



APEC Study Centre
The Chinese University of Hong Kong

Entrepreneurship in APEC and Hong Kong

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Introduction to APEC's Micro, Small and Medium Enterprises (MSMEs) initiatives

Small and medium enterprises (SMEs) 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 a 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 SMEs. Global financial crises and natural regional disasters exposed the vulnerability of SMEs to shocks. To strengthen the SMEs resilience to crisis and best position them to seize growth opportunities in its aftermath, principles and checklist of financial crisis management for APEC SMEs 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 SMEs, 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 favouring SMEs as well as increasing connectivity in the region have all been important development initiatives.

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

Since 2010, the issue of corruption was also noted as a significant market access barrier for SMEs 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 SMEs Initiatives was formed to facilitate regional connection and capacity building in fighting against corruption. Concerning the issues of gender and opportunities for young people, young and women enterprises are often key emphasized throughout this period. Besides the promotion of SMEs, APEC also promoted the development of micro-enterprises beginning in 2003 by formulating a micro-enterprise annual working plan. The importance of micro-enterprises has been gaining the attention of policymakers. Over the years, APEC's Micro, Small and Medium Enterprises (MSMEs) policies have been evolving to cover a broad dimension of relevant issues.

Recently, modernizing MSMEs becomes one of focused issues in 2016: (i) Promoting innovation and MSMEs connectivity; (ii) moving forward integration and development through productive infrastructure; (iii) integration of green MSMEs into the Global Value Chains (GVC); and (iv) internationalization of MSMEs and their integration in GVC.

Indeed, according to the *2016 APEC SME Ministerial Statement*, "Modernization" is the major theme for the future development of SMEs. Concrete actions should be formulated in the following areas:

- (i) increasing the innovation capacities of SMEs;
- (ii) fostering enabling environment and policies;
- (iii) guaranteeing access to financial means and capacity building;
- (iv) enhancing the participation of SMEs in e-commerce;
- (v) reducing technological gaps facing by SMEs;

-
- (vi) integrating SMEs into GVCs; and
 - (vii) shifting to a more sustainable, eco-friendly and green production.

The objective of this short paper is to study the performance of MSMEs in selected APEC economies, non-APEC economies and Hong Kong, regarding their new business creation, technological innovation, export orientation, female participation as well as household income of MSMEs owners, as based on the 2016 dataset compiled by the Global Entrepreneurship Monitor (GEM). We put more focus on Hong Kong as a case study mainly because Hong Kong as a participant in the GEM study, we are able to obtain the micro survey data for Hong Kong at this stage.

Entrepreneurial Activities in APEC Economies and Hong Kong

Official statistics for MSMEs are predominantly *firm-level* data, which inevitably exclude informal MSMEs (e.g. unregistered self-employment, start-ups). However, they are an integral part of the MSMEs' ecosystem. According to the World Bank, there are between 420-510 million MSMEs globally, among which about 8% are formal SMEs, 17% are formal microenterprises, and 75% are informal enterprises.¹ In addition, there is significant heterogeneity in MSMEs' definitions across economies, which implies that official statistics are often inappropriate for the cross-sectional comparative purpose.

In light of these issues, this paper uses the harmonised data on entrepreneurship from the Adult Population Survey (APS) conducted by the GEM to study business activities across APEC member economies. The APS is a world-wide telephone survey designed to collect comprehensive data on entrepreneurial activities, where each national sample consists of a minimum of 2000 adult respondents. In 2016, the APS covered a total of 65 economies, of which 14 of them were APEC members.

In the GEM survey, the APS adopts a broad definition of “entrepreneurship”:

“Any attempt at new business or new venture creation, such as

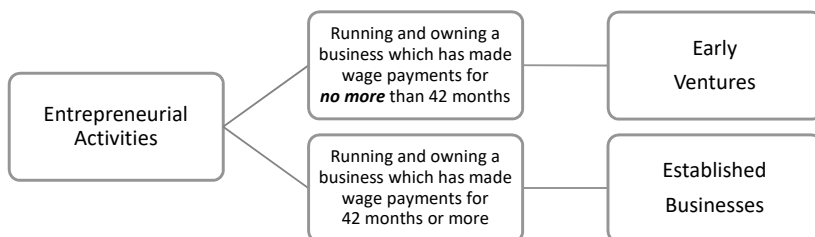
¹World Banks' IFC Enterprise Finance Gap Database (2011).

self-employment, a new business organisation, or the expansion of an existing business, by an individual, a team of individuals, or an established business”.

Therefore, the APS does not exclude MSMEs in the informal sector from the outset.

Under the APS, entrepreneurial activities are classified into two types, namely “early venture”² and “established business”, based on how developed a business venture is, which is in turn discerned by the duration of wage payment as shown in the below flow chart.

Figure 2.1 Classification of Entrepreneurial Activities in APS



2.1 New Business Creation

The creation of new business is a key indicator of how vibrant entrepreneurial activities are in an economy. Fig. 2.2 plots the ratio of the working population engaged in early venture activities of all 65 economies in the 2016 APS sample.

²In GEM study’s notation, early venture is referred to as Total Early-stage Entrepreneurial Activity (TEA).

Figure 2.2 Ratio of Early Ventures in 18-64 Adult Population (2016, %)

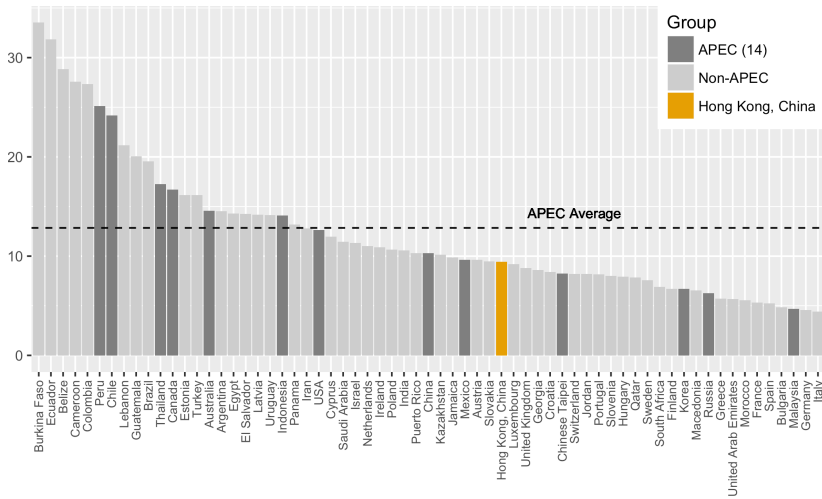


Table 2.1 Ratio of Early Ventures in 18-64 Adult Population (2016, %)

<i>City/Region</i>	<i>% 18-64 Working Population</i>
<i>Hong Kong</i>	9.4
<i>APEC(14)</i>	12.8
<i>Non-APEC</i>	12.1

In 2016, approximately 9.4% of the Hong Kong working population engaged in early venture activities, ranking it 10th out of 14 APEC members, or 39th out of all 65 economies in terms of prevalence of early venture activities. In addition, Fig. 2.2 shows that Hong Kong's prevalence rate was below the regional average of all 14 APEC members (depicted by the dotted line).

2.2 Production Technology

Generally speaking, the adoption of new technology among established businesses was slower than that of early ventures. In 2016, the average adoption rate of new production technology, defined as technology developed within the past 5 years, was 21.4% among established businesses in the APEC region. In contrast, the corresponding figure for early ventures in the APEC region was almost twice as high, at 38.3%. In fact, a similar pattern can also be seen in the non-APEC region, where the proportion of early-stage ventures with new production technology was 37.2%, a sharp contrast with its established-business counterpart, at 19.5%.

Table 2.2 Utilisation of Innovative Technology by Early Ventures
(2016, %)

<i>City/Region</i>	< 1 year old	1 – 5 years old	> 5 years old
<i>Hong Kong</i>	7.3	24.3	68.4
<i>APEC (14)</i>	15.3	23.0	61.7
<i>Non-APEC</i>	16.8	20.4	62.8

Table 2.3 Utilisation Rate of Innovative Technology
by Established Business (2016, %)

<i>City/Region</i>	< 1 year old	1 – 5 years old	> 5 years old
<i>Hong Kong</i>	1.5	7.9	90.6
<i>APEC (14)</i>	7.2	14.2	78.6
<i>Non-APEC</i>	6.4	13.2	80.5

As for Hong Kong, in 2016, around one-third (31.6%) of early-stage entrepreneurs and less than one-tenth (9.4%) of established businesses reported the use of production technology developed within the past 5 years, lagging China and its Southeast Asian peers.

It is also worth pointing out that new production technology was particularly prevalent among businesses from Southeast Asian economies. A case in point is Indonesia — 91.3% of Indonesian early ventures reported using production technology developed within the past 5 years in 2016, around 3 times higher than the respective figure observed in Hong Kong (see Fig. 2.3).

Figure 2.3 Utilisation of Technology Within 5 Years Old by Early Ventures (2016, %)

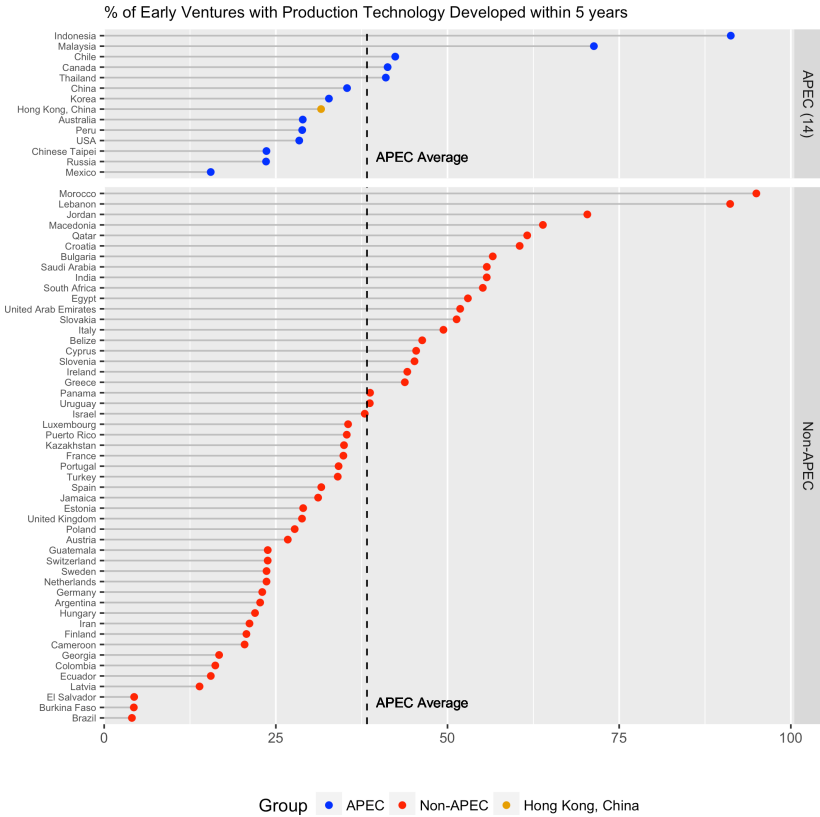
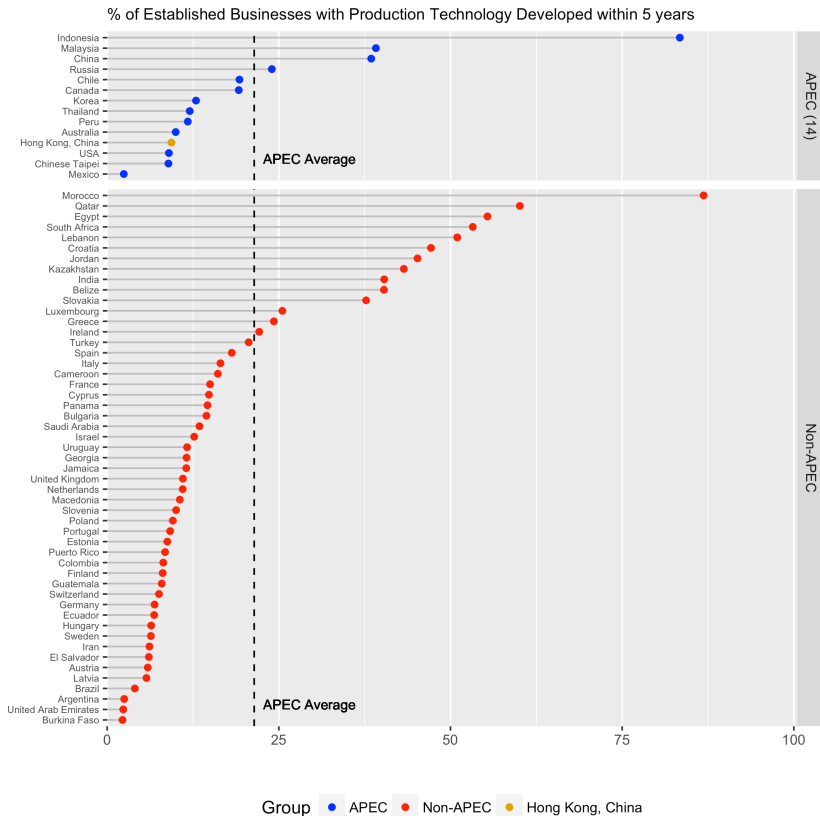


Figure 2.4 Utilisation of Technology Within 5 Years Old by Established Businesses (2016, %)



2.3 Export Orientation

As a small and open economy, early ventures and established businesses in Hong Kong indicated a strong export orientation. In 2016, 38.3% of early ventures and 34.1% of established businesses indicated that more than 25% of their revenue came from abroad, placing Hong Kong as the most outward-looking economy within the APEC region.

Averaging all 14 APEC members in the sample, about one eighth (12.4%) of new ventures reported an export to revenue ratio exceeding 25%, and for

established businesses, 9.5%. As for new ventures and established businesses in the non-APEC region, the equivalent proportions were slightly higher, at 20.2% and 17.4% respectively.

Table 2.4 Ratio of Export to Revenue of Early Ventures
(2016, %)

<i>City/Region</i>	0%	1-25%	26-75%	76-100%
<i>Hong Kong</i>	31.5	30.2	16.3	22.0
<i>APEC (14)</i>	60.5	27.1	7.6	4.8
<i>Non-APEC</i>	50.9	28.8	12.4	7.8

Table 2.5 Ratio of Export to Revenue of Established Business
(2016, %)

<i>City/Region</i>	0%	1-25%	26-75%	76-100%
<i>Hong Kong</i>	40.7	25.2	12.1	22.0
<i>APEC (14)</i>	62.8	27.7	4.8	4.7
<i>Non-APEC</i>	52.8	29.8	10.2	7.2

On the other hand, the survey also revealed that Southeast Asian economies in the sample placed a strong emphasis on the local market. In fact, over 90% of early ventures and established businesses in Indonesia and Thailand reported that they had no revenue from exports at all.

Figure 2.5 Ratio of Early Ventures with Export/Revenue Ratio over 25% (2016, %)

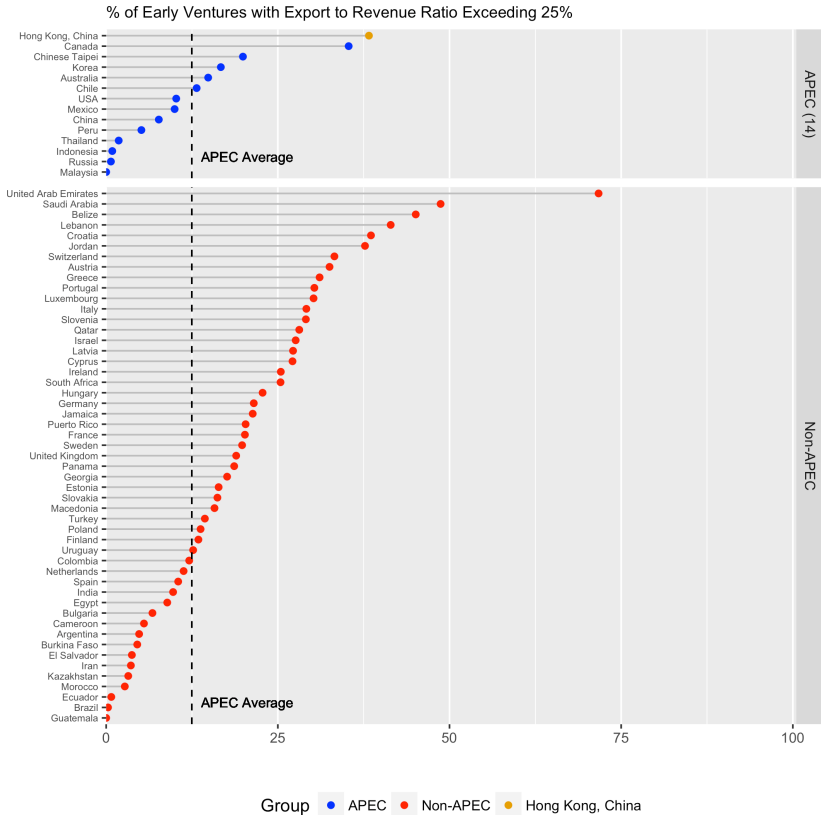
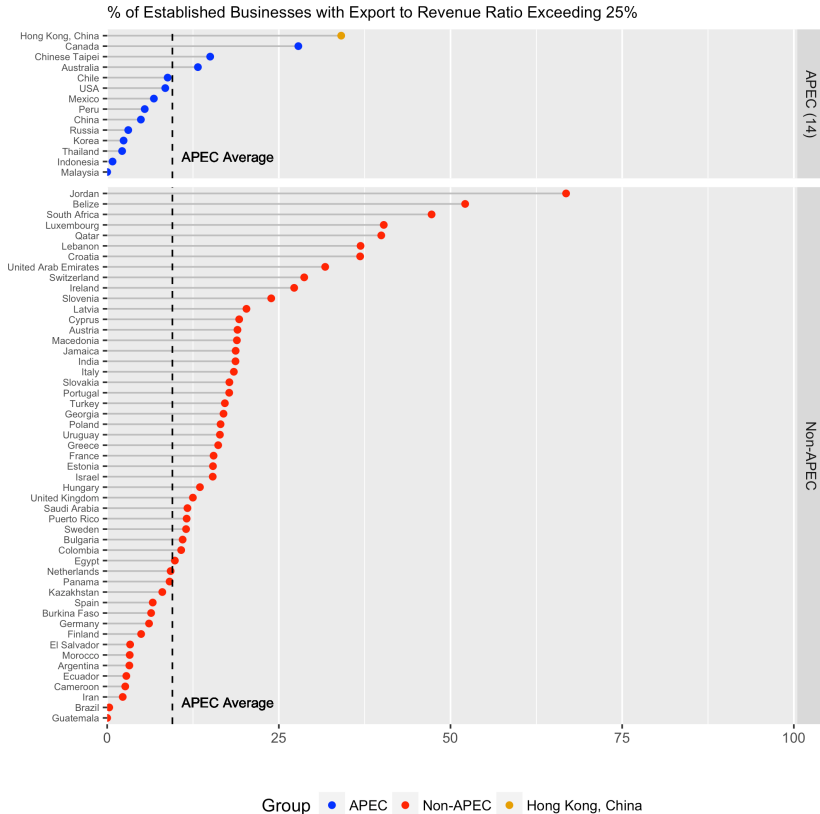


Figure 2.6 Ratio of Established Businesses with Export/Revenue Ratio over 25% (2016, %)



2.4 Female Participation in Entrepreneurship

In Hong Kong, 13.1% of male respondents aged 18-64 reported engaging in early-stage entrepreneurial activities whereas the ratio of female respondents aged 18-64 was 6.5%. The male population doubled that of the female population in entrepreneurial activities. For the 14 APEC members, the regional average was 14.6% and 11.1% respectively.

It should be pointed that a higher participation rate in early ventures among males than females was observed in all 65 economies included in the 2016

GEM study, with 3 exceptions, namely Mexico and Indonesia from the APEC region, and Brazil from the non-APEC region.

Table 2.6 Participation in Early Ventures by Sex (2016, %)

<i>City/Region</i>	<i>% of 18-64 Male</i>	<i>% of 18-64 Female</i>	<i>Ratio of Male to Female</i>
<i>Hong Kong</i>	13.1	6.5	2.0
<i>APEC (14)</i>	14.6	11.1	1.3
<i>Non-APEC</i>	14.6	9.7	1.5

2.5 Entrepreneurial Activity by Household Income

In general, the high-income group has relatively more early ventures owners than the low-income group. In the 2016 GEM study, the ratio of the proportion of early venture owners in the high-income group to the low-income group's proportion was about 1.7 for the APEC region and 1.4 for the Non-APEC region.

As for Hong Kong, the distribution of early venture owners is clearly skewed towards the high-income group, with the proportion of early ventures in the high-income group around 4 times higher than the low-income group. Early venture owners only represented 4.5% of the low-income group in Hong Kong, significantly lower than the average ratios seen in the APEC and non-APEC regions.

Figure 2.7 Ratio of Male to Female Participation in Early Ventures (2016, %)

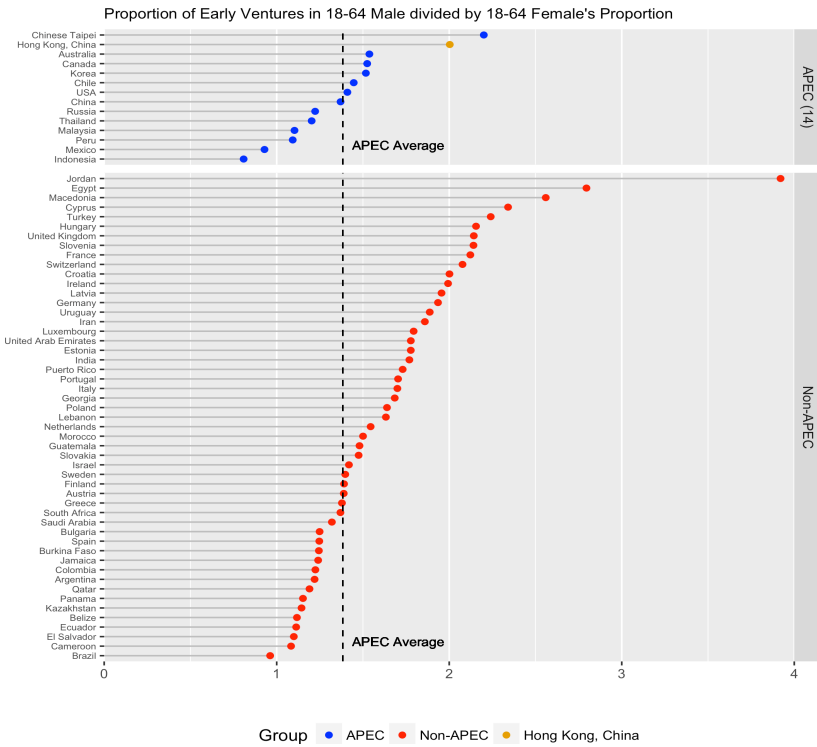
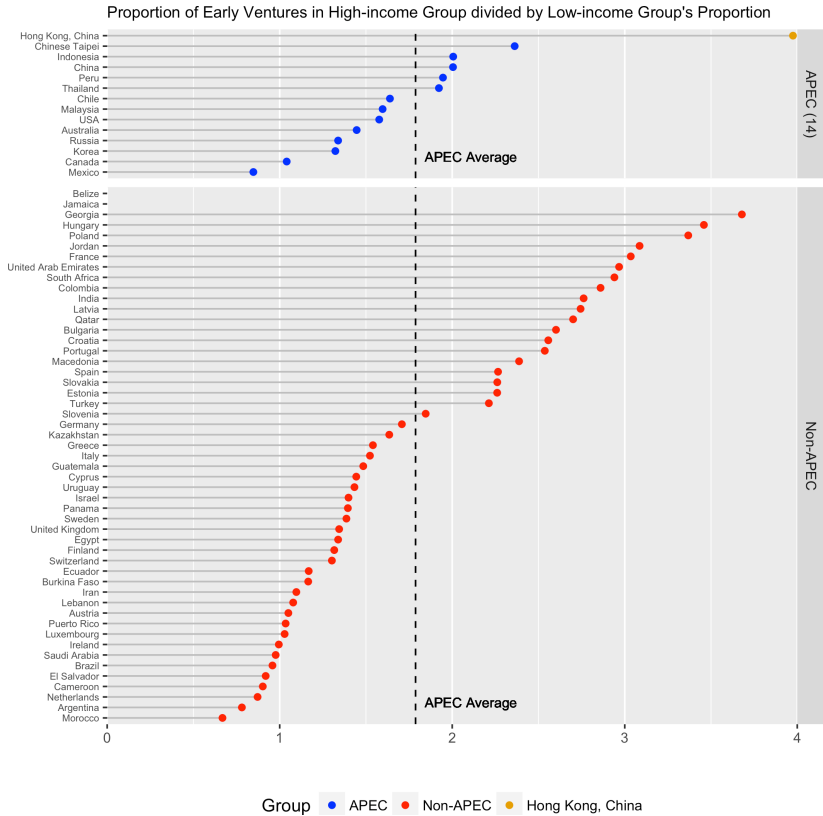


Table 2.7 New Business Creation by Household Income Levels³ (2016, %)

City/Region	Low	Middle	High
Hong Kong	4.5	8.0	17.7
APEC (14)	10.0	12.2	16.5
Non-APEC	10.2	12.1	14.7

³Household income levels were grouped into *low* (bottom 33th percentile), *middle* (middle 33th percentile), and *high* (top 33th percentile).

Figure 2.8 Ratio of High-income Group's Early Venture Participation to Low-income (2016, %)⁴

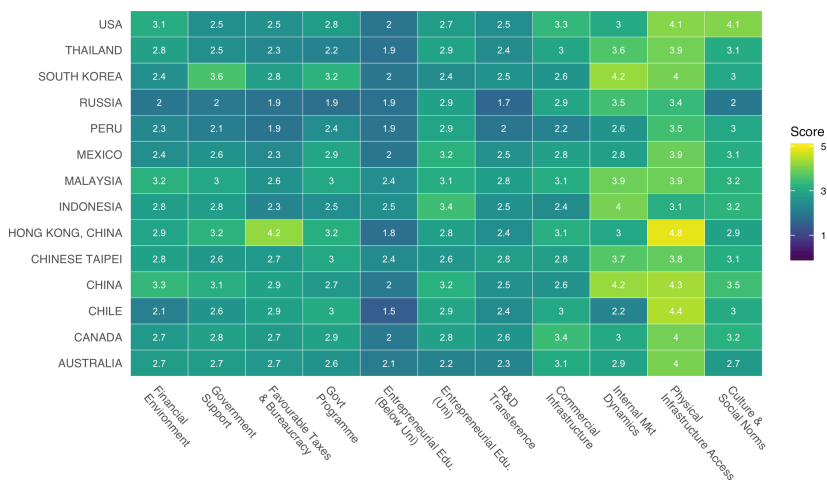


⁴Data not available for Brazil and Jamaica.

Entrepreneurial Ecosystem

This section presents summary results from another important dataset of the 2016 GEM study, National Expert Survey (NES), which describes the entrepreneurial environment throughout the 14 APEC members included in the study. Essentially, the NES is an in-depth interview with experts in the field of entrepreneurship regarding their assessment of the current state of the entrepreneurial ecosystem in their respective economy. Experts are required to evaluate a wide range of factors that influence entrepreneurship dynamics such as the financial environment, government support and physical infrastructure. These responses are aggregated and converted into assessment scores that range from 0 (weakest) to 5 (strongest).

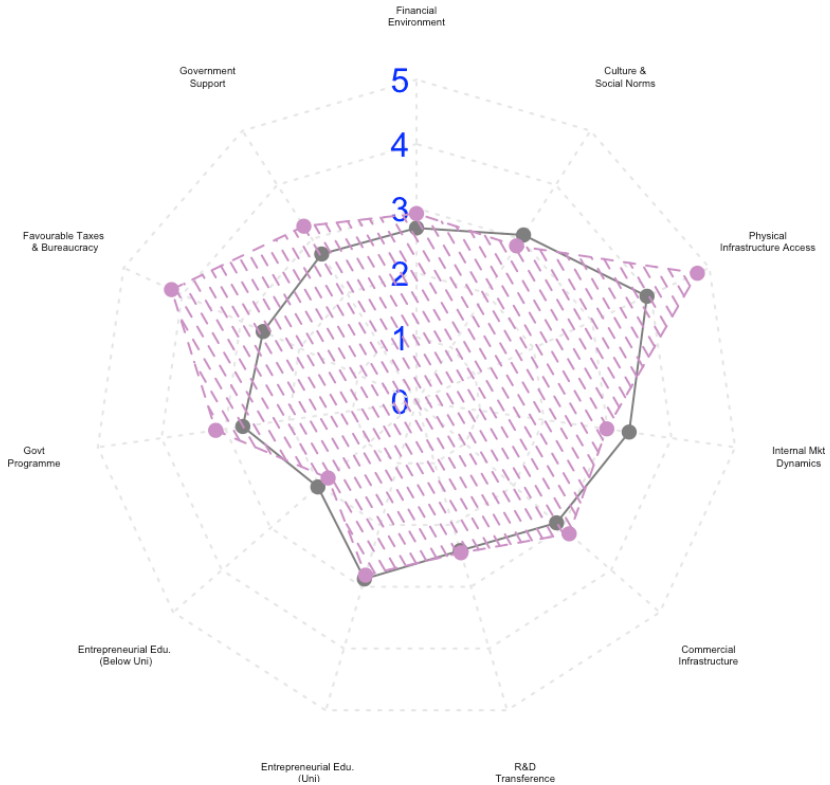
Figure 3.1 NES Assessment Scores Heat Map for APEC (14 members) (2016)



According to the 2016 NES, physical infrastructure access and entrepreneurial education at primary and secondary school level were cited as Hong Kong's greatest strength and weakness respectively. But Fig. 3.1 reveals that the same could easily be said for most other APEC economies. A key strength that really set Hong Kong apart from other APEC economies, however, was its business-friendly government policies and tax system.

In general, the experts' assessment of Hong Kong was positive. Fig. 3.2 juxtaposes Hong Kong's scores and the average scores of 14 APEC members and shows that Hong Kong achieved a higher score in 7 out of all 11 topics considered in 2016.

Figure 3.2 Comparison of Hong Kong and Average APEC Scores (2016)⁵



⁵Note: APEC Average Scores represented by the polygon in grey outline

Concluding Remarks

This pilot paper uses the harmonized data compiled by GEM as an alternative to official records to study the features of the MSMEs sector in the APEC region, and Hong Kong in particular. Our study covers the following five areas which are closely related to APEC's MSMEs initiatives: (i) promoting the 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, using Hong Kong as the reference point, the major findings are as follows:

- (i) 9.4% of the Hong Kong working population engaged in early venture activities in 2016, lagging the average rate of 14 APEC members, at 12.8%, in the sample.
- (ii) Adoption of new technology was slow in Hong Kong, as evident by the fact that some 70% of early-stage ventures and 90% of establishing businesses were using production technology that was more than 5 years old.
- (iii) Hong Kong enterprises showed a strong export orientation, with 38.3% of early ventures and 34.1% of established businesses had an export-to-revenue ratio of more than 25%, placing Hong Kong as the most outward-looking economy among the 14 APEC members in the sample.
- (iv) There were relatively more males than females participating in early

venture activity in Hong Kong. However, the gap between male and female participation was more notable in Hong Kong than the average differences seen in both the APEC and non-APEC regions.

- (v) In Hong Kong, the participation in early ventures was skewed towards the high-income group, with participation among the rich around 4-times more often than the poor. Meanwhile, early venture participation was more evenly spread among different income groups in other APEC and non-APEC economies.

With these limited findings, we offer the following tentative policy recommendations for APEC's 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 the 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.
- (iv) There is an urgent need for APEC members to exchange views on their respective MSMEs' policies (e.g., financing support, accessing international markets, promoting entrepreneurship, manpower training, upgrading technology, etc.) more effectively, in order to identify the causes and effects, and to draw and share valuable experiences among APEC members.

While this study has chosen Hong Kong as the main reference point for comparison, we also present entrepreneurial characteristics and entrepreneurial environment of 14 APEC members participated in the GEM 2016 study in Appendix A and Appendix B¹. It is our hope that these provide an overview of entrepreneurship for the APEC region.

The GEM dataset is a very valuable information source for entrepreneurship. This is one of the few longitudinal data sets on entrepreneurship available (using the same definitions). In recent years, Hong Kong only participated in the 2009 and 2016 rounds of the APS Survey. In fact, only eight APEC members took part in both studies. It is possible for us to review the changes in entrepreneurship of these eight APEC members individually, or even making

¹Appendix A and Appendix B are available at www.google.com

some comparisons. But this sample is too small for drawing any inference for the APEC region as a whole.

We will try to examine more APEC-MSMEs issues in our subsequent research study. The latest data set covered only 14 APEC members. We would like to see more APEC members participate in GEM's future surveys, which could facilitate our research on this subject. APEC members should also be sub-divided into two groups, developed and developing, for analytical purpose, if the sample size permits. This short paper is very restrictive and mostly descriptive in nature. We need another designated research design to complement the GEM approach and collaboration with other APEC Study Centres, in order to derive relevant analytical results for APEC. To start with, there is an urgent need for APEC members to exchange views on their respective MSMEs' policies more effectively, in order to identify the causes and effects and to draw and share valuable experiences among APEC members.



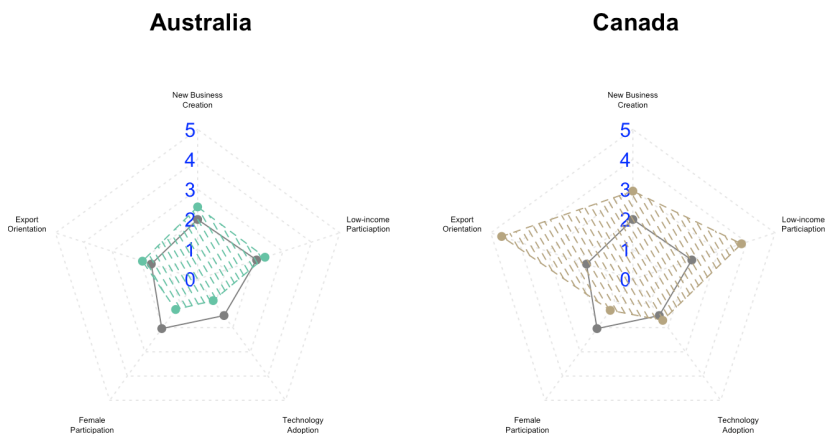
Entrepreneurial Characteristics in the APEC region (14 members)

This section presents an overview of the entrepreneurial characteristics of all 14 APEC members included in the 2016 Adult Population Survey (APS) through 5 indicators. These performance indicators and their definitions are given below.

- (1) **New Business Creation:** Percentage of 18-64 adult respondents participating in early ventures.
- (2) **Low-income Participation:** The inversed ratio of percentage of 18-64 adult respondents from the *high-income* group participating in early ventures to the percentage of 18-64 adult respondents from the *low-income* participating in early ventures. Therefore, a high inversed ratio implies active participation of the low-income group in relative terms.
- (3) **Technology Adoption:** Percentage of early ventures adopting technology developed within the past 5 years in goods production or service provision.
- (4) **Female Participation:** The inversed ratio of percentage of 18-64 *male* respondents participating in early ventures to the percentage of 18-64 *female* respondents participating in early ventures. Therefore, a high inversed ratio implies greater female participation in relative terms.
- (5) **Export Orientation:** Percentage of early ventures with an export-to-

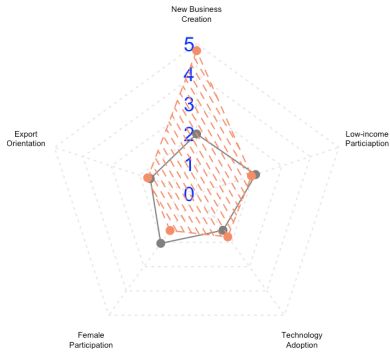
revenue ratio of more than 25%.

Each of these indicators are normalised to a scale of 5 for ease of comparison¹ (0 being the weakest and 5 the strongest). These 14 APEC members are arranged in alphabetical order. Average scores of the 14 APEC economies are represented by the polygon in grey outline.

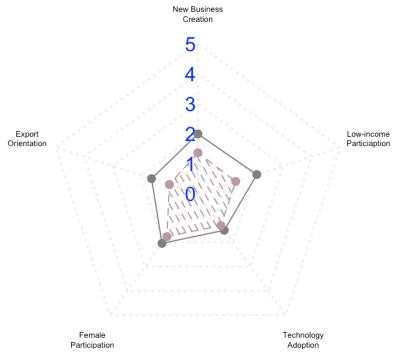


¹Let x_i be the raw statistics for economy i , the normalised score, $x_{inormalised}$, is calculated as: $x_{inormalised} = \frac{x_i - \min(x)}{\max(x) - \min(x)} \times 5$

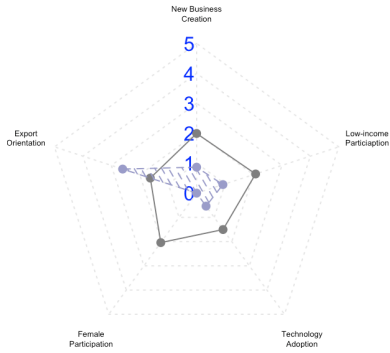
Chile



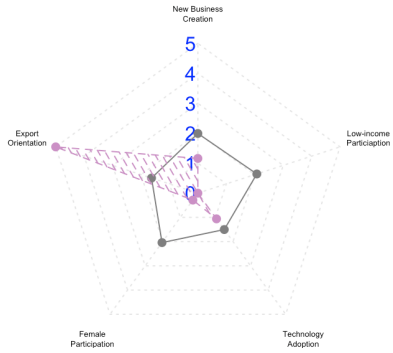
China



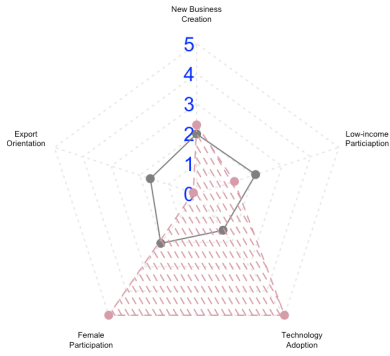
Chinese Taipei



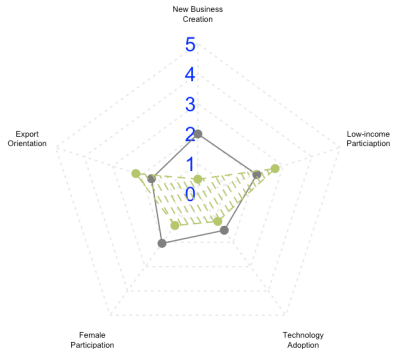
Hong Kong, China



Indonesia



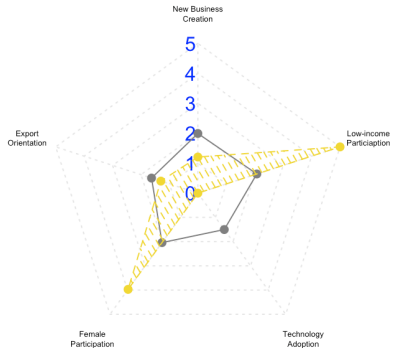
Korea



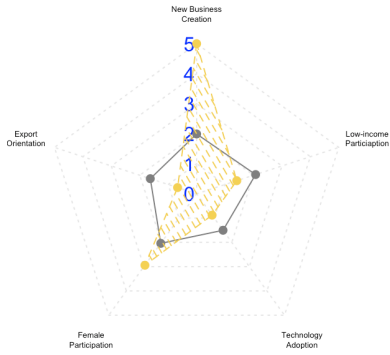
Malaysia



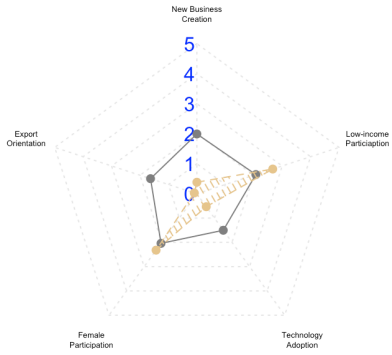
Mexico



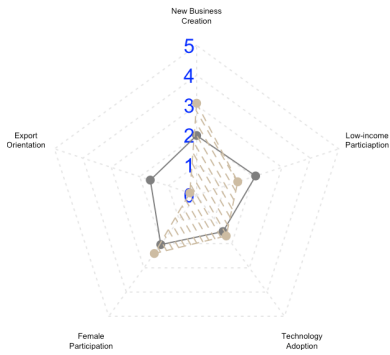
Peru



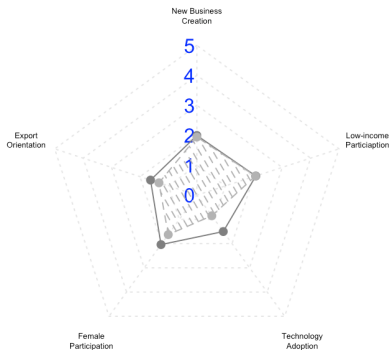
Russia



Thailand



USA





Entrepreneurial Environment in the APEC region (14 members)

This section presents an overview of the entrepreneurial environment of all 14 APEC members included in the 2016 National Expert Survey (NES) of the GEM study.

In the 2016 NES, national experts from each participating economy were asked to assess the entrepreneurial environment of their economy in terms of 11 indicators:

- (1) Financial Environment
- (2) Government Support
- (3) Favourable Taxes and Bureaucracy
- (4) Government Programmes
- (5) Entrepreneurial Education (below University Level)
- (6) Entrepreneurial Education (University Level)
- (7) R&D Transference
- (8) Commercial Infrastructure
- (9) Internal Market Dynamics
- (10) Physical Infrastructure Access
- (11) Cultural and Social Norms

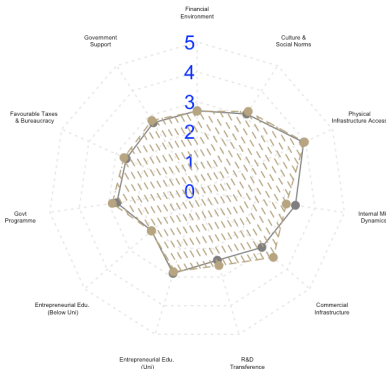
These 14 APEC members are arranged in alphabetical order. Assessment scores range from 0 (weakest) to 5 (strongest). Average scores of the 14 APEC

members are represented by the polygon in grey outline.

Australia



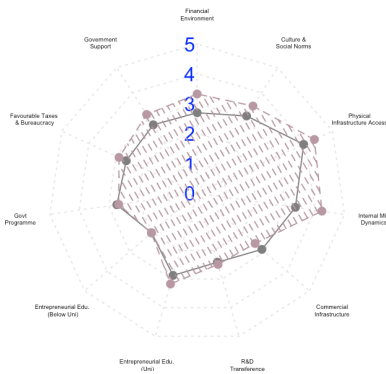
Canada



Chile



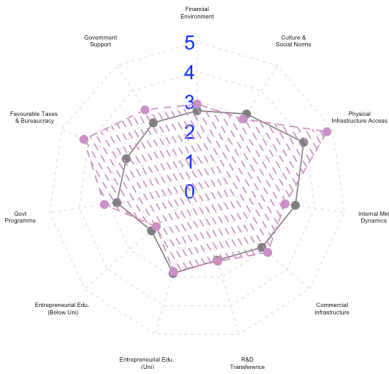
China



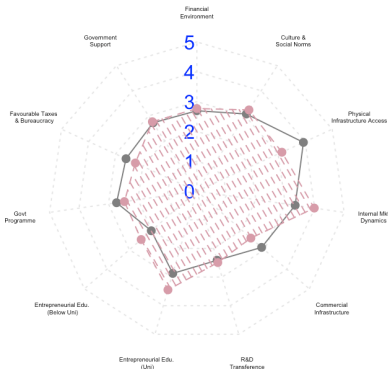
Chinese Taipei



Hong Kong, China



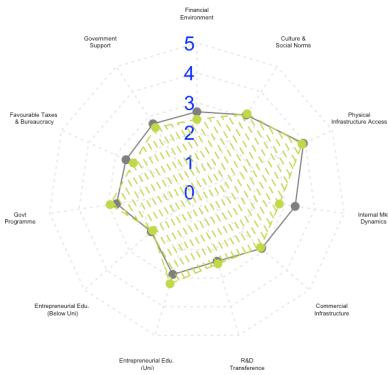
Indonesia



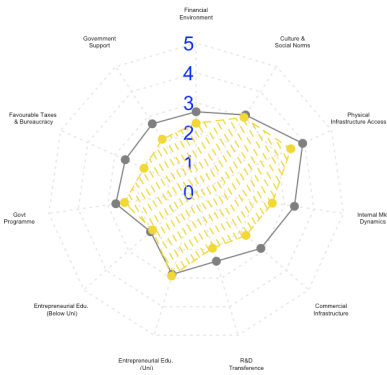
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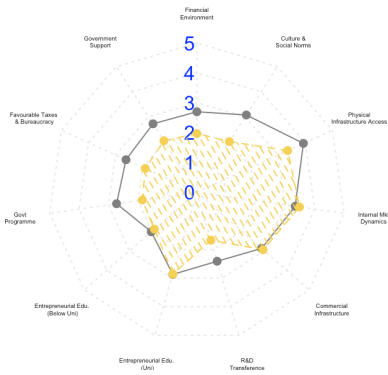
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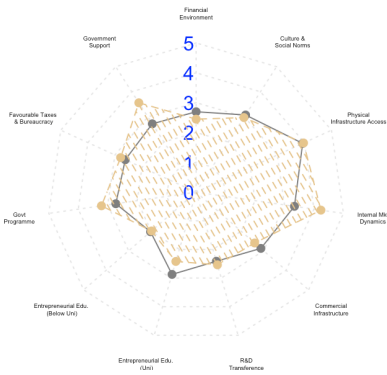
Peru



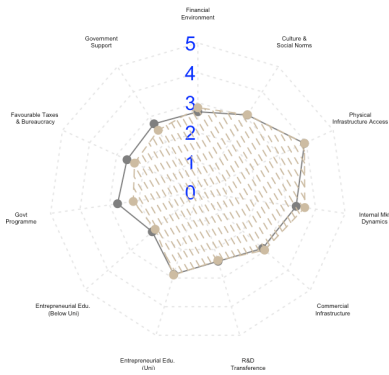
Russia



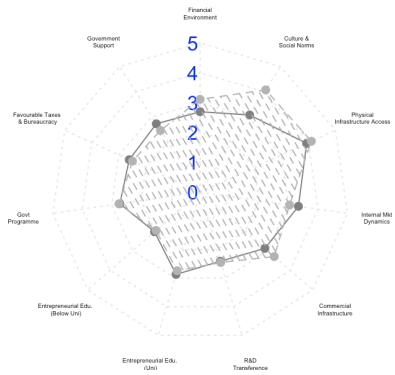
South Korea



Thailand



USA



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APEC Study Centre

The Chinese University of Hong Kong

Entrepreneurship in APEC and Hong Kong

Small and Medium Enterprises (SMEs) 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.

This pilot paper uses the harmonized data compiled by GEM as an alternative to official records to study the features of the MSMEs sector in the APEC region, and Hong Kong in particular. Our study covers the following five areas which are closely related to APEC's MSMEs initiatives: (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

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