




## FACTORS OF EARLY-STAGE ENTREPRENEURIAL ASPIRATIONS IN ASIA PACIFIC ECONOMIES



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### ABSTRACT

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This paper directly explores of the determinants of growth aspirations for the early-stage entrepreneurs in Asia Pacific economies. By studying the relationship between five orientations of the early-stage entrepreneurs and their growth aspirations, this study can provide a comprehensive understanding to stimulate the entrepreneurial activities in examined countries. The data source is extracted from a sample of firms in 14 Asia Pacific economies participated in the 2015 Global Entrepreneurship Monitor Adult Population Survey. This study employs the binary logistic regression with a dummy variable of country orientations. The results demonstrate no significant relationship between innovative orientation, entrepreneurial probability and the firms' growth aspirations. The updated technology and new product or service implementations can neither deteriorate nor stimulate the early-stage entrepreneurial companies' growth aspirations in Asia Pacific countries. The relations of international orientation, increase-income motivation and high-risk aversion with growth aspirations are significantly negative. This denotes an adverse influence of the internationalisation and the income growth expectations, and frustration to the Asia Pacific firms' growth aspirations. The results also indicate that firms from factor-driven and efficiency-driven economies have fewer growth aspirations than those from innovation-driven countries. Although having some limitations, this study sheds light on the entrepreneurship understanding of policymakers, academics and professional businesspersons.

**Contribution/ Originality:** This paper contributes to the existing literature by exploring the factors of growth aspirations of the early-stage entrepreneurs in 14 Asia Pacific nations. This study suggests negative effects of international orientation, increase-income motivation and risk aversion on growth aspirations. Firms in more developed economies have more growth aspirations.

## 1. INTRODUCTION

Various empirical studies posit that company growth can positively stimulate economic development in terms of wealth and employment advancement. Furthermore, growth aspirations are one of the focal factors that can enhance the business's growth (Hermans et al., 2015; Stam & Wennberg, 2009; Wiklund & Shepherd, 2003). Entrepreneurs believe entrepreneurial growth aspirations are the growth trajectory for their start-up business. This reveals their particular beliefs about the prospect of their firms' development (Dutta & Thornhill, 2008; Maki & Pukkinen, 2000). By exploring concerns and challenges related to the entrepreneurs' growth aspirations, this can

provide respected perceptions to endorse business growth (Levie & Autio, 2013). Consequently, this sets the enthusiasm for various surrounding studies related to the antecedents of such aspirations recently.

Prior studies on this topic have shown that entrepreneurs' background, employment growth and external environmental influences can significantly modify the foundation of growth aspirations (Autio & Acs, 2010; Hessels, van Gelderen, & Thurik, 2008; Kontolaimou, Giotopoulos, & Tsakanikas, 2016; Park, 2005). It can be said that the growth rate of a start-up depends heavily on the characteristics of each business, especially the level of innovation, international orientation, and the entrepreneurs' perceptions of their opportunities and confidence (Capelleras, Contín-Pilart, Larraza-Kintana, & Martín-Sánchez, 2016). Nevertheless, the extant literature on the influence of these factors on entrepreneurial growth aspirations is relatively limited. Hessels and van Stel (2011) suggest that the growth aspirations of international oriented entrepreneurs (i.e., exporting) is one of the techniques for the entrepreneurs to enhance their growth prospects. The motivations of increased income, entrepreneurs' risk aversion, or the prospect of starting a new firm also have significant influences on the entrepreneurs' growth aspirations (Hermans et al., 2015). Also, individuals' creation of businesses and inclination towards entrepreneurship are intensely influenced by many features of the nation's institutional context, including social attitude towards entrepreneurship or cultural standards (Hayton, George, & Zahra, 2002). These impacts are distinctive for each nation's economic development.

Since 2008, Global Entrepreneurship Monitor (GEM) has started to classify the examined countries based on the three typologies proposed by Porter, Sachs, and McArthur (2001): *factor-driven economies*, *efficiency-driven economies*, and *innovation-driven economies*. The influences of these factors are distinctive for the economic policy division and the sponsorship for entrepreneurship (Rebernik, Pušnik, & Tominc, 2010). The fundamental characteristics of the three categories proposed by the World Economic Forum (WEF) are as follow:

- **Factor-driven economies:** A large proportion of businesses are in the agricultural and extractive industry, which mainly rely on unskilled workforce and natural resources.
- **Efficiency-driven economies:** more competitive and industrialized economy with progressive reliance on economies of scale and large capital-intensive organizations.
- **Innovation-driven economies:** An advanced economy with knowledge-intensive businesses and a high proportion of the service sector.

According to the Global Entrepreneurship and Development Index (GEI) 2015 Report (Acs, Szerb, & Autio, 2016), Asia Pacific presents the highest potential for economic growth and entrepreneurial activities. This region includes well-established and mature economies such as Australia, Japan, Korea, and Singapore, large emerging economies such as China and India, and many emerging economies such as Thailand, Vietnam, Malaysia, Iran, etc. The high growth economies, advancing governances, and youthful age structures of the Asia Pacific region offer hypothetical opportunities for entrepreneurial activities. The institutional contexts in these countries also create significant implications for the nature and extent of entrepreneurship (Carney, Estrin, Liang, & Shapiro, 2019; Zahra & Wright, 2011). Further, TEA rates at the regional level are typically high for the economies of this region, according to GEM 2015/16 Global Report.

Given the mixed outcome, the focal purpose of this study is to explore the growth aspirations among the early-stage entrepreneurs (TEA) in Asia Pacific countries. This study focuses on the relationship between entrepreneurial performance's prospective operational quota (growth objectives of potential employment) and five principal dimensions of entrepreneurship. Those dimensions include Innovative orientation (New product, Competitiveness, and Technology), International orientation (Export), Improvement-driven opportunity, Fear of failure, Opportunity to start-up, and Country orientation (Driven factors). This study can explore the challenges for ambitious entrepreneurs by examining this relationship and providing appreciated comprehensions to promote firm growth.

This study proceeds as follows. The next section reviews the prior literature on the determinants of entrepreneurship growth aspirations. We then propose the hypotheses determined by research propositions from

prior studies. This is followed by the outlines of the research methods and the basic statistics for the examined data. The findings are then reported, and the results are discussed.

## 2. THEORETICAL FRAMEWORK AND PROPOSED HYPOTHESES

The means of how entrepreneurs estimating their growth aspirations mainly inspire their possible objectives. Entrepreneurs are more likely to have better prospective growth for their business in the early-stage of entrepreneurship than those with longer periods (Sirec & Mocnik, 2013). In particular, TEA can promote market efficiency by applying pioneering and innovative technologies or measures to launch new services and products to their market (Bosma & Harding, 2007). The creativity and innovation of the entrepreneurs can enhance their growth objectives in terms of higher competitiveness on their market. Further, international expansion is one of the critical trends for entrepreneurs in enhancing their growth aspirations. The expansion of the international market has important implications for expanding the business's size by attracting potential customers in new markets and updating top technology trends for their production (Kyläheiko, Jantunen, Puumalainen, Saarenketo, & Tuppur, 2011). Hence, the dimension of internationalisation is considerably associated with the growth determination of the new business (Tominc & Rebernik, 2011; Verheul & Van Mil, 2011). The first and second hypothesis (H1 and H2) are formed as follow:

*Hypothesis 1 (H1): The early-stage entrepreneurial business's growth aspirations are positively associated with their innovative orientation.*

*Hypothesis 2 (H2): The early-stage entrepreneurial business's growth aspirations are positively associated with their international orientation.*

The motivations of increased income, fear of failure or the prospect of starting a new firm also have significant influences on the growth aspirations of the entrepreneurs (Hermans et al., 2015; Morris, Miyasaki, Watters, & Coombes, 2006). For the increase-income-motivated entrepreneurs, the increase of income from starting new businesses can positively affect their growth aspirations (Teruel & De Wit, 2011). Hessels et al. (2008) also reveals a positive association between and the possibility of commencing a business and the staff growth. Further, Shane (2004) also proposed five compulsory provisions for the early-stage of entrepreneurship: (1) entrepreneurial prospects, (2) risk aversion, (3) establishing/manipulating opportunity, (4) innovation, and (5) aptitude and readiness to exploit an opportunity. Therefore, this study also proposes three additional hypotheses as follow.

*Hypothesis 3 (H3): The early-stage entrepreneurial business's growth aspirations are positively associated with their improvement-driven opportunity.*

*Hypothesis 4 (H4): The early-stage entrepreneurial business's growth aspirations are positively associated with their perception of opportunity to start-up.*

*Hypothesis 5 (H5): The early-stage entrepreneurial business's growth aspirations are negatively associated with their fear of failure.*

## 3. DATA AND METHODOLOGY

### 3.1. Data

This paper utilises data derived from the Global Entrepreneurship Monitor (GEM) Research<sup>1</sup>. The details of GEM research content and procedures are obtainable from the study of Bosma, Wennekers, and Amorós (2012). The GEM has annually conducted comprehensive entrepreneurship research programs since 1997 with only ten participated nations. There are two surveys to measure adult involvement in entrepreneurship and institutional framework conditions of each economy, including Adult Population Survey (APS) and National Expert Survey (NES). The survey includes at least 2,000 randomly selected adults (18–64 years of age) for each economy. GEM

<sup>1</sup>In this study, we only employed the data from Global Entrepreneurship Monitor (GEM) 2015/2016 report as it is the latest dataset provided.

conducted their interviews by employing the Computer Assisted Telephone Interviewing (CATI) method. In 2015/2016 report, 181,281 adults from 62 participated economies had been interviewed by GEM.

Table 1 shows the national data sample, categorizations, and the GEI ranking in 2015 (Acs et al., 2016). In this research, the data of 14 countries from the Asia and Oceania region with 66,491 interviewed cases in 2015. These countries are categorized based on the economic development stages<sup>2</sup> and then the global geographic regional structure<sup>3</sup>. Economic development stages are regrouped into two groups for analyses, including Efficiency-driven and Factor-driven economies and Innovation-driven economies. After removing the missing data of all variables, analysis is constructed from valid data of 4,284 cases for 14 Asia and Oceania economies, as in Table 1.

The proportions of each country's total early-stage entrepreneurs are also computed. In 2015, the efficiency-driven and factor-driven economies accounted for 85.7% of the total number of entrepreneurs in this region, while only 14.3% for innovation-driven economies. Among ten efficiency-driven and factor-driven economies, India has the highest proportion of TEA (22.8%), while Malaysia accounts for only 1.6% with only 68 new firms in 2015. The scopes among four innovation-driven economies are relatively equivalent, around 3% to 4%. In terms of the 2015 GEI ranking, the innovation-driven economies include some of the world's top entrepreneurial economies, such as Australia (3<sup>rd</sup>) and Taiwan (8<sup>th</sup>). Korea and Israel are also in the top 30, followed by some efficient-driven economies such as Lebanon, Malaysia, China, and Thailand. In contrast, this region also has some of the global laggards, such as India (104<sup>th</sup>) or Indonesia (120<sup>th</sup>). This can be likely rationalised by the administrative red tape common in those countries that restricts entrepreneurial activities (Acs et al., 2016).

Table-1. Statistics for the Asia Pacific Economies Participating in the 2015/2016 GEM Survey.

| Country  | Early-stage entrepreneurs (TEA) | Proportion | Adult population survey sample size | Global Entrepreneurship Index Ranking |
|--|---------------------------------|------------|-------------------------------------|---------------------------------------|
| Efficiency-driven and Factor-driven economies <sup>4</sup> |                                 |            |                                     |                                       |
| China  | 382                             | 8.9%       | 3,365                               | 61 <sup>st</sup>                      |
| India  | 977                             | 22.8%      | 3,413                               | 104 <sup>th</sup>                     |
| Indonesia  | 287                             | 6.7%       | 5,620                               | 120 <sup>th</sup>                     |
| Iran   | 338                             | 7.9%       | 3,234                               | 94 <sup>th</sup>                      |
| Kazakhstan   | 136                             | 3.2%       | 2,101                               | 88 <sup>th</sup>                      |
| Lebanon  | 601                             | 14.0%      | 2,600                               | 50 <sup>th</sup>                      |
| Malaysia   | 68                              | 1.6%       | 2,000                               | 53 <sup>th</sup>                      |
| Philippines  | 330                             | 7.7%       | 2,000                               | 95 <sup>th</sup>                      |
| Thailand   | 328                             | 7.7%       | 3,000                               | 68 <sup>th</sup>                      |
| Vietnam  | 223                             | 5.2%       | 2,000                               | 85 <sup>th</sup>                      |
| Sub-Total  | 3,670                           | 85.7%      | 29,333                              | -                                     |
| Innovation-driven economies                                |                                 |            |                                     |                                       |
| Australia  | 180                             | 4.2%       | 1,770                               | 3 <sup>rd</sup>                       |
| Israel   | 175                             | 4.1%       | 2,055                               | 22 <sup>th</sup>                      |
| Korea  | 145                             | 3.4%       | 2,000                               | 28 <sup>th</sup>                      |
| Taiwan   | 114                             | 2.7%       | 2,000                               | 8 <sup>th</sup>                       |
| Sub-Total  | 614                             | 14.3%      | 7,825                               | -                                     |
| Total  | 4,284                           | 100.0%     | 66,491                              | -                                     |

<sup>2</sup> Three stages of economic development are proposed by the World Economic Forum (WEF). Source: <http://weforum.org>

<sup>3</sup> The economies' categorisation is adapted from the United Nation's configuration of the global macro geographical regions. Source: <http://unstats.un.org/unsd/methods/m49/m49regin.htm>

<sup>4</sup> In this group, there are four factor-driven economies ( India, Iran, Philippines, and Vietnam) and six efficient-driven economies (China, Indonesia, Kazakhstan, Lebanon, Malaysia and Thailand). Source: GEM Global Report 2015/2016.

### 3.2. Variables

This section depicts the dimensions for all examined categories according to the GEM research. The dependent variable is the growth aspirations with five independent variables. An additional dummy variable is based on country orientation. The detailed descriptions for all variables from GEM are exhibited in Table 2.

Table-2. GEM variables in the binary logistic regression model.

| Variables                   | Descriptions  | GEM code | GEM Descriptions  | Code           |
|-----------------------------|---|----------|---|----------------|
| Growth aspirations          | <b>Dependent variable</b> - TEA: are measured by reflecting their expectation of an increase in the number of new jobs.   | TEAJOBEX | TEA: Expects more than 5 employees in next five years                         | 0 = No, 1= Yes |
| Independent variables       | <b>Innovative orientation</b> - TEA: any predisposition to inventive behaviour through enquiries adopted are coded 1 (Yes), and all the others are coded 0 (No) | TEANEWPR | TEA: Product is new to all or some customers                                  | 0 = No, 1= Yes |
|                             |   | TEANEWMK | TEA: New market (few/no businesses offer the same product)                    | 0 = No, 1= Yes |
|                             |   | TEAyyNTC | TEA: New technology   | 0 = No, 1= Yes |
|                             | <b>International orientation</b> - TEA: 1 (Yes) all the response with at least some foreign customers, and 0 (No) is coded to all the others                    | TEAEXPWK | TEA: International orientation (more than 1% of revenue from outside country) | 0 = No, 1= Yes |
|                             | <b>Improvement driven opportunity</b> - TEA: If there will be good opportunities for starting a business in this area (Yes), otherwise (No).                    | TEAyyIDO | TEA: Improvement driven opportunity   | 0 = No, 1= Yes |
|                             | <b>Opportunity perception</b> -TEA: If they consider that fear of failure can prevent them from commencing a business (Yes), otherwise (No).                    | TEAOPP_P | TEA: opportunity (in sample of early-stage entrepreneurs)                     | 0 = No, 1= Yes |
| Country orientation (Dummy) | Innovation-driven country or factor-driven and efficiency-driven country dummy regression coefficient   | CAT_GCR2 | (Stage 1 and 2) Efficiency-driven or Factor-driven economies                  | 0              |
|                             |   |          | (Stage 3) Innovation-driven economies   | 1              |

#### 3.2.1. Dependent Variable

The growth aspirations of TEA are measured by their expectations for increasing in the number of new jobs. Two following questions are applied to collect the data:

- *Excluding the owners but including exclusive subcontractors, how many employees are currently working for this business?*
- *Excluding the owners but counting exclusive subcontractors, how many employees will be occupied in this business five years from now?*

The distinction between the two answers denotes the expectation of the number of new jobs by the entrepreneurs. The criterion variable is coded based on this outcome. If the number of workers is more than five in the next five years, we code it as 1 – Yes, and all other responses are coded as 0 – No.

### 3.2.2. Independent Variables

This model has five independent variables, including innovative orientation, international orientation improvement-driven opportunity, fear of failure and opportunity to start up, which have two parameters of 1 and 0 (this is the reference indicator). For the innovative orientation, this predictor is evaluated based on the judgments of the early-stage entrepreneurs in the three following queries:

- *Will the products/services be considered as new and unacquainted by all, some or none of prospective customers?*
- *Are there many, few, or no other companies selling similar products/services to your prospective customers at the moment?*
- *Have the technologies or procedures necessitated for your products/services been developed for less than one year, one to five years, or more than five year?*

If the answers show any predisposition to the innovative behaviour, we code it as 1 – Yes, and all others are coded as 0 – No. For the international orientation, it is measured the answers for the early-stage entrepreneurs regarding the following question:

- *What is the proportion of your customers typically live outside the country? Is it less than 10%, more than 10%, more than 25%, more than 50%, more than 75%, or more than 90%?*

If the response with at least some clients from other countries, we code it as 1- Yes, and code 0 is given to all others. For the Improvement driven opportunity, it is measured the answers for the early-stage entrepreneurs regarding the following question:

- *Which do you feel, is the most important motive for pursuing this opportunity?*

The respondent indicates that the principal reason for involving in this opportunity is to be independent or to increase current income, rather than just upholding their income, we code it as 1- Yes, and code 0 is given to all others. For the Fear of failure, it is measured the answers for the early-stage entrepreneurs regarding the following question:

- *Would fear of failure would prevent you from starting a business?*

If the answer indicates that fear of failure can prevent the entrepreneurs from commencing a business, we code it as 1- Yes, and code 0 is given to all others. For the Opportunity to start up, **it is** measured the answers for the early-stage entrepreneurs regarding following question:

- *In the next six months, will there be good opportunities for starting a business in the area where you live?*

If the early-stage entrepreneurs' answers show any inclination of good opportunities to start up a new business in the next six months, we code it as 1 – Yes, and all others are coded as 0 – No.

### 3.2.3. Dummy Variable

The dummy variable for the country orientation is determined by the WEF economic development classifications, which is employed to investigate the nation's significant influence on the growth objectives. This dummy variable also has two constraints of 1 and 0. In this study, the examined countries are classified into three stages as the GEM 2015/16 Global Report. Therefore, we reorganise the 14 selected economies into two clusters. The first group comprises efficiency-driven and factor-driven economies, and the second group is the country that derives from innovation-driven economies. If a country is in the innovation-driven phase, we code it as 1 and 0 if a country in other phases.

### 3.3. Methodology and Descriptive Statistics

By supposing that there is a linear combination between a dependent variable and five predictors and a country dummy variable, this study employs the binary logistic regression. The conditional statistic in the logistic regression is highly suitable for binary/dichotomous nature of the dependent variable (growth aspiration) with the Wald tests (Todman & Dugard, 2007). In this study, we construct a binary logistic regression model as follow:

$$GROWTH_i = \alpha + \beta_1 INNOV_i + \beta_2 INTER_i + \beta_3 IDO_i + \beta_4 OPPORT_i + \beta_5 FEARFAIL_i + D COUNTRY_i + \epsilon_i$$

Where,  $GROWTH_i$  is the binary logit quote for aspirations of future growth, which also denotes the binary logit for the regression of constant value. The binary logit of  $\beta_1$  to  $\beta_5$  presents the regression coefficients for five predictors of Innovative orientation ( $INNOV$ ), International orientation ( $INTER$ ), Improvement driven opportunity ( $IDO$ ), Opportunity to start up ( $OPPORT$ ) and Fear of failure ( $FEARFAIL$ ), respectively. The value of D takes the binary logit estimate for an efficiency-driven, factor-driven, or innovation-driven country dummy regression coefficient in the regression. The error of regression model is  $\epsilon_i$  and i is index for the number of cases (4,284 observations).

Table 3 below tabulates the basic statistics for four variables in the binary logistic regression model. For the criterion variable – growth aspirations ( $GROWTH$ ), the majority (81.4%) of the entrepreneurs expect that their business will have less than five employees in the next five years, and only 18.6% believe that this number is more than five. However, the inclination to the innovative behaviour ( $INNOV$ ) from the entrepreneurs is accounted for 78.2% of the total responses, while the fraction of without any inclination is only 21.8%. Regarding the international orientation ( $INTER$ ), only 22.5% of entrepreneurs believe that they have some foreign customers, and 77.5% of them focus on the domestic market only. The Improvement driven opportunity ( $IDO$ ), 14.3% of the responds indicate that the main motive to start-up is to be independent or improve current income, rather than just upholding their income, 85.7% are on the contrary idea. Further, 80.5% of interviewed adults believe that there would be good opportunities ( $OPPORT$ ) for starting a business in the next six months, and only 22.8% of them consider that fear of failure ( $FEARFAIL$ ) can prevent them from commencing a business.

Table-3. The descriptive statistics for all variables of binary logistic regression model.

| Binary Value                         |           | 0     | 1     | Total |
|--------------------------------------|-----------|-------|-------|-------|
| Growth aspirations (GROWTH)          | Frequency | 3,488 | 796   | 4,284 |
|                                      | %         | 81.4  | 18.6  | 100   |
| Innovative orientation (INNOV)       | Frequency | 932   | 3,352 | 4,284 |
|                                      | %         | 21.8  | 78.2  | 100   |
| International orientation (INTER)    | Frequency | 3,321 | 963   | 4,284 |
|                                      | %         | 77.5  | 22.5  | 100   |
| Improvement driven opportunity (IDO) | Frequency | 2270  | 2014  | 4,284 |
|                                      | %         | 85.7  | 14.3  | 100   |
| Opportunity to start up (OPPORT)     | Frequency | 837   | 3447  | 4,284 |
|                                      | %         | 19.5  | 80.5  | 100   |
| Fear of failure (FEARFAIL)           | Frequency | 3308  | 976   | 4,284 |
|                                      | %         | 77.2  | 22.8  | 100   |
| Country dummy (COUNTRY)              | Frequency | 3670  | 614   | 4,284 |
|                                      | %         | 85.7  | 14.3  | 100   |

#### 4. EMPIRICAL RESULTS

Before applying the regression model, the multicollinearity check is performed to examine the associations between independent variables. As tabulated in Table 4, tolerance statistics are all higher than 0.2 and the variance inflation factor (VIF) values are well below 10. Hence, the multicollinearity is undetected by checking its tolerance and its reciprocal. In other words, the data in the logistic regression model show no collinearity.

Table-4. Test of multicollinearity for variables in the model.

| Coefficients <sup>a</sup> |   |                             |            |                           |       |       |                         |       |
|---------------------------|---|-----------------------------|------------|---------------------------|-------|-------|-------------------------|-------|
| Model                     |   | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig.  | Collinearity Statistics |       |
|                           |   | B                           | Std. Error | Beta                      |       |       | Tolerance               | VIF   |
| 1                         | (Constant)                                  | 0.081                       | 0.017      |                           | 4.831 | 0.000 |                         |       |
|                           | <i>Innovative orientation (INNOV)</i>       | 0.008                       | 0.014      | 0.008                     | 0.561 | 0.575 | 0.977                   | 1.024 |
|                           | <i>International orientation (INTER)</i>    | 0.101                       | 0.014      | 0.108                     | 7.107 | 0.000 | 0.951                   | 1.051 |
|                           | <i>Improvement driven opportunity (IDO)</i> | 0.158                       | 0.017      | 0.142                     | 9.336 | 0.000 | 0.948                   | 1.055 |
|                           | <i>Opportunity to start up (OPPORT)</i>     | 0.075                       | 0.013      | 0.096                     | 5.688 | 0.000 | 0.775                   | 1.290 |
|                           | <i>Fear of failure (FEARFAIL)</i>           | 0.009                       | 0.017      | 0.009                     | 0.517 | 0.605 | 0.778                   | 1.285 |
|                           | <i>Country dummy (COUNTRY)</i>              | 0.049                       | 0.014      | 0.052                     | 3.454 | 0.001 | 0.956                   | 1.046 |

Note:<sup>a</sup> Dependent Variable: Growth aspirations.

Table 5 demonstrates the summary of the binary logistic regression model based on the GEM data of 14 Asia and Oceania economies. Panel A shows the Cox & Snell R-Square and Nagelkerke R-Square values that are used to assess the fit of the model to the data. Hence, the explained variation in the dependent variable in the binary logistic regression model varies from 5.2% to 8.4%. Overall, the model can only explain 8.4% (Nagelkerke R-square<sup>5</sup>) of the growth aspirations variance, which measures the variance of the dependent variable explained by the experiment from 0 (minimum value) to approximately 1 (perimeter) (Pallant, 2020). Thus, the association between indicators and the expectation in this model is weak. The Hosmer–Lemeshow test is statistically insignificant (p-value = 0.09) with a Chi-square ( $\chi^2 [8]$ ) of 10.325, which indicates that the model appropriately corresponds to the results, as the poor fit model is associated with statistically significant p-value of less than 0.05 (Pallant, 2020).

In Panel B, the binary logistic regression model classification is demonstrated, which shows the accuracy of the model. The model can appropriately classify 81.5% of cases "No" growth aspirations with all independent variables. With the overall good model fit, we evaluate the binary logistic coefficients' statistical test to find significant relationships between examined variables.

Table-5. The summary of the binary logistic regression model

| Panel A: Model Summary and Hosmer and Lemeshow Test |                      |                      |                     |            |    |      |
|---|----------------------|----------------------|---------------------|------------|----|------|
| Step  | -2 Log likelihood    | Cox & Snell R-Square | Nagelkerke R-Square | Chi-square | df | Sig. |
| 1   | 3885.87 <sup>a</sup> | 0.052                | 0.084               | 10.325     | 8  | 0.09 |

Note:<sup>a</sup> Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

<sup>5</sup> It is usually referred as the pseudo R-square value, which has lower values than the R-square in the multiple regression. Nevertheless, we can interpret this value in the same means, but with more caution. These values depend on choosing the approaches of Cox & Snell or Nagelkerke, respectively. Nagelkerke R-square is an adjustment of Cox & Snell R-square, the latter that cannot reach the value of 1; therefore, Nagelkerke R-square is usually applied (Kvalseth, 1985).



| Panel B: Classification Table <sup>a</sup> |                    |   |                    |    |                    |
|--|--------------------|---|--------------------|----|--------------------|
| Observed                                   |                    |   | Predicted          |    |                    |
|  |                    |   | Growth aspirations |    | Percentage Correct |
|  |                    |   | 0                  | 1  |                    |
| Step 1                                     | Growth aspirations | 0 | 3459               | 29 | 99.2               |
|  |                    | 1 | 764                | 32 | 4.0                |
|  | Overall Percentage |   |                    |    | 81.5               |

Note: <sup>a</sup> The cut value is .500

Table-6. Results of the binary logistic regression.

| Variables in the Equation                            |        |       |        |       |        |                     |       |
|--|--------|-------|--------|-------|--------|---------------------|-------|
|  | B      | S.E.  | Wald   | Sig.  | Exp(B) | 95% C.I. for EXP(B) |       |
|  |        |       |        |       |        | Lower               | Upper |
| Constant   | -0.737 | 0.138 | 28.345 | 0.000 | 0.478  | -                   | -     |
| Innovative orientation<br>( $\beta_1$ - INNOV)       | 0.057  | 0.101 | 0.314  | 0.575 | 1.058  | 0.868               | 1.29  |
| International orientation<br>( $\beta_2$ - INTER)    | -0.612 | 0.09  | 46.427 | 0.000 | 0.542  | 0.455               | 0.647 |
| Improvement driven opportunity<br>( $\beta_3$ - IDO) | -0.522 | 0.094 | 30.742 | 0.000 | 0.593  | 0.493               | 0.713 |
| Opportunity to start up<br>( $\beta_4$ - OPPORT)     | -0.060 | 0.128 | 0.22   | 0.639 | 0.942  | 0.733               | 1.21  |
| Fear of failure ( $\beta_5$ - FEARFAIL)              | -0.313 | 0.092 | 11.593 | 0.001 | 0.731  | 0.611               | 0.876 |
| Country dummy ( $D$ - COUNTRY)                       | 0.861  | 0.1   | 73.95  | 0.000 | 2.365  | 1.944               | 2.878 |

Table 6 tabulates the results from the binary logistic regression model, which estimates growth aspirations' determinants of TEA firms in Asia Pacific economies. Overall, the effect of the innovative orientation (*INNOV*) and the Opportunity to start up (*OPPORT*) are not statistically significant ( $p$ -value > 0.10), the associations between growth aspirations and all other covariates are strongly significant ( $p$ -value = 0.00). To be specific, the intercept is -0.737, which is the binary logit for the constant value in the regression model. The constant's logistic coefficient is statistically significant at the 0.01 level based on the statistical tests of the Wald statistic (Wald = 28.345,  $p$ -value = 0.000). This coefficient denotes the growth regarding without any growth objectives, when all independent variables are estimated at 0. Supposing that all predictor variables are zero, the companies with aspirations for growth have 0.737 units smaller of the growth aspiration compared to firms without any growth aspiration.

For the predictor of *INNOV*, the binary logit estimate is negative ( $\beta_1 = 0.057$ , Wald = 0.314); however, it is statistically insignificant to the model ( $p$ -value = 0.575). Thus, there is no substantial difference regarding the growth aspirations between the firms with or without the orientations for innovation, given all other predictors are constant. In Table 3, the Exp (B) in the last column are the odds ratios<sup>6</sup> for the predictors. For the *INNOV*, the Exp (B) is close to 1.0 (1.058), demonstrating that growth aspirations' risk of the innovative firms is just marginally higher than the non-innovative businesses (the last group's odds need be multiplied by 1.058). Regarding the predictor of *OPPORT*, the coefficient ( $\beta_4 = -0.06$ ) is also statistically insignificant to the model (Wald = 0.2200,  $p$ -value = 0.639). Therefore, the inclination of good opportunities to create a new venture in the next six months does not encourage future growth aspirations.

<sup>6</sup> The odds ratios are the exponentiation of the regression coefficients for the predictors in the logistic regression model. If that values above 1.0 shows a positive relationship and below 1.0 denotes a negative relationship (Hair, Black, Babin, Anderson, & Tatham, 2014).

For the *INTER*, the binary logit estimate is negative and statistically significant ( $\beta_2 = -0.612$ , Wald = 46.427, p-value = 0.000). As the logit estimate compares the international alignment for growth objectives, the negative value denotes that businesses with the global orientation are less prospective for potential growth (0.612 unit smaller) after controlling for the other predictors. With the odd ratio (0.542) being less than 1.0, this indicates a positive relationship between growth aspirations and international orientation. In this case, the growth objectives' risk of the companies with at least some foreign clients is lower than the firms that do not have such customers (or the last group's odds need be multiplied by 0.542). It can be said that firms with international customers are less prospective for future growth. In addition, the binary logit estimated for the Improvement driven opportunity (*IDO*) is also negative and significant at the 1% significance level ( $\beta_3 = -0.522$ , Wald = 30.742, p-value = 0.000).

This predictor indicates the differences in income improvement opportunities for the growth aspirations. Therefore, the negative coefficient indicates that the new ventures inspired by income improvements opportunity are less feasible for growth aspirations when controlling for all other predictors. As the odd ratio (0.593) is less than 1.0, the risk from growth aspirations of new ventures motivated by income improvements is lower than firms that do not have such motivations (or the last group's odds need be multiplied by 0.593).

In terms of the Fear of failure (*FEARFAIL*), the binary logit estimate is negative ( $\beta_5 = -0.313$ , Wald = 0.11.593) and also statistically significant to the model (p-value = 0.001). This result demonstrates that the entrepreneurs with the higher risk aversion will be less potential for future growth aspirations, given that all other predictors are constant. In other words, the higher level of collapsed anxiety, the lower level of growth aspirations for the new venture. With the odd ratio of 0.731, the growth aspirations risk of entrepreneurs afraid of failure is relatively lower than the confident ones (or the last group's odds need be multiplied by 0.731).

Regarding the country orientation dummy variable, the coefficient is positive and statistically significant at the 1% significance level ( $D = 0.861$ , Wald = 73.95, p-value = 0.000). The positive coefficient reveals that the firms in innovation-driven economies are more likely to have growth aspirations (0.861 units higher) than the firms from efficiency-driven and factor-driven economies. The value of Exp (B) of the dummy variable is 2.365, indicating a positive relationship between the country orientation and growth aspirations. In other words, the growth aspirations' risk of firms from innovation-driven countries is lower than firms in other groups of countries (or the last group's odds need be multiplied by 2.365). This outcome leads to a conclusion that the Australian, Korean, Israeli, and Taiwanese firms are more potential for growth aspirations.

Based on these results, the two proposed hypotheses in this study are not validated. For the first hypothesis (H1), we cannot confirm the correlation between the innovative orientation of the early-stage entrepreneurial business and their growth aspirations. Although its coefficient is negative, the significant level is beyond the 10% significance level for the first predictor variable. In other words, the implementation of updating technology and launching new products or services can neither weaken nor strengthen the Asia Pacific TEA firms' growth aspirations. It is also insufficient to reject Hypothesis 4 (H4) as the significant level is beyond the 10% significance level. Therefore, the relationship between Opportunity to start-up of the TEA and their aspirations for future growth is not validated.

The results indicate sufficient evidence to reject the second hypothesis (H2) and confirm the considerably negative relationship between international orientation and the firm's growth aspirations. Indeed, one interpretation of this finding is that Asia Pacific TEA firms have more orientations for the international market; they tend to have fewer growth aspirations. The third hypothesis (H3) is also rejected as the negative correlation is at the 1% significance level. Therefore, we can confirm the negative relationship between the improvement driven opportunity and the entrepreneurial firms' growth aspirations. In other words, Asia Pacific TEA firms will have less inspirations for employment growth when their new ventures are inspired from income improvements. On the

other hand, our results support the fifth hypothesis (H5), which indicates the negative relationship between the entrepreneurs' fear of failure and their inspirations for future growth. A conclusion that can be drawn is that Asia Pacific TEA firms' growth aspirations will be reduced when the entrepreneurs are terrified of their business' catastrophe.

## 5. DISCUSSION OF RESULTS AND CONCLUSION

### 5.1. Results Discussion

In the field of entrepreneurship, the contextualised studies are endorsed and sustained as some recent study of Zahra, Wright, and Abdelgawad (2014) as the economic activities are socially entrenched (Granovetter, 1985). An ambitious entrepreneur starts up and operates their business with the above-average influences of the job or wealth creation and the perfect development model (Morris, Webb, & Franklin, 2011). Therefore, this study's focal purpose is to examine the contextualised influences of the entrepreneurs' export, innovative orientations, improvement-driven opportunity, fear of failure, and opportunity to start-up on the growth aspirations by considering economic development phases. This study employs data from Asia and Oceania economies as their outstanding characteristics in terms of entrepreneurship potential.

Overall, increasing innovative orientation and probability of becoming an early-stage entrepreneur are not associated with the adjustment likelihood of growth aspirations. However, the increasing international orientation, increase-income-motivation and high-risk aversion are associated with reducing the likelihood of growth aspiration. Regarding the national orientation, the TEA firms in efficiency-driven and factor-driven countries are more likely to have growth objectives than the TEA businesses in innovation-driven countries in the Asia and Oceania region.

In contrary to our expectation, we cannot find any significant relationship between the innovative orientation and the opportunity to start-up TEA firms and their growth aspirations. A conceivable explanation for these results is related to the firms' age. GEM defines a TEA firm as having been established for less than 40 months (around three years), which is comparatively short for new firms to develop new products or services. They can use updated technology during this period; however, the beginning firm's limited budget cannot allow them to apply all the latest technologies to their product. Hence, the relationship between innovative orientation at TEA cannot significantly impact their growth aspirations. If we reconsider this relationship in the later years of development, their growth aspirations can be positively affected by the innovative orientation. This can be rationalised by requirements of competitiveness as well as the increase in financial strengths (Stenholm, 2011).

This study specifies that the relationship between the entrepreneurs' export orientation and their growth aspirations is significantly negative. This finding shows that the more orientations for the international market of the Asia Pacific TEA firms; the fewer aspirations of growth that they have. This conclusion could be rationalised by the entrepreneurs' exertions when extending to the international markets, as this enhances their enduring understandings regarding the future growth prospects for their new ventures (Butler, Doktor, & Lins, 2010). For the inexperienced firms in the international market, the entrepreneurs can confront new administrative and environmental obstacles, resulting in a reduction in growth ambitions (Johanson & Vahlne, 2009; Zaheer, 1995). The results from this study also show that firms in innovation-driven economies are more likely to have growth aspirations than the firms from efficiency-driven and factor-driven economies within the Asia and Oceania region. Considerably, the innovation-driven countries in this region are the mature economies, which are one of the most dynamic and most robust economies in the world (Acs et al., 2016). Therefore, it can strongly support entrepreneurship activities.

## 5.2. Implications and Conclusion

The entrepreneurship variables in this study are relatively multifaceted in both capacity and character; consequently, this study has some practical implications. At the policymakers' level, they can effectively establish new policies to stimulate and support entrepreneurship regarding exporting and innovative activities. The encouraging procedures should be more dedicated towards the entrepreneurs inspired for growth with high-growth aspirations. From the entrepreneurs' perspectives, they can adaptively advance their innovative and export approaches from a better understanding of the innovative context as well as the international market. By reflecting the balance between risks of perceptive abilities and awareness to create new opportunities, they are disposed to obtain beneficial resources by altering their orientations. Further, this study can also theoretically advance knowledge regarding the early-stage entrepreneurship, especially theories of innovations, perceptions of risk and opportunities, and internationalisation related to future development aspirations.

This study also maintains some limitations, which instantaneously postulate prospects for further research. This study only employed the 2015/2016 report dataset, which is the latest dataset provided by GEM. Hence, this paper's outcome cannot update the cutting-edge trends of entrepreneurship aspirations in the inspected region. From our perspectives, the GEM measurements for the exports and new products and technologies orientations could not completely capture the actual entrepreneurs' international and innovative orientations. The traditional portion of export intensity, which is international sales divided by total sales, can significantly improve the results. For the measurement of growth aspirations, this study utilises the predictable number of employees as a proxy, and further studies can be more informative to reflect both foreign and local estimated number of staffs. Future studies can extend the sample sizes by comparing different regions, groups of countries, or groups of entrepreneurs, which can provide a broader view of entrepreneurial activities.

Overall, the examined region embraces both the world's leading entrepreneurial and hot emerging economies, which comprises both advantages and challenges for this region to support the entrepreneurial activities. Due to their stable governance structures and excellent social and economic conditions, they appear to be highly potential for entrepreneurship development in this region. However, the developing Asia Pacific economies signify the world's second least developed cluster, after African countries (GEI 2015 Report). There are two most significant hurdles for these economies, the funding and the labour laws, as these developing economies are lacking national financial strengths as well as well-established institutional and regulatory conditions for entrepreneurship. Consequently, these developing economies' policymakers should launch suitable plans to stimulate entrepreneurship according to their limitations. In particular, the provision of technological and ambitious entrepreneurs is essential. The focal attention should be for the owners or managers, as they are the key to entrepreneurial firms' growth aspirations. For every country, the different mindsets, cultural contexts, and social-economic factors should be considered to obtain the appropriate entrepreneurial policies. For hot emerging economies such as China or India, the government should strengthen the laws to empower ambitious entrepreneurship to flourish. Regarding the emerging economies such as Malaysia, Thailand, or Indonesia, the enhancement in arrangements for ambitious entrepreneurship and enabling competitive market entries are imperative.

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