13	4.76	7.69
>5	37.08	35.48	41.27	26.92
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

## 6. Business Failure Experience Previously

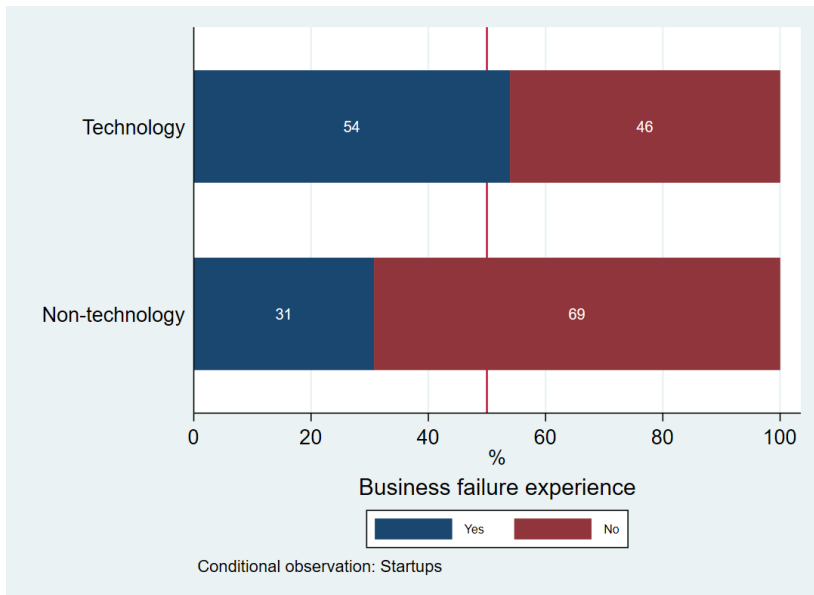
- About half (50.8%) of business owners in our sample had previous experience in business failure.
- There is no statistical significant difference associated with previous business failure experience between startup/non-startup businesses.
- Yet, there is a weak statistical significant difference associated with previous business failure experience between tech/non-tech for startup businesses. 54% of tech-startup businesses were operated by entrepreneurs who had experienced business failures before. This was a resilient group.

Table 2.7 Business Failure Experience Previously

Business failure experience	Overall		Startup*	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	47.19	54.84	53.97	30.77
No	52.81	45.16	46.03	69.23
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.3 Startups - Business Failure Experience Previously



## 7. Motivation of Establishing a Startup

- (a) Overall, the motivations of establishing a startup was “self-fulfilment” (82.5%) and “profit” (65%). “Serving public interest” and “networking” were relatively less concerns.
  - i. It is somewhat surprising that the proportion of “self-fulfilment” surpassed the “profit” motive.
  - ii. Furthermore, non-startup owners expressed stronger consideration in the “self-fulfilment” motive than their counterparts.
  - iii. This pattern remained in both tech-nature of startups
- (b) There is neither a statistical significant difference between startup/non-startup firms nor between tech/non-tech startup firms in the motivation of establishing a business.

Table 2.8 Motivation of Establishing a Startup: Networking

Networking	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	23.60	22.58	20.63	30.77
No	76.40	77.42	79.37	69.23
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.9 Motivation of Establishing a Startup: Profit Motive

Profit motive	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	66.29	61.29	71.43	53.85
No	33.71	38.71	28.57	46.15
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.10 Motivation of Establishing a Startup: Serving Public interest

Serving public interest	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	41.57	45.16	38.10	50.00
No	58.43	54.84	61.90	50.00
<i>N</i>	89	31	63	26

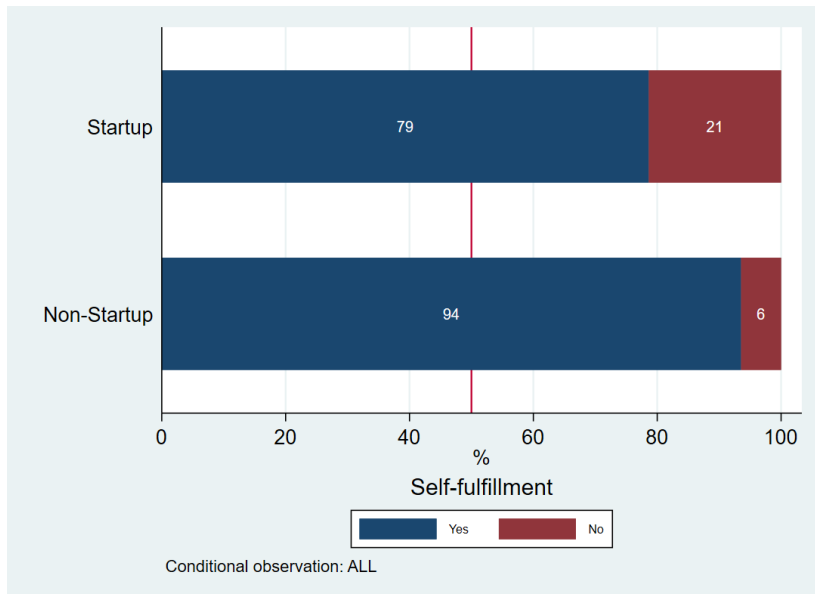
+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.11 Motivation of Establishing a Startup: Self-fulfillment

Self-fulfillment	Overall+		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	78.65	93.55	76.19	84.62
No	21.35	6.45	23.81	15.38
<i>N</i>	89	31	63	26

+  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Figure 2.4 Overall - Motivation of Establishing a Startup: Self-fulfillment



## Summary

We define a “startup” as a business operating less than three years. In our survey, we also included some firms with more than three years of operations. We will use them as a control-group for comparison with the startup group, but would not read much into their details. Due to the responding rate, time,



manpower and budget constraints, the study only obtained a total sample of 120 firms. The sample consisted of 89 startups (74% of the entire sample), of which 63 were technology-related businesses (71% of startups). Although the sample size is relative small, this is likely to be the first attempt to understand the important questions about the current operating status of startup firms, the startup ecosystem in Hong Kong, and their interactions and prospects regarding the GBA development.

### (a) Demographic Characteristics

The major demographic characteristics of the entire sample (120 firms) and the startups (89 firms) were:

- 68.4% of the business owners were around 30 to 49 age old, with startup firms having 66.2% within the same age group.
- 28.3% of all business owners were foreign nationals, with startup firms having 29.2%.
- 78.3% of all business owners were the male gender, with startup firms having 79.8%.
- 95.8% of all business owners held at least a bachelor degree, with startup firms having 96.5%.

Most of the business owners were local male at their prime age, with good academic qualifications and little or moderate business experience. Generally, there is no statistical significant difference between startups and non-startups in terms of their owners' demographic characteristics, while there is weakly relationship between a particular demographic characteristic such as gender and nationality between tech and non-tech startup firms. For the tech startups (63 firms), there is no statistical significant gender difference between locals and foreigners. The male gender prevailed in both national identities.

Table 2.12 Demographic Characteristics  
(with statistical significant difference)

Variable	Startup (89) / Non-Startup (31)	Tech (63) / Non-Tech (26) Startups
Nationality	–	A larger proportion of foreign nationals set up tech firms.
Gender	–	A larger proportion of tech firm owners were male.

It is statistically significant that male and foreign nationals had greater participations in the tech-businesses. This indicates that they were able to discover more tech-business opportunities than female and locals. The entry cost for

female into the tech field seems to be higher for some reasons. On the other hand, foreign tech-firms could probably be better informed than the locals about tech-market developments.

### (b) Other Characteristics

- Regarding the possession of “previously related business experience”, 35.8% of all business owners did not have any related experience and 36.7% had more than 5 years of experience, while the corresponding proportions for startups were 40.4% and 37.1% respectively.
- Regarding “previous experience in business failure”, 49.2% of all business owners had failure experience, with startup firms having 47.2%. Although there were nearly half of the startup owners had failed in their businesses previously, there were also about half of them starting their current businesses with none or very limited (0-1 year) related business experience. This inexperience pattern was more pronounced in the non-tech-business sector. It implies the startup market attracted quite a lot of entrepreneurs into new and unfamiliar business areas.
- Regarding “motivations of establishing a business”, “self-fulfilment” (82.5%) and “profit” (65.0%) were the major motivations for the overall sample, while the corresponding proportions for startups were 78.7% and 66.3% respectively. It is a bit surprising to know that a larger proportion of startups indicated “self-fulfilment” as a motive for setting up a new business, as compared with the usual “profit” motive. Undoubtedly, “self-fulfilment” is a strong motive to push entrepreneurs forward.

Table 2.13 Other Major Characteristics  
(with statistical significant difference)

Variable	Startup (89) / Non-Startup (31)	Tech (63) / Non-Tech (26) Startups
Previous experience in business failure	–	A larger proportion of tech-firm owners experienced business failure previously.

## 2.2 Technology Level

### 1. Tech/Non-tech

- (a) There were 120 observations in our entire sample, 89 (74.2%) observations were tech-businesses. Among startups, 63 (70.8%) were tech-businesses.
- (b) 31 (25.8%) observations were non-tech businesses and 26 (83.9%) of them were startups.
- (c) There were only 5 non-tech firms in non-startups.

### 2. Technology Types and Intensity

- (a) There were all together 89 tech firms in our sample: 26 for non-startups and 63 for startups.
- (b) Over 80% of all tech firms adopted technology for software development, app development and product design. About 70% of the tech firms considered that they were adopting “medium” and “high level” technologies in their operations.
- (c) A high proportion of 56% of tech startups also involved in product manufacturing and the ratio was even higher at 65% for non-startups.
- (d) There is no statistical significant difference in the adopted technology intensity between startups and non-startups firms.

Table 2.14 Technology Types and Intensity: APP Development

APP development	Overall Tech Firms	
	Startup %	Non-Startup %
Unrelated	15.87	15.38
Low	12.70	11.54
Medium	33.33	46.15
High	38.10	26.92
<i>N</i>	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.15 Technology Types and Intensity: Software Development

Software development	Overall Tech Firms	
	Startup %	Non-Startup %
Unrelated	12.70	7.69
Low	12.70	15.38
Medium	28.57	15.38
High	46.03	61.54
<i>N</i>	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.16 Technology Types and Intensity: Product Design

Product design	Overall Tech Firms	
	Startup %	Non-Startup %
Unrelated	12.70	11.54
Low	23.81	19.23
Medium	26.98	23.08
High	36.51	46.15
<i>N</i>	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.17 Technology Types and Intensity: Manufacturing

Product manufacturing Technology	Overall Tech Firms	
	Startup %	Non-Startup %
Unrelated	44.44	34.62
Low	17.46	15.38
Medium	23.81	30.77
High	14.29	19.23
<i>N</i>	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

## Summary

- There were 120 observations in total, 89 (74.2%) observations were tech-businesses and 63 (70.8%) of tech-businesses were startups. 31 (25.8%) of all observations were non-tech businesses and 26 (83.9%) of them were startups.
- There were only 5 non-tech firms (16.1%) within the non-startup firms. It seems that a larger proportion of tech-firms survived overtime, as compared with non-tech firms.
- Over 80% of all tech firms adopted technology for software development, app development and product design. About 70% of the tech firms considered they were adopting “medium” and “high level” technologies in their operations. The level of adopted technologies was rather high as reported by the surveyed firms. This was only the subjective assessment of the surveyed firms and we do not have more information to assess the validity of this important parameter in this survey. Regarding the various types of adopted technologies, it is likely that most of them were for business-to-consumer applications and professional services facilitating productions.
- 56% of tech startups also involved in product manufacturing and the ratio was even higher at 65% for non-startups. As the manufacturing sector in Hong Kong is very small, the nature of manufacturing involvement by tech startups is very interesting and should deserve further studies.

## 2.3 Business Operations

### 1. Years of Establishment

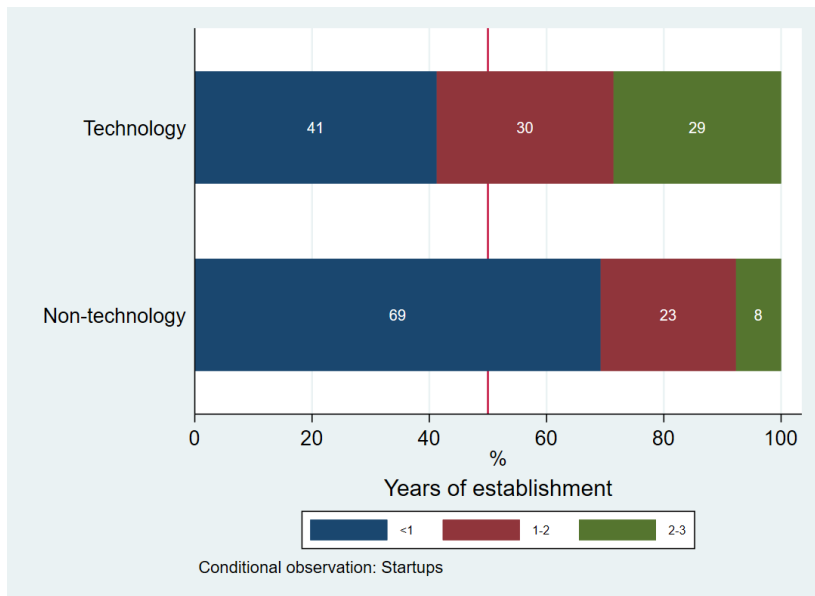
- (a) Our sample was dominated by newly established businesses, with 74.2% of observations (89 firms) having less than three years of business establishment.
- (b) Nearly half of the startup sample were less than one year of establishment and 70.8% of startup sample (63 firms) were technology-related firms.
- (c) There were 31 non-startups, with 45% of them establishing more than five years.
- (d) In our startup sample, the year of establishment for tech firms was statistically significant longer ( $P\text{-value}=0.033$ ) than their non-tech counterparts.

Table 2.18 Years of Establishment

Year of establishment	Overall		Startup*	
	Startup %	Non-Startup %	Technology %	Non-technology %
<1	49.44	0.00	41.27	69.23
1-2	28.09	0.00	30.16	23.08
2-3	22.47	0.00	28.57	7.69
3-4	0.00	38.71		
4-5	0.00	16.13		
>5	0.00	45.16		
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.5 Startups - Year of Business Establishment



## 2. Business Areas

- (a) There was no particular business area dominating the entire sample. In general, over 40% of the firms had their operations covered

more than one business area. The most dominating business areas were education (22.4%), retail (22.4%), financial (22.4%), health (19.1%) and smart-city related (18.0%) . Obviously, some adopted technologies could be generally applied to various business areas. They engaged relatively less in entertainment (11.2%), environment (9.0%), medical/biological (9.0) and tourism (9.0%) industries. Logistics (7.9%), and (5.6%) were the least popular business areas.

- i. Similar patterns were revealed in both startups and non-startups firms, while non-tech startups had relatively more participation in logistics and environment.
- ii. There is no statistical significant difference between startups/non-startup nor between tech-startup/non-tech-startup firms in the business areas.

Table 2.19 Business Areas: Education

Education	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	22.47	19.35	20.63	26.92
No	77.53	80.65	79.37	73.08
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.20 Business Areas: Entertainment

Entertainment	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	11.24	19.35	12.70	7.69
No	88.76	80.65	87.30	92.31
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.21 Business Areas: Environment

Environment	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	8.99	16.13	6.35	15.38
No	91.01	83.87	93.65	84.62
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.22 Business Areas: Financial

Financial	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	22.47	16.13	20.63	26.92
No	77.53	83.87	79.37	73.08
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.23 Business Areas: Health

Health	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	19.10	22.58	19.05	19.23
No	80.90	77.42	80.95	80.77
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001



Table 2.24 Business Areas: Logistic

Logistic	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	7.87	3.23	6.35	11.54
No	92.13	96.77	93.65	88.46
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.25 Business Areas: Medical/Biological

Medical/Biological	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	8.99	16.13	11.11	3.85
No	91.01	83.87	88.89	96.15
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.26 Business Areas: Retail

Retail	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	22.47	19.35	20.63	26.92
No	77.53	80.65	79.37	73.08
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.27 Business Areas: Smart-City Related

Smart-City related	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	17.98	25.81	22.22	7.69
No	82.02	74.19	77.78	92.31
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.28 Business Areas:Transportation

Transportation	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	5.62	6.45	7.94	0.00
No	94.38	93.55	92.06	100.00
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.29 Business Areas: Tourism

Tourism	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	8.99	3.23	9.52	7.69
No	91.01	96.77	90.48	92.31
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

### 3. Revenue Generation

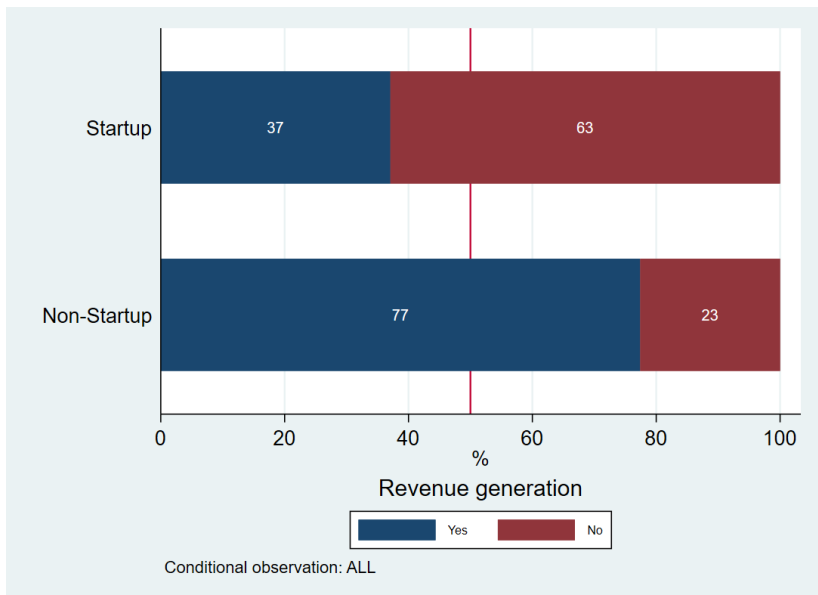
- There were 52.5% of firms that had not generated revenue in the overall sample.
- As expected, this pattern was more pronounced for startups. Over 60% of startups did not generate revenue, while over 70% of non-startups did.
- There is a strong statistical significant difference (P-value=0.000) in generating revenue between startups and non-startups. A larger proportion of non-startups generated revenue.

Table 2.30 Revenue Generation

Revenue generation	Overall***		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	37.08	77.42	38.10	34.62
No	62.92	22.58	61.90	65.38
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.6 Overall - Revenue Generation



#### 4. Employment Status

- (a) 67.5% of the entire sample employed full-time staff, while there were only 54.2% employed part-time staff.
- (b) This pattern maintained in both startup and non-startup businesses, while startups had a relatively lower rate in both forms of employment.
- (c) Startup firms tended to employed less staff. In particular, there were only 18% of startups hiring more than 3 full-time employees, compared with 58.1% for non-startups.
- (d) There is a strong statistical significant difference (P-Value=0.000) in the number of full-time employment between both startup or non-startup businesses. The same is true for part-time employment (P-Value=0.009). Non-startups employed more full-time and part-time employees than startups.
- (e) As for startups, there is no statistical significant difference in the number of full-time employees between tech and non-tech firms. Yet there is statistical significant difference (P-Value=0.013) in the number of part-time employees between tech and non-tech startups. Tech startups employed more part-time employees.

Table 2.31 Employment Status: Full-Time Employees

Num. of full-time employees	Overall***		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	39.33	12.90	33.33	53.85
1	15.73	3.23	15.87	15.38
2	16.85	16.13	15.87	19.23
3	10.11	9.68	12.70	3.85
>3	17.98	58.06	22.22	7.69
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.32 Employment Status: Part-Time Employees

Num. of part-time employee	Overall**		Startup*	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	50.56	32.26	39.68	76.92
1	11.24	25.81	12.70	7.69
2	19.10	9.68	20.63	15.38
3	6.74	0.00	9.52	0.00
>3	12.36	32.26	17.46	0.00
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.7 Overall - Employment Status - Full-Time Employees

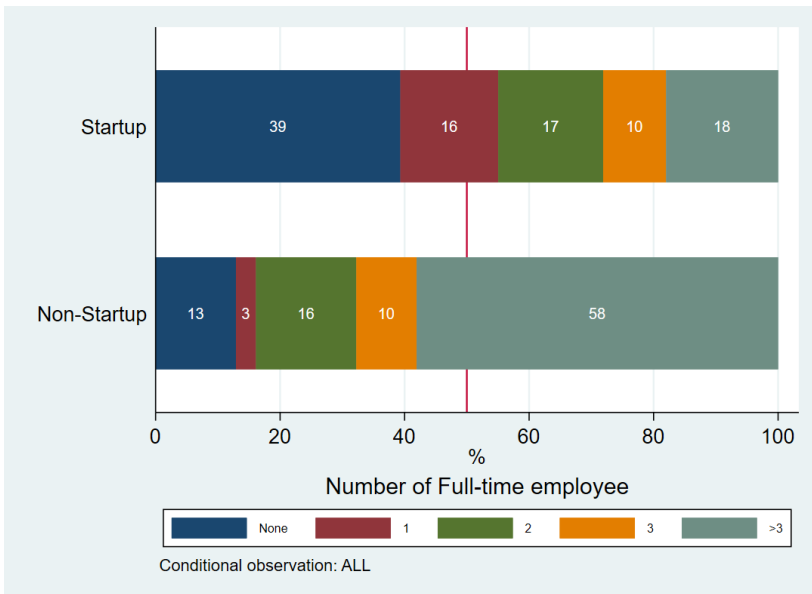


Figure 2.8 Overall - Employment Status - Part-Time Employees

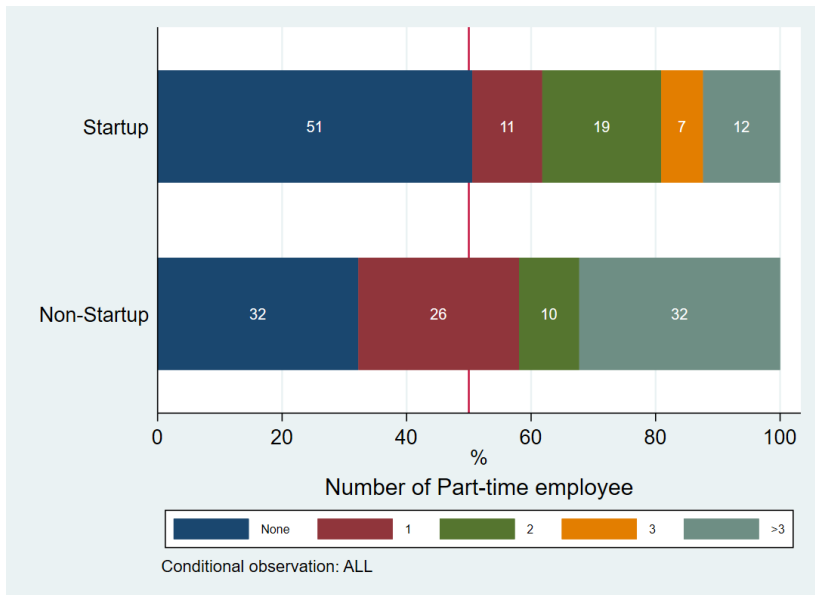
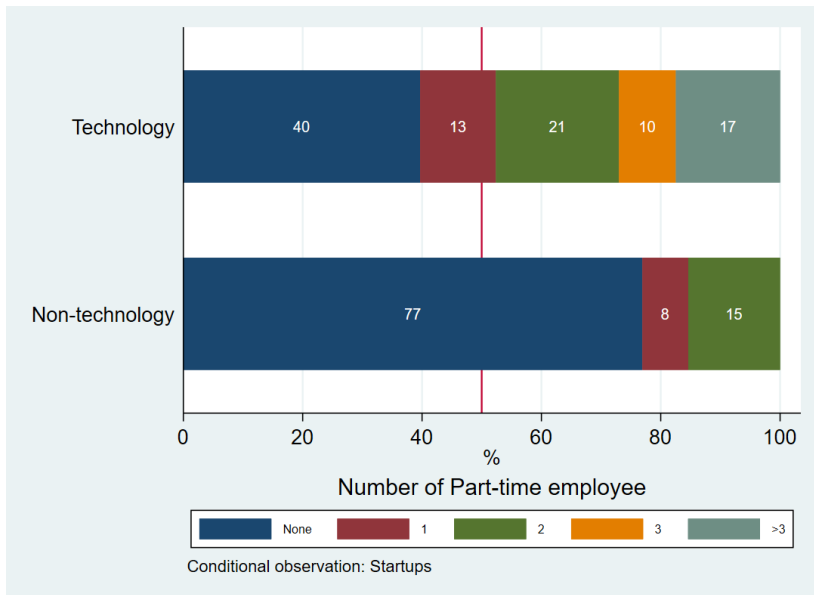


Figure 2.9 Startups - Employment Status - Part-Time Employees



## 5. Business Partners

- (a) Overall, 76.7% of the business owners had at least one business partner.
  - i. The most frequently seen business partnership (including the business owner) was a duo (25.0%) or trio (25.8%).
  - ii. 19.2% in the sample had more than 3 business partners.
- (b) This pattern was closely followed by startups, while non-startups had relatively more business partnership (>3 partners: 32.3%).
  - i. 46.2% of the non-tech startups operated their businesses alone, while only 19.1% of tech startups did the same.
  - ii. The most popular (34.9%) partnership for tech startups was a trio (3 people in total) partnership.
- (c) There is a statistical significant difference (P-value=0.047) in business partnership formation between startup/non-startup businesses. Non-startups had more business partners.
- (d) As for startups, there is a statistical significant difference (P-value=0.068) in business partnership formation between tech and

non-tech firms. Tech-firms were having more business partners.

Table 2.33 Number of Business Partners

Num. of business partners	Overall*		Startup+	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	26.97	12.90	19.05	46.15
1	24.72	25.81	23.81	26.92
2	29.21	16.13	34.92	15.38
3	4.49	12.90	4.76	3.85
>3	14.61	32.26	17.46	7.69
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.10 Overall – Number of Business Partners

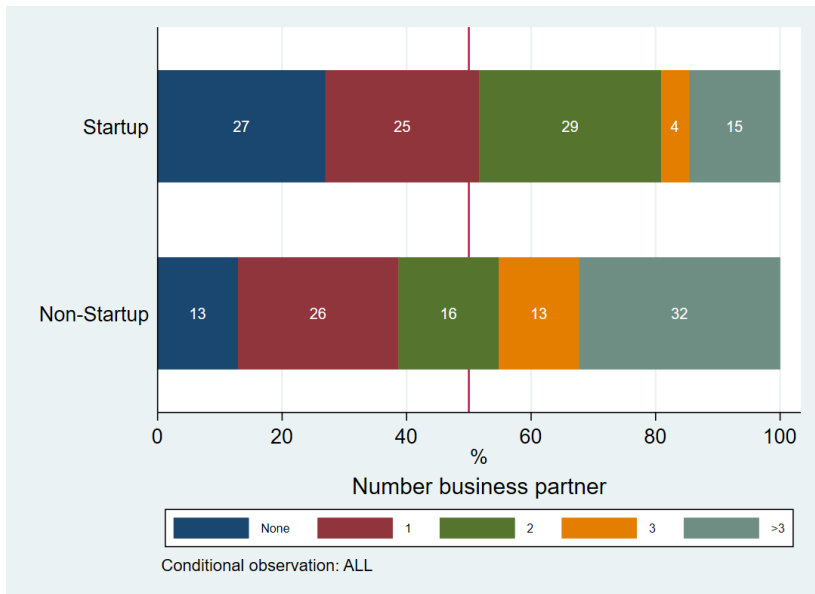
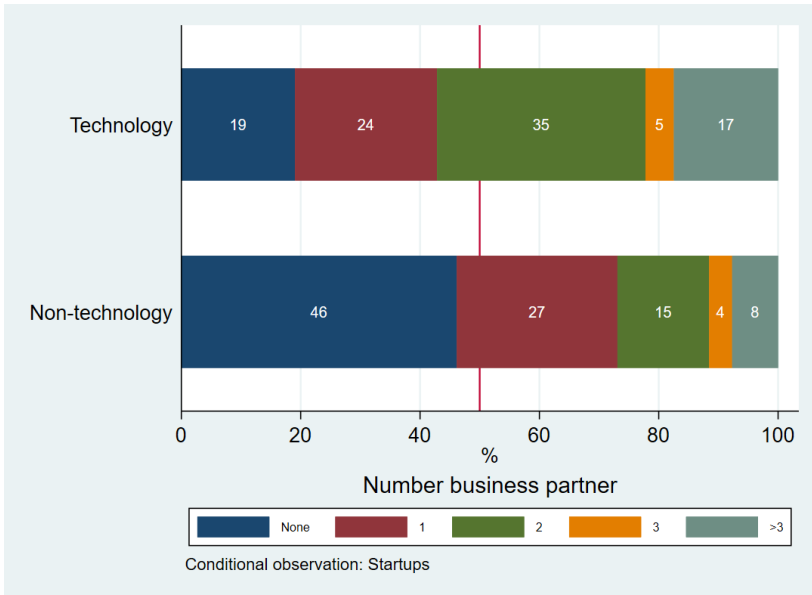




Figure 2.11 Startups – Number of Business Partners



## 6. Obtaining Intellectual Property

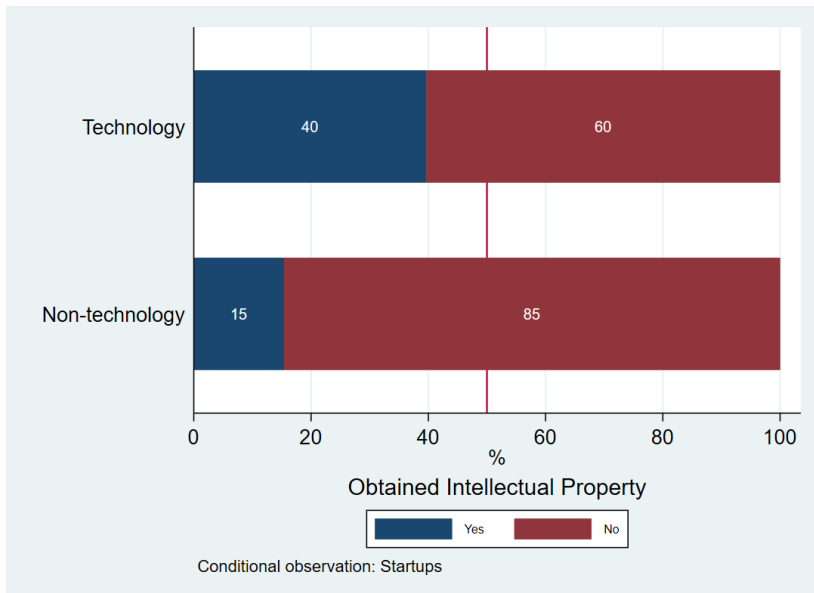
- 36.7% of the entire sample obtained some kind of intellectual property.
- Non-startups obtained relatively more intellectual property. However, there is no statistical significant difference in the ownership of intellectual property between startup and non-startup businesses.
- Among startups, tech firms obtained relatively more intellectual property compared with non-tech firms. Indeed, there is a statistical significant difference ( $P\text{-value}=0.026$ ) in the ownership of intellectual property between tech and non-tech firms.

Table 2.34 Obtaining Intellectual Property

Obtaining intellectual property	Overall		Startup*	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	32.58	48.39	39.68	15.38
No	67.42	51.61	60.32	84.62
<i>N</i>	89	31	63	26

+  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Figure 2.12 Startups - Obtaining Intellectual Property



## 7. Marketing Activities

- 70% of the businesses had marketing activities.
- The pattern was more pronounced for non-startups: over 80% of non-startups as against 65% of startups. There is a weak statistical significant difference ( $P\text{-value}=0.050$ ) in marketing behaviour between startup/non-startup businesses. Relatively

more non-startup firms had marketing activities.

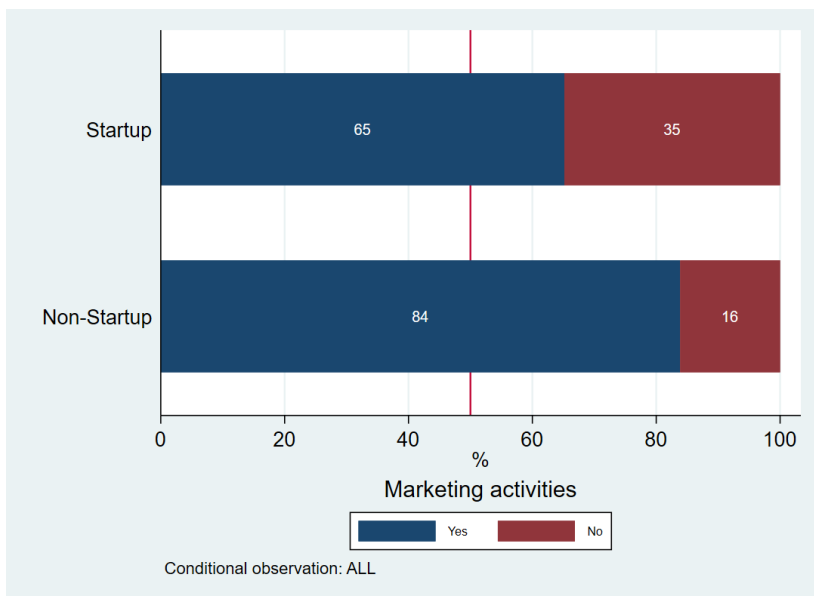
- (c) As for startups. there is no statistical significant difference in marketing behaviour between tech and non-tech firms.

Table 2.35 Marketing Activities

Marketing activities	Overall+		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	65.17	83.87	61.90	73.08
No	34.83	16.13	38.10	26.92
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.13 Overall - Marketing Activities



### 8. Years of Engagement in R&D

- (a) 25.4% of startup tech firms had less than 1-year R&D activities.
- (b) The R&D pattern remained the same for both startups and non-startups.
- (c) There were 12.7% of startups having more than 5-year R&D. They had started their R&D in advance of launching their businesses.
- (d) There is no statistical significant difference between tech-startup and tech non-startup firms in the year of R&D.

Table 2.36 Years of Engagement in R&D

Year of R&D	Tech Firms	
	Startup %	Non-Startup %
<1	25.40	15.38
1-2	33.33	26.92
2-5	28.57	38.46
>5	12.70	19.23
<i>N</i>	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### Summary

- Regarding the “year of establishment”, nearly half of the startup sample were less than one year of establishment. There were 31 non-startups, with 45% of them establishing more than five years.
- Regarding “business areas”, there is no statistical significant different between startups and non-startups, and between tech and non-tech startups. Most of the popular businesses were related to the traditional service sectors, such as education (21.7%), financial (20.8%), health (20.0%) and retail (21.7%), except those related to “smart city” (20.0%). Tech startup firms also engaged in these business areas similarly.
- Regarding “revenue generating”, there were 52.5% of firms that had not generated any revenue (still a long way from profitability) in the overall sample. As expected, this pattern was more pronounced for startups. Over 60% of startups did not generate revenue, while over 70% of non-startups did. Naturally, many startups not generating revenue might not survive for more than three years.
- Regarding the “employment status”, 67.5% of the entire sample employed full-time staff, while 54.2% employed part-time staff. Startup

firms tended to employ less staff. In particular, there were only 18.0% of startups hiring more than 3 full-time employees, compared with 58.1% for non-startups. Startup firms encountered more serious budget constraint and uncertain business prospects in their early stage of development. They would face more obstacles in staff recruitment.

- Regarding “business partners”, 42% of the non-tech startups operated their businesses alone, while only 19% of tech startups did the same. The most popular (34.9%) partnership for tech startups was a trio (3 people in total) partnership. Partnership is the most popular business model that can provide relevant experience and risk sharing, which is particularly important for startup firms.
- 36.7% of the entire sample obtained some kind of intellectual property. A larger proportion of non-startup firms possessed intellectual property, as they operated for a longer period of time. However, the possession of intellectual property might not have resulted in revenue (not to mention about profitability) for many firms yet.
- Overall 70% of the businesses had marketing activities. The pattern was more pronounced for non-startups: over 80% of non-startups as against 65% of startups. A very large proportion of firms appreciated the importance of marketing for their business development.
- 25.4% of startup tech firms had less than 1-year R&D activities. The R&D pattern remained the same for both startups and non-startups. There were 12.7% of startups having more than 5-year R&D. They had started their R&D prior to launching their businesses.

**Table 2.37 Business Operations**  
(with statistical significant difference)

Variable	Startup (89) / Non-Startup (31)	Tech (63) / Non-Tech (26) Startups
Number of year of establishment of the firm	–	Tech firm established longer than non-tech firms.
Generating revenue	A larger proportion of non-startups generated revenue.	–
Number of full-time employment	A larger proportion of non-startup firms employed more full-time employees.	–
Number of business partners	Non-startups had more business partners.	Tech firms had more business partners.
Possessing intellectual property	–	A larger proportion of tech firms possessed intellectual property.
Marketing activities	A larger proportion of non-startups engaged in marketing activities.	–

## 2.4 Funding and Overseas Sales

### 1. Sources of External Funding

- (a) 47.2% of startups and 38.7% of non-startups did not use any external funding respectively, implying they all used their own funds.
- (b) For the startups, the relative importance of external funding sources was: borrowing from friends and relatives (28.1%), venture capital fund (18.0%) and borrowing from banks (7.9%).
- (c) The funding pattern of startups and non-startups was similar. There is no statistical significant difference in the sources of external funding between startup and non-startup businesses.
- (d) Among the startups, 60.3% of the tech firms and 34.6% of non-tech firms used external funding respectively. There is a statistical significant difference (P-value=0.027) in the sources of external funding between tech firms and non-tech firms. Tech firms relied more on external funding.

Table 2.38 Sources of External Funding: Borrowing from Friends or Relatives

Borrowing from friends or relatives	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	28.09	38.71	30.16	23.08
No	71.91	61.29	69.84	76.92
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.39 Sources of External Funding: Borrowing from Banks

Borrowing from banks	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	7.87	3.23	6.35	11.54
No	92.13	96.77	93.65	88.46
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.40 Sources of External Funding: Venture Capital Fund

Venture capital fund	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	17.98	19.35	22.22	7.69
No	82.02	80.65	77.78	92.31
<i>N</i>	89	31	63	26

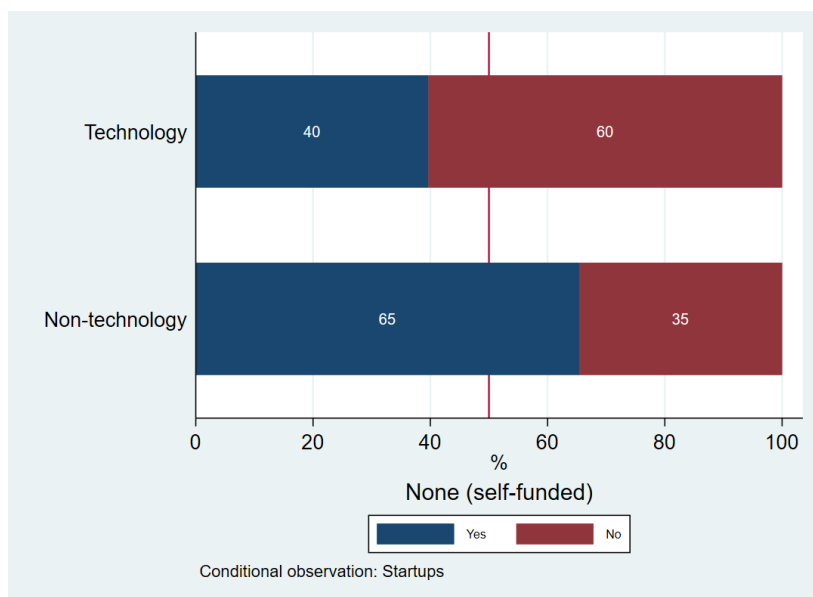
+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.41 Sources of External Funding: No External Funding

None	Overall		Startup*	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	47.19	38.71	39.68	65.38
No	52.81	61.29	60.32	34.62
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.14 Startups - No External Funding (Self-funded only)



## 2. Applying HK SMEs Supportive Schemes

- In general, the majority of businesses (73.3%) did not apply for the HK government SME funding schemes. Only 26.7% (22 firms) of startups did apply.
- There is no statistical significant difference in the funding application behaviour between startup/non-startup businesses.



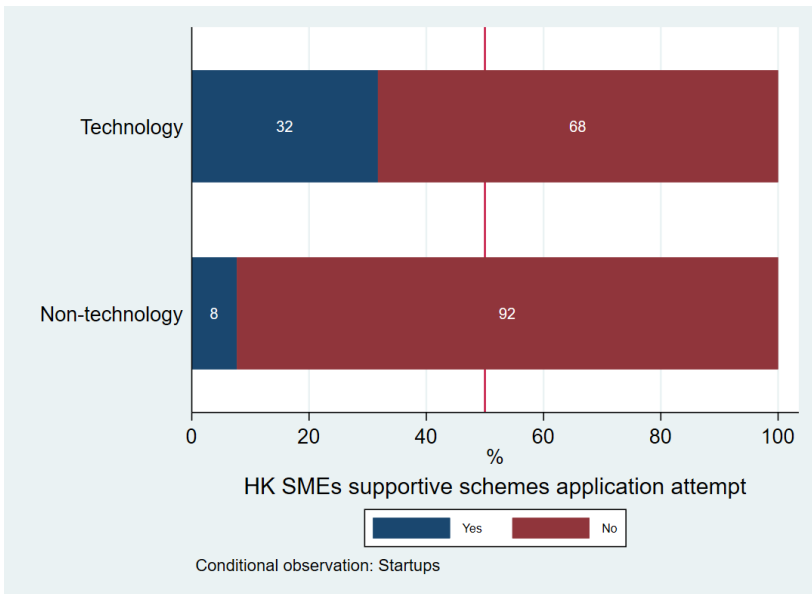
- (c) However, among startups, there is a statistical significant difference(p-value=0.017) between tech firms and non-tech firms. More tech firms applied for the SME supportive schemes (31.7% compared to 7.7%).

Table 2.42 Applying HK SMEs Supportive Schemes

HKSMEs supportive schemes application attempted	Overall		Startup**	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	24.72	32.26	31.75	7.69
No	75.28	67.74	68.25	92.31
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.15 Startups – Applying HK SMEs Supportive Schemes



### 3. Successful Applications of HK SMEs Schemes

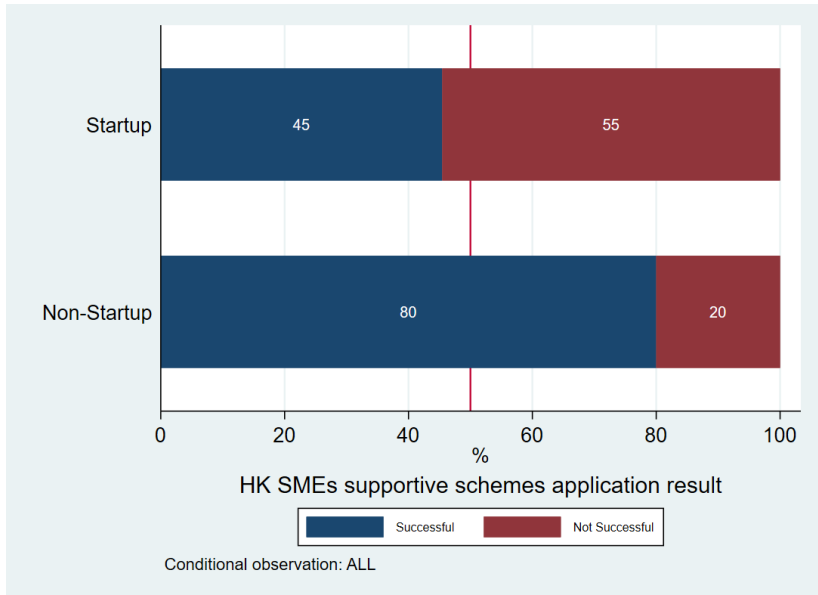
- (a) For those firms applied for government supporting schemes, 56.3% of the applications were successful.
- (b) 80% of non-startup businesses succeeded in the application, while less than half (45.5%) of startups' applications were successful.
- (c) There is a weak statistical significant difference (P-value=0.068) in the application successful rate between startup and non-startup businesses. Non-startup firms which had more experience, were having much higher successful rate in applications.
- (d) Among the startups, the application by non-tech firms was too small for a meaningful comparison.

Table 2.43 Successful Applications of HK SMEs Schemes

HK SMEs supportive schemes application result	Overall+		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Successful	45.45	80.00	50.00	0.00
Not successful	54.55	20.00	50.00	100.00
<i>N</i>	22	10	20	2

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.16 Overall - Successful HK SMEs Schemes Applications



#### 4. Helpfulness of HK SMEs Schemes

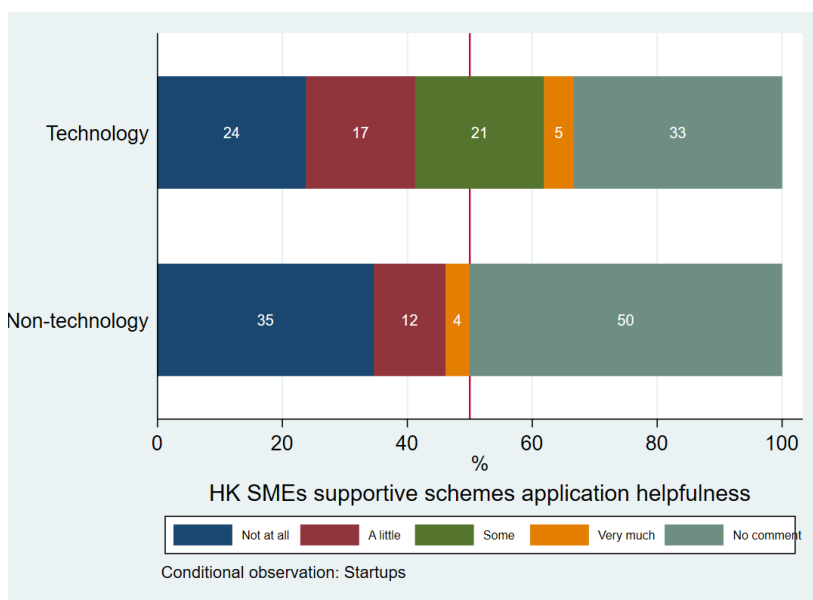
- 62.5% of the over sample were unsatisfied (23.3%) with or did not comment (39.2%) on the usefulness of HK SME supportive schemes.
- While non-startups showed relatively more appreciation to the government SME funding schemes (29% for “some” and “very much” helpfulness), the corresponding answers for startups were 19.1% together.
- There is no statistical significant difference in the comment on the usefulness of HK SME funding schemes between startup and non-startup businesses.
- There is a weak statistical significant difference ( $P\text{-value}=0.094$ ) in the comment on the usefulness of HK SME funding schemes between tech and non-tech businesses. As more tech firms applied for the schemes, they showed more positive comments on the schemes.

Table 2.44 Helpfulness of HK SMEs Schemes

HK SMEs supportive schemes helpfulness	Overall		Startup+	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Not at all	26.97	12.90	23.81	34.62
A little	15.73	16.13	17.46	11.54
Some	14.61	16.13	20.63	0.00
Very much	4.49	12.90	4.76	3.85
No comment	38.20	41.94	33.33	50.00
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.17 Startups - Helpfulness of HK SMEs Schemes



## 5. Overseas Sales

- (a) 48.3% of the entire sample engaged in foreign sales. It was 32.3% for non-startups and 53.9% for startups. There is a statistical

- significant difference (P-value=0.038) in foreign sales between startup and non-startup businesses.
- (b) For the entire sample, the relative importance of foreign markets was the following: 33.3% for Mainland China market, 23.3% for Southeast Asia, 15% for EU, 10% for Northeast Asia and 8.3% for US.
  - (c) The pattern of overseas businesses was the same for startups and non-startups.
  - (d) As for the startups, non-tech firms (69.2%) engaged more in foreign sales than tech firms (47.6%). There is a weak statistical significant difference (P-value=0.063) in foreign sales between tech firms and non-tech firms.
  - (e) The pattern of overseas markets was the same for tech and non-tech startups.

Table 2.45 Overseas Sales: None

None	Overall*		Startup+	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	53.93	32.26	47.62	69.23
No	46.07	67.74	52.38	30.77
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.46 Overseas Sales: Mainland China

Mainland China	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	29.21	45.16	31.75	23.08
No	70.79	54.84	68.25	76.92
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.47 Overseas Sales: Southeast Asia

Southeast Asia	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	21.35	29.03	23.81	15.38
No	78.65	70.97	76.19	84.62
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.48 Overseas Sales: Northeast Asia

Northeast Asia	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	8.99	12.90	9.52	7.69
No	91.01	87.10	90.48	92.31
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.49 Overseas Sales: United States

United States	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	6.74	12.90	7.94	3.85
No	93.26	87.10	92.06	96.15
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.50 Overseas Sales: Europe

European countries	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	13.48	19.35	12.70	15.38
No	86.52	80.65	87.30	84.62
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.18 Overall - Overseas Sales - None

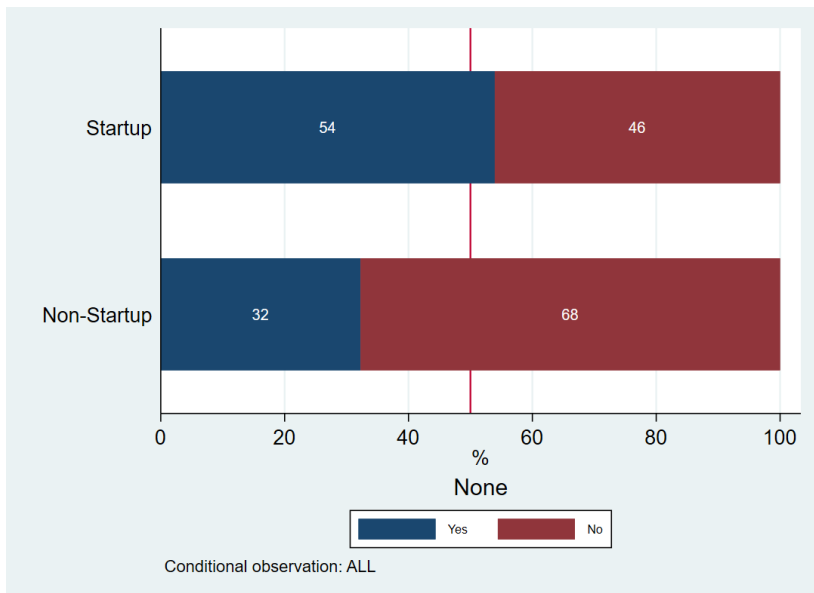
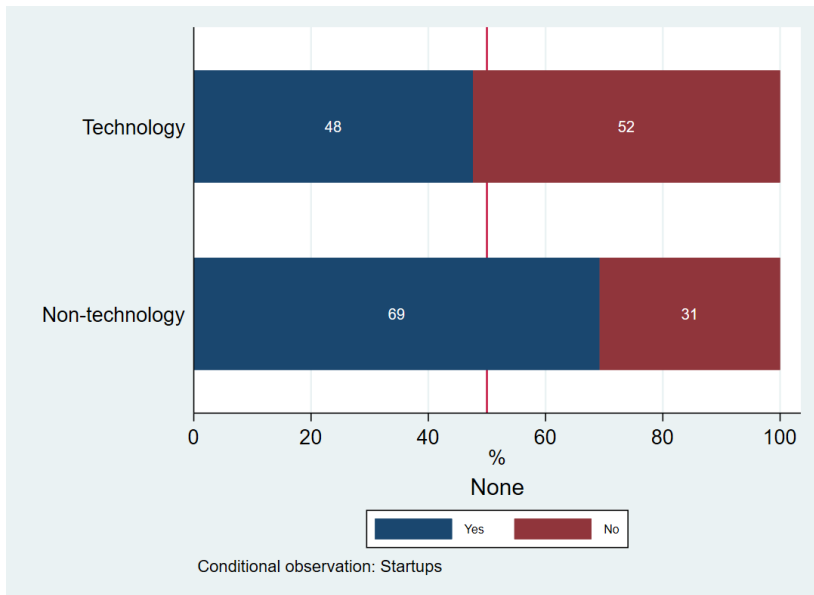


Figure 2.19 Startups - Overseas Sales - None



## Summary

### (a) Funding

- 47.2% of startups and 38.7% of non-startups did not use any external funding respectively, implying they all used their own funds. For the startups, the relative importance of external. Funding sources were: “borrowing from friends and relatives” (28.1%), “venture capital fund” (18.0%) and “borrowing from banks” (7.9%). As startups were risky businesses, the traditional banking finance had not been active in supporting startup firms.
- 73.3% of the businesses did not apply for the HK government SME funding schemes. Only 24.7% of startups did apply.
- For those firms applied for government supporting schemes, 56.3% of the applications were successful. 80% of non-startup businesses succeeded in the application, while only 45.5% of startups’ applications were successful. The successful rate for the public funding schemes seemed relative high, particularly for non-startups. It implies that gaining and sharing of successful experiences may promote the successful



rate of applications.

- 62.5% of the sample were unsatisfied (23.3%) with or did not comment (39.2%) on the usefulness of supportive schemes. While non-startups showed relatively more appreciation to the government funding schemes (29% for “some” or “very much” helpful), the corresponding answers for startups were 19.1% together. Obviously, firms did not apply for the schemes or failed in their applications would comment negatively on the schemes.

### (b) Overseas Sales

- 48.3% of the entire sample engaged in overseas sales. It was 32.3% for non-startups and 53.9% for startups. For the entire sample, the relative importance of overseas markets was the following: 33.3% for Mainland China market, 23.3% for Southeast Asia, 15% for EU, 10% for Northeast Asia and 8.3% for US. As for the startups, non-tech firms (69.2%) engaged more in foreign sales than tech firms (47.6%). It seems that non-tech startup firms (probably with more readily available services or products) would initiate their overseas sales earlier than tech firms. Obviously, non-startup firms with a longer history of operation would have more opportunities and experience to expand their overseas sales.

Table 2.51 Funding and Overseas Sales  
(with statistical significant difference)

Variable	Startup (89) / Non-Startup (31)	Tech (63) / Non-Tech (26) Startups
Sources of external funding	–	A larger proportion of tech firms relied on external funding.
Applying for government SME supportive schemes	–	A larger proportion of tech firms applying for such schemes.
Application of government SME schemes successful	A larger proportion of non-startups had their applications successful.	–
Comments on government SME schemes	–	A larger proportion of tech firms showed positive comments.
Obtaining intellectual property rights	–	A larger proportion of tech firms obtained intellectual property rights.
Overseas sales	A larger proportion of startups engaged in overseas sales.	A larger proportion of non-tech firms engaged in overseas sales.

## 2.5 GBA Interaction and Operation

### 1. Frequency in Visiting GBA

- (a) 59.6% of all the sample visited GBA in the last 6 months. 12.3% visited more than 7 times in the last 6 months.
- (b) There was a similar pattern of GBA visiting shared between startup/non-startup businesses.
- (c) As for startups, 65.1% of tech firms visited GBA, compared with 46.2% of non-tech firms.
- (d) However, there is neither a statistical significant difference in GBA visiting behaviour between startup/non-startup nor between tech/non-tech firms.

Table 2.52 Frequency in Visiting GBA

Num. of GBA visits (last 6 months)	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	40.45	41.94	34.92	53.85
1-3	35.96	38.71	38.10	30.77
4-6	11.24	6.45	14.29	3.85
7-10	5.62	6.45	6.35	3.85
>10	6.74	6.45	6.35	7.69
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### 2. Familiarity with GBA Local Government Policy

- (a) Most of the business owners were not familiar (about 70% had “low” to “no understanding”) with the GBA policy.
- (b) The overall pattern remained largely the same in both startup/non-startup and tech/non-tech businesses.
- (c) There is neither a statistical significant difference in GBA policy familiarity/understanding between startup/non-startup nor between tech/non-tech firms.

Table 2.53 Familiarity with GBA Local Government Policy

Familiarity/Understanding of GBA policy	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	35.96	35.48	28.57	53.85
Low	34.83	38.71	39.68	23.08
Medium	25.84	19.35	26.98	23.08
High	3.37	6.45	4.76	0.00
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### 3. GBA Office Establishment

- (a) Only 13.5% of the sample (19 firms) had set up an office in GBA. There were 12 startups and 7 non-startups. Among the 12 startups, 9 were tech firms and 3 were non-tech firms. As the number of non-tech startup firms having an office in GBA was very small (only three), the statistical analysis for the difference of tech and non-tech firms would not be meaningful.
- (b) There is no statistical significant difference in setting up an office in GBA between startup/non-startup firms.

Table 2.54 GBA Office Establishment

Office establishment in GBA	Overall		Startup*	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	13.48	22.58	14.29	11.54
No	86.52	77.42	85.71	88.46
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

### 4. Years of GBA Office Establishment

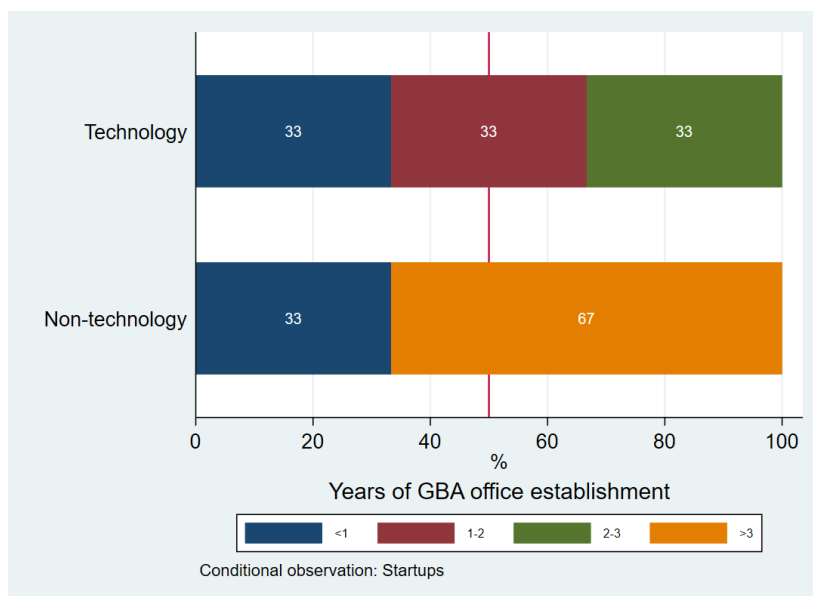
- (a) The established 19 offices in GBA of the entire sample were a relatively new phenomenon. 58% of them had less than 2 years of establishment.
- (b) There is no statistical significant difference in number of year of the office establishment between startup/non-startup firms.

Table 2.55 Years of GBA Office Establishment

Years of GBA office establishment	Overall		Startup	
	Startup*	Non-Startup	Technology	Non-technology
	%	%	%	%
<1	33.33	14.29	33.33	33.33
1-2	25.00	42.86	33.33	0.00
2-3	25.00	14.29	33.33	0.00
>3	16.67	28.57	0.00	66.67
<i>N</i>	12	7	9	3

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.20 Startups - Years of GBA Office Establishment



## 5. Operating Nature of GBA Office

- The analysis of GBA business operations is restricted to the firms that established an office in GBA (N=19).
- The GBA business operations in general mainly involved mar-

keting (50%), administration (42.1%), networking (33.33%) and R&D (33.33%).

- i. Manufacturing (26.3%) was relatively little mentioned.
  - ii. While this pattern remained in both startups/non-startups, non-startups were relative more active in the marketing (71.4%) and networking (71.4%) than startups.
- (c) There is no statistical significant difference in the nature of GBA business operations between startup/non-startup firms.

Table 2.56 Operating Nature of GBA Office: Administration

Administrative	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	41.67	42.86	33.33	66.67
No	58.33	57.14	66.67	33.33
<i>N</i>	12	7	9	3

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.57 Operating Nature of GBA Office: Manufacturing

Manufacturing	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	25.00	28.57	22.22	33.33
No	75.00	71.43	77.78	66.67
<i>N</i>	12	7	9	3

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.58 Operating Nature of GBA Office: Marketing

Marketing	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	50.00	71.43	55.56	33.33
No	50.00	28.57	44.44	66.67
<i>N</i>	12	7	9	3

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.59 Operating Nature of GBA Office: Networking

Networking	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	33.33	71.43	22.22	66.67
No	66.67	28.57	77.78	33.33
<i>N</i>	12	7	9	3

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.60 Operating Nature of GBA Office: R&amp;D

Research Development (R Non-technology	Overall D)		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	33.33	42.86	44.44	0.00
No	66.67	57.14	55.56	100.00
<i>N</i>	12	7	9	3

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

## 6. Employment in GBA Office

- (a) The distribution of the number of GBA employment was quite different between startup and non-startup firms.
  - i. Although 42.1% of the available sample (N=19) did not have any employment in the GBA, non-startups with GBA office establishment had at least 1 full-time employment in GBA.
  - ii. While there were 66.6% startups did not have any full-time employment, no single startup employed more than two employees.
- (b) 55.6% of tech-startup had HK employees working in GBA (probably not full-time). As for non-startups, only 1 firm out of 7 had HK employees working in the GBA office.
- (c) There is a statistical significant difference (P-value=0.020) in employment behaviour in GBA between startup/non-startup firms. Non-startups employed more local employees working full-time

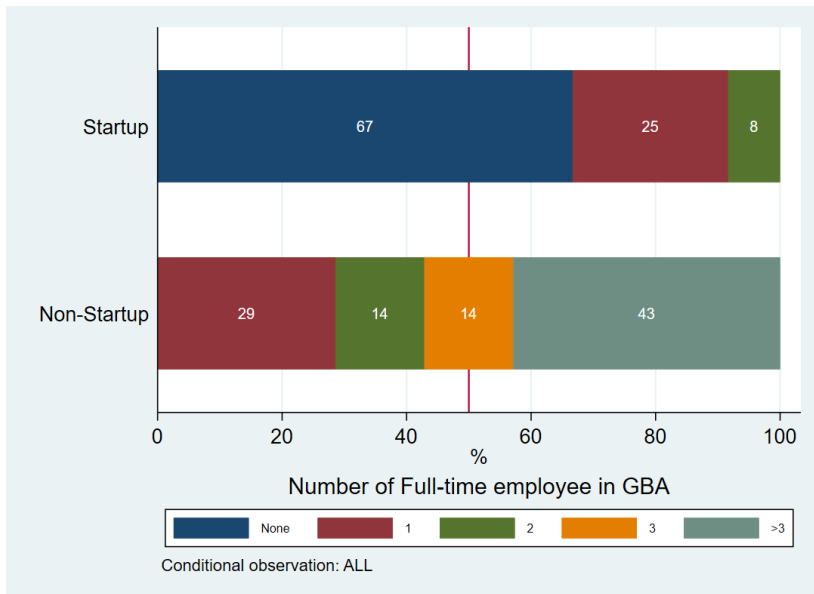
in GBA than startups.

Table 2.61 Employment in GBA Office

Num. of Full-time employee in GBA	Overall*		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	66.67	0.00	66.67	66.67
1	25.00	28.57	22.22	33.33
2	8.33	14.29	11.11	0.00
3	0.00	14.29		
>3	0.00	42.86		
<i>N</i>	12	7	9	3

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.21 Overall - Employment in GBA Office: Full-Time Employees



### 7. Obtaining Supports from GBA Local Government

- (a) 36.8% of the GBA participants (N=19) received some kinds of support from the GBA local governments, mainly in the form of “subsidies/incentives” (36.8%) and “networking” (26.3%). However, “operational/technical assistance” was sparsely mentioned.
- (b) There is no statistical significant difference in supports provided by GBA local governments between non-startup/startup.

Table 2.62 Obtaining Supports from GBA Local Government

None	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	41.67	28.57	33.33	66.67
No	58.33	71.43	66.67	33.33
<i>N</i>	12	7	9	3

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.63 Obtaining Supports from GBA Local Government:  
Technical assistance

Providing operational/technical assistance	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	8.33	0.00	11.11	0.00
No	91.67	100.00	88.89	100.00
<i>N</i>	12	7	9	3

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001



Table 2.64 Obtaining Supports from GBA Local Government: Subsidies

Local government provided subsidy/incentive	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	33.33	42.86	44.44	0.00
No	66.67	57.14	55.56	100.00
<i>N</i>	12	7	9	3

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.65 Obtaining Supports from GBA Local Government: Rent

Low rental charge	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	16.67	28.57	22.22	0.00
No	83.33	71.43	77.78	100.00
<i>N</i>	12	7	9	3

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.66 Obtaining Supports from GBA Local Government: Networking

Networking	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	33.33	14.29	44.44	0.00
No	66.67	85.71	55.56	100.00
<i>N</i>	12	7	9	3

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

## Summary

### (a) GBA Interaction

- 59.6% of the samples visited GBA in the last 6 months. 12.3% of firms visited more than 7 times. There was a similar pattern of GBA visiting

shared between startup and non-startup businesses. As for startups, 65.1% of tech firms visited GBA, compared with 46.2% of non-tech firms.

- Most of the business owners were not familiar (about 70% had “low” or “no understanding”) with the GBA policy. There was about a quarter of business owners frequently visiting GBA in the last 6 months, similar proportion of business owners claimed themselves possessing medium to high level of understanding of the GBA policy. Indeed, many of these firms (19 of them) had offices set up in GBA already.

### **(b) Nature of GBA Business Operation**

- 13.5% of the sample (19 firms) had set up an office in GBA. There were 12 startups and 7 non-startups. Among the 12 startups, 9 were tech firms and 3 were non-tech firms. The established 19 offices in GBA of the entire sample were a relatively new phenomenon. 58% of them operated less than 2 years in GBA.
- The GBA business operations mainly involved marketing (57.9%), networking (47.4%) and administration (42.1%). R&D (36.8%) and manufacturing (26.3%) were relatively little mentioned. It is interesting to record that networking was one of the major features of GBA business operations, other than marketing. Also, 26.3% of firms indicated that their GBA offices involved in manufacturing. They probably did not engage in manufacturing activities directly, but their operations would have included out-sourcing of manufacturing activities. The nature of these manufacturing activities should deserve more attention for further studies.
- The distribution of the number of GBA employment was quite different between startup and non-startup firms. While 42.1% of the available sample (19 firms) did not have any employment in the GBA, non-startups employed more local employees working full-time in their GBA offices than startups. As for startups, there were 66.6% did not have any full-time employment. All these GBA establishments were very small operations. As for tech startups, it is very likely that the Hong Kong entrepreneurs and their Hong Kong employees worked in their GBA offices on a part-time basis, without any local employment.
- 36.8% of the GBA participants received some kinds of support from the GBA local governments, mainly in the form of “subsidies/incentives” (36.8%), and “networking” (26.3%). “Technical assistance” was sparsely mentioned. While the number of support recipients was rather limited, tech-startups were in a better position than the non-tech startups. Sup-

portive schemes offered by GBA local governments mainly targeted tech startups from Hong Kong.

## 2.6 Business Prospects

### 1. Expecting Profitability (after 12 months)

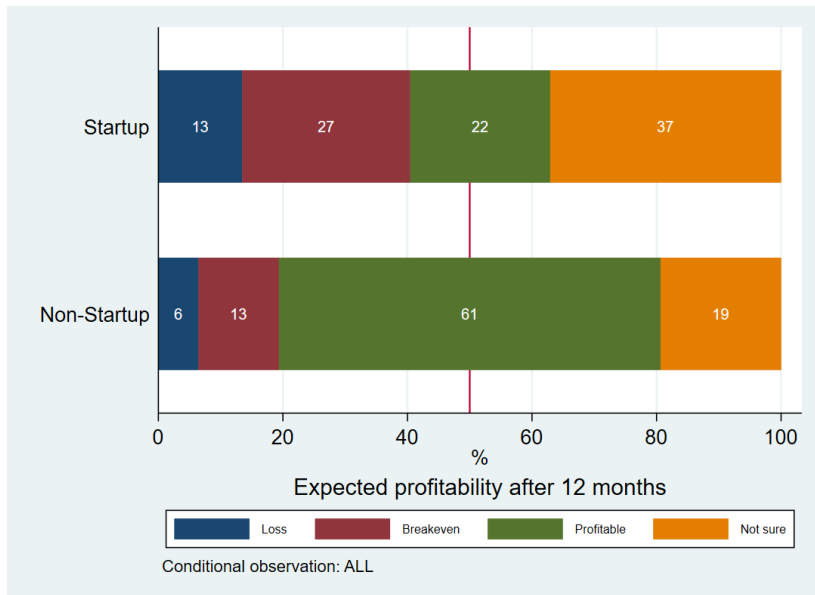
- (a) In short term, 11.7% of firms still expected a loss, while 32.5% of firms expected profitability after 12 months. This was a rather optimistic view, given the fact that 52.5% of firms did not generate revenue during the survey period.
- (b) This positive assessment was more pronounced in the non-startup business.
  - i. 61.3% of the non-startups expected profitability after 12 months.
  - ii. Only 22.5% of startups expected profitability after 12 months.
- (c) As for the startups, the non-tech firms were more optimistic.
  - i. There were only 3.8% of non-tech firms expected a loss, while 17.5% of tech firms did.
  - ii. There were 34.6% of non-tech firms replied “breakeven”, while 23.8% of tech firms did.
- (d) There is a statistical significant difference (P-value=0.001) in short term profitability expectation between startup/non-startup firms. 61.3% non-startup firms expected profitability after 12 months.

Table 2.67 Expecting Profitability (after 12 months)

Expected profitability after 12 months	Overall***		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Loss	13.48	6.45	17.46	3.85
Breakeven	26.97	12.90	23.81	34.62
Profitable	22.47	61.29	22.22	23.08
Not sure	37.08	19.35	36.51	38.46
N	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.22 Overall - Expecting Profitability (after 12 months)



## 2. Future Overseas Sales and Markets

- (a) 82.5% of the whole sample were expecting more overseas sales in the future.
- (b) This future assessment remained the same for both startup and non-startup firms.
  - i. While most tech-startups (88.9%) were positive about overseas markets, non-tech startups (57.7%) were less inclined to explore foreign markets.
- (c) While there is no statistical significant difference between startup/non-startup firms, there is a statistical significant difference in the future overseas sales between tech/non-tech startup firms. Tech firms expected to sell more to overseas markets.
- (d) Most of the expected overseas sales would be going to Mainland China (73.3%) and Southeast Asia (56.7%).
- (e) A similar pattern was followed by both tech and non-tech startup firms.
  - i. Tech-startups' markets were relatively more diversified than

non-tech startups: nearly 40% of tech-startup expected better sales in the Western countries (European countries: 39.7%, and United States 36.5%), comparing to less than one-fifth of the expectation of non-tech startups.

- ii. There is no statistical significant different in future overseas sales markets between tech/non-tech startup firms.

Table 2.68 Expecting More Overseas Sales

Expect more non-local sales	Overall		Startup***	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	79.78	90.32	88.89	57.69
No	20.22	9.68	11.11	42.31
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.69 Future Target Oversea Markets: None

None	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	8.99	6.45	4.76	19.23
No	91.01	93.55	95.24	80.77
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.70 Future Target Oversea Market: Mainland China

Mainland China	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
Yes	75.28	67.74	74.60	76.92
No	24.72	32.26	25.40	23.08
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.71 Future Target Oversea Markets: Southeast Asia

Southeast Asia	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	57.30	54.84	60.32	50.00
No	42.70	45.16	39.68	50.00
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.72 Future Target Oversea Markets: Northeast Asia

Northeast Asia	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	32.58	22.58	33.33	30.77
No	67.42	77.42	66.67	69.23
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.73 Future Target Oversea Markets: United States

United States	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	31.46	32.26	36.51	19.23
No	68.54	67.74	63.49	80.77
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.74 Future Target Oversea Markets: Europe

European countries	Overall		Startup+	
	Startup %	Non-Startup %	Technology %	Non-technology %
Yes	33.71	45.16	39.68	19.23
No	66.29	54.84	60.32	80.77
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.23 Startups - Expecting More Overseas Sales

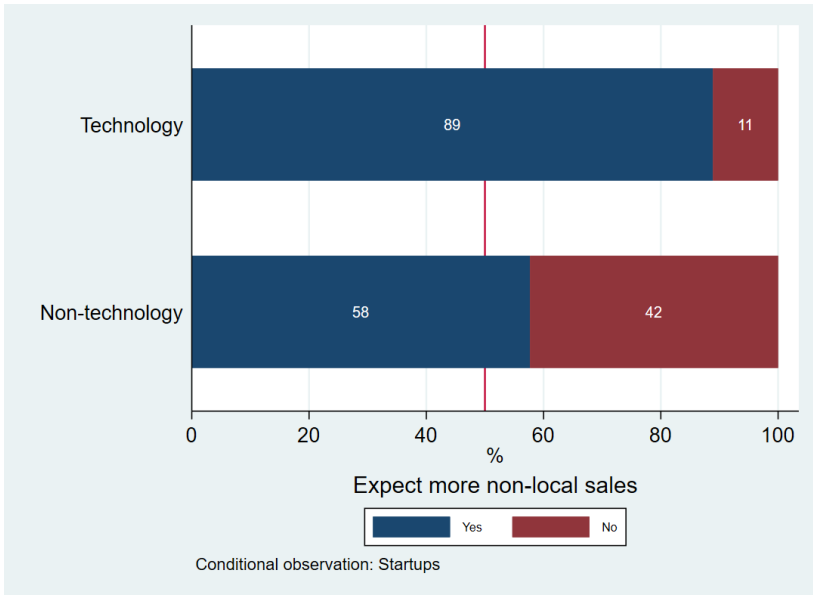
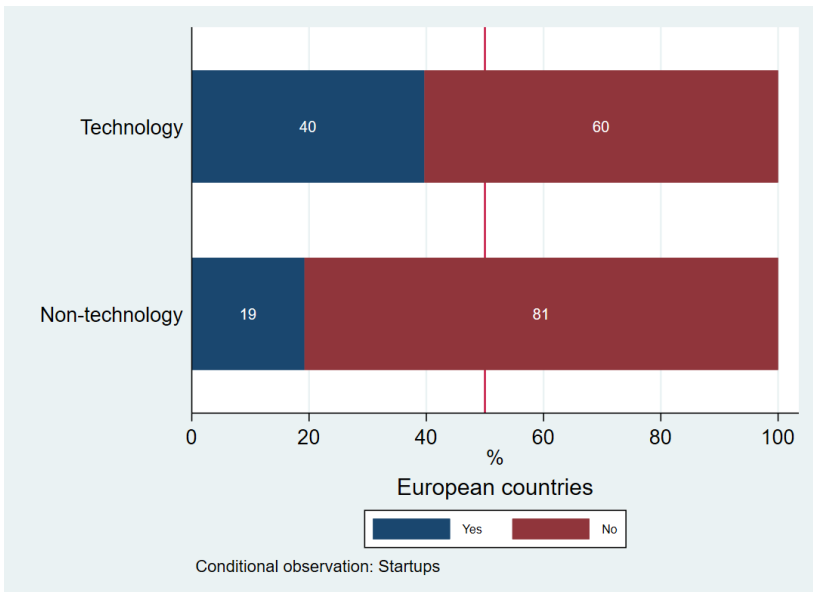


Figure 2.24 Startups - Future Target Oversea Markets Europe





### 3. Foreseeable Business Challenges

- (a) Our entire sample provided a less-than-favourable assessment about their future business prospects.
- (b) While there was about one third of the entire sample indicating “none” or “little concern” about future business challenges, there were “moderate” or “substantial worries” regarding funding (68.4%) and manpower (62.5%).
- (c) Startups particularly worried about the operational difficulty (61.8%) and inadequate market information (57.3%).
  - i. These worried generally remained in tech-startup firms.
  - ii. Insufficient funding was particularly pronounced by tech-startups (76.2%), while non-tech startups worried more about inadequacy of market information (72.7%).
- (d) Interestingly, tech-startup had a relatively clearer view in market conditions than non-tech startup. 55.6% of tech startups expressed “none” or “little concern” about the future market conditions, while there were only 38.2% of non-tech startup shared this optimism.
- (e) There is no statistical significant difference in the expectation of business challenges in both startups/non-startups nor between tech/non-tech startup firms, except that there is a statistical significant difference (P-value=0.020) in the perception of uncertain market conditions between tech and non-tech startup firms.

Table 2.75 Foreseeable Business Challenges:  
Insufficient Funding

Insufficient funding	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
None	10.11	16.13	7.94	15.38
Little	19.10	22.58	15.87	26.92
Moderate	32.58	38.71	34.92	26.92
Substantial	38.20	22.58	41.27	30.77
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.76 Foreseeable Business Challenges:  
Manpower Shortage

Manpower shortage	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
None	6.74	12.90	6.35	7.69
Little	31.46	22.58	26.98	42.31
Moderate	26.97	38.71	26.98	26.92
Substantial	34.83	25.81	39.68	23.08
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.77 Foreseeable Business Challenges:  
Inadequate Market Information

Inadequate market information	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
None	14.61	19.35	15.87	11.54
Little	28.09	29.03	31.75	19.23
Moderate	42.70	35.48	39.68	50.00
Substantial	14.61	16.13	12.70	19.23
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.78 Foreseeable Business Challenges:  
Operational Difficulties

Operational difficulty	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
None	13.48	12.90	15.87	7.69
Little	24.72	41.94	23.81	26.92
Moderate	50.56	35.48	52.38	46.15
Substantial	11.24	9.68	7.94	19.23
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.79 Foreseeable Business Challenges:  
Technical Difficulties

Technological obstacle	Overall		Startup	
	Startup %	Non-Startup %	Technology %	Non-technology %
None	14.61	12.90	15.87	11.54
Little	35.96	41.94	36.51	34.62
Moderate	33.71	35.48	33.33	34.62
Substantial	15.73	9.68	14.29	19.23
<i>N</i>	89	31	63	26

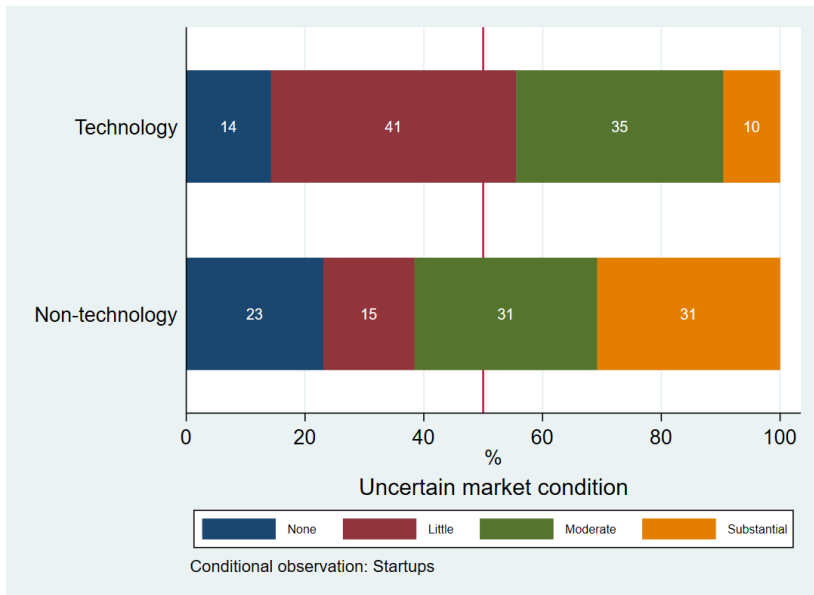
+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 2.80 Foreseeable Business Challenges:  
Uncertain Market Conditions

Uncertain market conditions	Overall		Startup*	
	Startup %	Non-Startup %	Technology %	Non-technology %
None	16.85	19.35	14.29	23.08
Little	33.71	32.26	41.27	15.38
Moderate	33.71	32.26	34.92	30.77
Substantial	15.73	16.13	9.52	30.77
<i>N</i>	89	31	63	26

+ p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Figure 2.25 Startups - Foreseeable Business Challenges:  
Uncertain Market Conditions



#### 4. Foreseeable Business Opportunities

- (a) In general, the Belt Road Initiative (BRI) was not seen as an exciting business opportunity for startups and small firms.
  - i. There was only 6.7% of the entire sample considered BRI as “substantial opportunity”.
  - ii. A similar pattern recorded for both startups and non-startups, while the latter indicated more reservations.
- (b) In contrast, the entire sample showed relatively more excitement in GBA. 21.% shared the optimistic view that GBA would be providing “substantial opportunities”.
- (c) Both tech and non-tech startup firms showed the same pattern as the entire sample.

Table 2.81 Foreseeable Business Opportunities

The Greater Bay Area (GBA)	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	22.47	9.68	25.40	15.38
Little	24.72	19.35	20.63	34.62
Moderate	31.46	48.39	34.92	23.08
Substantial	21.35	22.58	19.05	26.92
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 2.82 Foreseeable Business Opportunities

The Belt and Road Initiative (BRI)	Overall		Startup	
	Startup	Non-Startup	Technology	Non-technology
	%	%	%	%
None	31.46	22.58	33.33	26.92
Little	29.21	48.39	23.81	42.31
Moderate	31.46	25.81	34.92	23.08
Substantial	7.87	3.23	7.94	7.69
<i>N</i>	89	31	63	26

+ p&lt;0.1, \* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

## Summary

- 32.5% of all firms expected profitability after 12 months, while 11.7% of them still expected a loss. This was a rather optimistic view, given the fact that 52.5% of firms did not produce revenue during the survey period. This positive assessment was more pronounced for the non-startup businesses (61.3%). As for the startups, the tech firms were less optimistic than non-tech firms.
- 82.5% of the whole sample were expecting more overseas sales in the future. While most tech startups (88.9%) were positive about exploring overseas markets, non-tech startups (57.7%) were less inclined. Most of the expected overseas sales would be going to Mainland China (73.3%) and Southeast Asia (56.7%).
- Regarding “future business prospects”, while there was about one third of the entire sample indicating “none” or “little concerns” about fu-

ture business challenges, there were “moderate” or “substantial worries” regarding funding (68.4%) and manpower (62.5%). “Insufficient funding” was particularly pronounced for tech startups (76.2%), while non-tech startups worried more about “inadequacy of market information” (72.7%). A smaller proportion of tech firms (44.4%) expected “uncertain market conditions” than non-tech firms (61.6%).

- 29% of all startup entrepreneurs were foreign nationals (35% for tech-startups). While most of the variables are not statistically significant different between foreign and local business owners, foreign owners expected more overseas sales in the future and encountered significantly less business challenges.
- In general, the BRI was not seen as an exciting business opportunity. There was only 6.7% of the entire sample considered BRI as creating “substantial opportunity”. In contrast, the entire sample showed relatively more excitement regarding GBA. 21% of firms shared the optimistic view that GBA would be providing “substantial opportunity”. In view of 19 firms having operations in GBA, GBA definitely provided an additional and useful platform for the operation of Hong Kong startup firms, particularly for those aiming at the Mainland market.

Table 2.83 Business Prospects  
(with statistical significant difference)

Variable	Startup (89) / Non-Startup (31)	Tech (63) / Non-Tech (26) Startups
Expecting profitability after 12 months	A larger proportion of non-startups expecting profitability.	–
Expecting more overseas sales	–	A larger proportion of tech firms expecting overseas sales.
Expecting more sales to European market	–	A larger proportion of tech firms expecting sales to European market.
Expecting uncertain market condition	–	A smaller proportion of tech firms expecting uncertain market condition.

---

## Probit Regression Analysis

A set of independent variables representing demographic and business characteristics was selected to explain whether the surveyed firms had generated business revenue or not. Two equations were presented for reference: one with the overall sample (120 observations, Yes=57 and No=63) and another one with the startup sample (89 observations, Yes=33 and No=56). The most important (and only) and statistical significant variable causing firms' generation of revenue is "marketing activity". The marketing activity would increase the probability of generating revenue of a firm by 49.1%. This positive effect remains the same for startup firms, though its magnitude slightly diminished to 46.8%. As for the sub-sample of startup firms (with 89 observations), the second statistical significant variable is "R&D for more than 1-year", which would increase the probability of generating revenue of a firm by 28.9%. (The R&D involvement of non-tech startups was assumed to be zero in this study.) However, this variable is not significant for the entire sample. All the other included variables in these two equations, including academic qualification, related business experience, tech-related, external funding, overseas sales in Mainland and obtaining intellectual property are all found to be statistically insignificant. We attempted to include other variables in other specifications too, including gender, nationality, etc. and they are found to be statistically insignificant as well.

### Binary Probit Regression on "Generating Revenue" (Yes/No)

Overall sample: Yes=57; No=63

Startup sample: Yes=33; No=56

Table 3.1 Probit Regression

Independent Variables (all variables are binary)	Overall	Startup
Academic qualification: above bachelor	-0.080 (-0.76)	-0.006 (-0.05)
Previous related business experience	-0.133 (-1.23)	-0.143 (-1.21)
Tech-related business nature	0.162 (1.32)	0.121 (1.06)
Years of R&D: >1	0.173 (1.20)	0.289** (3.22)
External funding	0.091 (0.81)	0.094 (0.79)
Business in Mainland market	0.092 (0.85)	0.076 (0.66)
Obtaining intellectual property	0.061 (0.52)	0.025 (0.19)
Marketing activities	0.491*** (5.68)	0.468*** (5.75)
Observations	120	89

+  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.010$ , \*\*\*  $p < 0.001$



---

## Policy Recommendations for Promoting Startup Operations

We define a “startup” as a business operating less than three years in this study. In our survey, we also included some firms with more than three years of operations. We used them as a control-group for comparison with the startup group, but would not read much into their details. Due to the responding rate, time, manpower and budget constraints, the study only obtained a total sample of 120 firms. The sample consisted of 89 startups (74% of the entire sample), of which 63 were technology-related businesses (71% of startups). Although the sample size is relative small, this is likely to be the first attempt to understand the important questions about the current operating status of startup firms, the startup ecosystem in Hong Kong and their interactions and prospects regarding the GBA development. In the following, we provide eight policy recommendations for promoting startup operations in Hong Kong. These recommendations would be suggested in broad terms. More studies should be undertaken for exploring the necessary details.

### 1. Empowerment of Female Entrepreneurs

80% of all startup entrepreneurs were the male gender. The female gender is very much under-represented in startup activities. The great gender difference is obvious mainly because of the fact that startups are more tech-oriented. It is very important to organize more pro-

---

grammes and platforms to empower female entrepreneurs to participate in tech-startup businesses, including collaborative opportunities with technology talents.

## 2. **Provision of Manpower Support**

There were only 18% of startups hiring more than 3 full-time employees. Naturally, startup firms encountered more serious budget constraint and uncertain business prospects in their early stage of development. They would face more obstacles in staff recruitment. The government can consider to design publicly-funded internship programmes to support the development of startup firms.

## 3. **Supporting Marketing Activities**

65% of startups had marketing activities. A very large proportion of firms appreciated the importance of marketing for their business development. The most important and statistical significant variable causing firms' generation of revenue is "marketing activity". Marketing activity would increase the probability of generating revenue of startup firms by 47%.

While most tech startups (89%) were positive about exploring overseas markets in the future, non-tech startups (58%) were less inclined to explore foreign markets. Most of the expected overseas sales would be going to Mainland China (73%) and Southeast Asia (57%). It is very important for the government to provide more resources to support marketing activities of startup firms, even if they are not profitable yet.

## 4. **Promoting R&D Activities**

23% of total tech firms had less than 1-year R&D activities. There were 13% of startups having more than 5-year R&D. They had started their R&D activities prior to the launch of their businesses. As for the sub-sample of startup firms (with 89 observations), the second statistical significant variable is "R&D for more than 1-year", which would increase the probability of generating revenue of a firm by 29%. It is very important for the government to provide more resources to support the R&D activities of startup firms.

## 5. **Promotion of Commercialization of Intellectual Property**

37% of the entire sample possessed some kind of intellectual property. However, the possession of intellectual property might not have resulted in revenue (not to mention about profitability) for many firms yet. Apparently, the successful commercialization of intellectual property would have been extremely low. It is important to have a better understand of the nature of these intellectual properties and design public programmes to facilitate the realization of their commercial values.

## 6. Conducting a Comprehensive Survey on Startup Firms

Over 80% of all tech firms adopted technology for software development, app development and product design. About 70% of the tech firms considered they were adopting “medium” to “high level” technologies in their operations. The level of adopted technologies was rather high as reported by the surveyed firms. This was only the subjective assessment of the surveyed firms and we do not have more information to assess the validity of this important parameter in this survey.

56% of tech startups also involved in product manufacturing and the ratio was even higher (65%) for non-startups. As the manufacturing sector in Hong Kong is very small, the nature of manufacturing involvement by tech startups is very interesting and should deserve further studies. It is very important for the government to conduct regular surveys on startup firms (tech firms in particular) in order to provide the necessary and relevant information for the Hong Kong Government to formulate relevant policies.

## 7. Promotion of Government’s SME Supporting Schemes

47% of startups did not use any external funding, implying that they all used their own resources only. For startups, the relative importance of external funding sources were: “borrowing from friends and relatives” (28%), “venture capital fund” (18%) and “borrowing from banks” (8%). As startups were risky businesses, the traditional banking finance had not been active in supporting startup firms. Despite the shortage of funding, only 25% of startups applied for the Hong Kong government SME funding schemes. It is very important for the government to enhance the promotion of such public schemes to startup firms directly. As 29% of all startup entrepreneurs were foreign nationals, special pro-

---

motion programmes should be designed to reach out the international and startup SME communities.

## 8. **Promotion of GBA Business Environment**

Most business owners were not familiar (about 70% had “low” or “no understanding”) with the GBA policy. Moreover, about 15% of these firms (19 of them) had offices set up in GBA already. 21% of firms shared the optimistic view that GBA would be providing “substantial opportunity”. GBA definitely provides an additional and useful platform for the operation of Hong Kong startup firms, particularly for those aiming at the Mainland market.

GBA participants received some kinds of support from the GBA local governments, mainly in the form of “subsidies/incentives” (37%), and “networking” (26%). “Technical assistance” was sparsely mentioned. These supporting schemes mainly targeted tech startups from Hong Kong. As 66% of the startup entrepreneurs were around 30 to 49 years of age, GBA’s incubation and tech centres should expand their potential targets from Hong Kong, not only focusing on young entrepreneurs. It is highly desirable that various GBA local governments should set up their offices in Hong Kong for the promotion of their respective business environments and concessional schemes to startup firms in Hong Kong directly.

---

---

## References

- Compass (2015). *Hong Kong Startup Ecosystem Report*. URL: <https://startupgenome.com/all-reports> (visited on 06/25/2019).
- Global Entrepreneurship Development Institute (2016). *2016 Global Entrepreneurship Index*. URL: <https://theledi.org/product/2016-global-entrepreneurship-index> (visited on 06/25/2019).
- new.gov.hk (2018). *IT gets \$50b boost*. URL: [https://www.news.gov.hk/eng/2018/02/20180228/20180228\\_104424\\_644.html](https://www.news.gov.hk/eng/2018/02/20180228/20180228_104424_644.html) (visited on 06/25/2019).
- Startmeup, InvestHK (2018). *Hong Kong Startup Ecosystem 2018 Hong Kong Asia most dynamic startup ecosystem*. URL: [https://www.startmeup.hk/wp-content/uploads/2019/01/StartmeupHK\\_StartupEcosystemSurveyFlyer2018.pdf](https://www.startmeup.hk/wp-content/uploads/2019/01/StartmeupHK_StartupEcosystemSurveyFlyer2018.pdf) (visited on 06/25/2019).
- Startup, Genome (2018). *Global Startup Ecosystem Report 2018*. URL: <https://startupgenome.com/all-reports> (visited on 06/25/2019).
- Wong, Richard (2016). *Is Hong Kong turning less entrepreneurial?* URL: <https://wangyujian.hku.hk/?p=6469&lang=en> (visited on 06/25/2019).



# APEC Study Centre

The Chinese University of Hong Kong

## Hong Kong Startups Ecosystem, Technology and GBA Interactions

The APEC Study Centre of the Chinese University of Hong Kong undertook a preliminary study regarding the development and challenges of startup businesses in Hong Kong in the first half of 2019. The objectives of the study are the following:

- (i) understanding the operating status, technology and ecosystem of startup businesses in Hong Kong;
- (ii) reviewing their interaction with and operation in the Greater Bay Area; and
- (iii) assessing their short-term business prospects, challenges and opportunities.

The policy recommendations are the following:

- (i) empowerment of female entrepreneurs;
- (ii) provision manpower support;
- (iii) supporting marketing activities;
- (iv) promoting RD activities;
- (v) promotion of commercialization of intellectual property;
- (vi) conducting a comprehensive Survey on startup firms;
- (vii) promotion of government's SME supporting schemes; and
- (viii) promotion of GBA business environment.

CUHK-APEC Study Centre, Economic Research Centre,  
Hong Kong Institute of Asia-Pacific Studies,  
The Chinese University of Hong Kong  
Email: econrc@cuhk.edu.hk  
Web: [www.cuhk.edu.hk/hkiaps/apesc](http://www.cuhk.edu.hk/hkiaps/apesc)

**CUHK-APEC Study Centre**

Copyrights © 2019. All rights reserved.