

## The Motivator to Students' Entrepreneurship Intention: the Existence of University Incubated Entrepreneurs

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### ABSTRACT

Along with more and more emphasis on the importance and benefits of entrepreneurship to the society and an increasing number of various programs offered in the university to edify students about entrepreneurship and cultivate the entrepreneurial spirit in the campus, fewer previous researchers are studying about the optimization of the currently allocated resources. This study aims at exploring the importance and other utility of university incubated entrepreneurs as the motivation factor to entrepreneurship intention among university students. With the convenience sampling method of the questionnaire, the study has collected 165 valid response mainly from a university's students in Hong Kong in this pilot test. The analysis results indicated that there is a relatively strong relationship between the existence of incubated entrepreneurs at the campus and entrepreneurship intention among university students yet the perception of attainment to entrepreneurship cannot moderate such relationship and the desirability of entrepreneurship can partly mediate this relationship. The research result points out the feasibility of promoting the university incubated entrepreneurs as a role model to university students, and the importance of pragmatic resources for designing the entrepreneurial education and programs in the future.

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### 1. Introduction

Currently, the importance of entrepreneurship has been highly emphasizing in a few decades, particularly during the situation of Covid-19 in 2020 when the unemployment rate was highest in these 10 years. Van Praag and Versloot (2007) have already mentioned that entrepreneurship is important to society and even a nation from three perspectives: employment, innovation and productivity and economic growth. With the basic rationale, entrepreneurship creates values to the society and economic growth by creating new businesses. In return, more jobs, intensive competitions and productivity throughout technological change exists (Acs, 2006).

Though the research through both qualitative and quantitative studies from Rosa, Kodithuwakku and Balunywa (2008) came to the result that the poorer people are less likely to start up their business and the necessity entrepreneurship will inhibit the economic growth, where the term "necessity entrepreneur" refers to those who have no choice but to become an entrepreneur because they cannot be employed or have no other method to make ends meet, is quite popular in these years. There is also finding indicating that human capital can mitigate the negative impact of necessity entrepreneurship on economic growth, and the total entrepreneurship still has a positive impact on economic growth (Rodrigues, 2018). On the other hand, Audrestch (2007, 2009) proved the positive relationship between entrepreneurship and economic growth from the perspective of entrepreneurial capital and more investments in new knowledge. Zhao (2005) has found the positive relationship between entrepreneurship and innovation in the industry, and both of them are the critical constitutions for the

organizations getting successful and sustainable development in the dynamic and rapidly changing environment. At the same time, the entrepreneurial ability is either significantly related to the productivity of the organization (Schumpeter, 2000)

When entrepreneurship is becoming more and more important to society and economic growth, it catches the attention from outside capitalists and the government for investment and support. Wei and Wang (2009) have summarized the four-factor structural modes of social support to entrepreneurs from House's studies (1981) including the emotion support, such as sympathy, concern, love, and trust; the information support, such as the information about dealing with an individual or environmental problems for entrepreneurs; the instrument support, such as offering work helps, services, funds, and paying off checks; and the feedback support, such as helping entrepreneurs establish their directions and acquire better acceptance in new venture creation.

Many authorities, capitalists, investors, and communities deem that supporting potential startups is a cost-efficient investment (Hackett & Dilts, 2004a). The existence of business incubators and incubated entrepreneurs hence raised rapidly. For example, just within three decades, the number of development business incubators with whatever the public and private policies in the United States have increased from 12 to 1,400 just within 26 years (Knopp, 2007). From Deloitte's report (2019), the total venture capital investment in China reached \$93.8 billion in 2018 which is 2.2 billion yuan more than in the United States ranked in the second, and with more than 4,849 business incubators and 6,959 mass maker Spaces (well known as coworking offices). In Hong Kong, China, there are about 40 business incubators and mass marker spaces as of 2016 (Policy Address, 2017).

Bergek and Norrman (2008) have mentioned the use of business incubators to startups development as providing a supportive environment. Xu (2010) also agreed that business incubators provide general services and benefits to startups with practical value. Those tangible and intangible services will affect the beliefs and attitudes of startups and individuals towards entrepreneurship (Krueger & Brazeal, 1994). There is a positive correlation between the perceived performance of the business incubators during the pre-incubation stage on the desirability, self-efficacy and facilitating conditions for business commencement through contact with professionals and mentors (Martínez, Fernández-Laviada & Crespo, 2017). Meanwhile, the effects of the aforementioned services have different effect contingent on the various entrepreneurial stages (Peter, Rice & Sundararajan, 2004; Hackett & Dilts, 2004b), even there is no convincing evidence vindicating the pre-incubation services can influence the on the entrepreneurial process (Voisey et al. 2013).

Besides the entrepreneurial education and research, the university also plays another significant role in supporting entrepreneurship development. The university technology business incubator (UTBI) is a powerful enterprise development tool (Mian, 1994), especially to nurture early-stage technological firms, and encourage their growth and development (Fang, Tsai & Lin, 2010; Lee & Osteryoung, 2004). The common resources from university business incubators were co-working area, entrepreneurial network expansion and exposure, and tenants professional support and suggestions, like coaching and mentoring, and "addressing associated liabilities of newness" (Patton & Marlow, 2011).

Rasmussen and Sorheim (2006) have advocated the importance of action-based entrepreneurship education which emphasizes developing entrepreneurial intention to university students should be based on the real approach to experienced businessman and successful entrepreneurs, as well as the experience to the real business operation, rather than simple knowledge teaching. Neck & Greene (2011) also highly valued the people-dependent education system that the entrepreneurial education should not only about understanding, knowing, taking, and acting, but also the practicing. They advocated learning a method rather than the specific content.

Therefore, it is assumed that the entrepreneurs incubated by the university and working on the campus are the great resource and promotion material for entrepreneurship, and entrepreneurial spirit cultivation on campus. The government of HKSAR (Hong Kong Special Administrative Region) has implemented a STEM internship scheme in 2020 summer with the aims of not only enriching university student's internship experience, but also, more importantly, sponsoring startups employing talented interns<sup>[96]</sup>. When the numbers of new startups stationed on the campus are rising and the interactions between university students and university incubated entrepreneurs are increasingly frequent and common, it is interesting and worthwhile to see if there is any positive impact of the existence of incubated entrepreneurs on the campus to university students as for their perception of entrepreneurship, self-desirability and entrepreneurial intention, particularly when the entrepreneurial intention among students is negatively affected by the understanding of the barriers to entrepreneurship and the complexity of the external environment (Mcmullan & Long, 1987; Oosterbeek, Van Praag & Ijsselstein, 2010).

In this context, this paper examines the impact of the existence of incubated entrepreneurs on campus to students' entrepreneurial intention. Based on the previous research, we incorporate both mediating and moderating effect factors in our research framework. Firstly, we will investigate the mediating role of perceived desirability of entrepreneurship in the developing student's motivation to become an entrepreneur. Additionally, the moderating effect of perception of achievement to entrepreneurship to the students' perceived desirability of entrepreneurship is investigated.

Consequently, the main contribution of this study is to explore the more added value of the incubated entrepreneurship, including the effect of their existence on the campus to the university student's entrepreneurial intention. On the application level, it is believed that this study can contribute to discovering more ways for the government and the university to maximize and fully-utilize the values of their support in terms of cultivating the entrepreneurial spirit to the Hong Kong Z generation. On the theoretical level, the consideration of the external factor associated with incubated entrepreneurs, and the perceived desirability of entrepreneurship can be also regarded as a contribution.

In the next session, it is going to include the current literature review and delineate the specifics of the proposed research hypothesis. The research sample and methodological approach, and the empirical results will be presented either. Finally, a concise conclusion about the contribution, limitation and implication of this study for further research will be described.

## **2. Literature review and hypothesis**

### **2.1. Historical background**

There are distinctive understandings that relate to the definition of entrepreneurial intention (hereinafter: EI). Scholars argue the term to be the intention to start-up new enterprises, be self-employed, drive into new business success (Krueger, Reilly & Carsrud, 2000; Kolvereid, 1996; Timmons, 1978). This paper defines EI to be a strong desire to motivate oneself to start operating their enterprise. Katz (1988) and Reynolds (1995) describes EI to be the primary factor that contributes to further entrepreneurship behaviors. Therefore, it is believed that an enterprise could be successful under the condition in which the entrepreneur is intended, motivated and trustful to themselves when carrying out further entrepreneurship behaviors.

### **2.2 Entrepreneurship models**

In the past decades, researchers have discussed determinants of EI using entrepreneurial models in a more stereoscopic view. Among these models, Shapero and Sokol (1982) have proposed the Entrepreneurial Event Model (EEM) which refers to three variables that determine EI. They are namely: perceived desirability, feasibility and readiness. In the later stage of the 20th century, Davidsson (1995) developed the determinants of entrepreneurial intentions (DEI) model. He included the economic-psychological variables of general attitudes (money, autonomy and achievement), domain attitudes (pay-off, contribution and know-how), personal background (age, gender and education) and more. However, Lühje and Franke (2003) further developed Davidsson's DEI model by adding personality traits (need for achievement, self-efficacy and locus of control) to improve the holistic picture of EI. This is because personality is considered to be an essential psychological factor that affects human beings to make up their minds and to react correspondingly (Buss, 1995).

These two classic models are worthwhile to be explored in further details, using few variables from each model, this paper aims to search deeper into the limited areas of modern knowledge. Therefore, the variables of perceived desirability, self-efficacy and need for attainment which is different from the need for achievement. According to Callender (2008), the concept of attainment has slight variations to the concept of the need for achievement; the state of attainment is to capture something valuable and important (the pride and self-affirmation of the milestone moment), whereas achievement is performing a feat that has been attained before. In short, attainment may come along with more pride in oneself than achievement since personnel is able to obtain something of the value they truly love. However, someone can achieve something that they do not always contribute to their interest.

### **2.3. Research Variables**

In view of perceived desirability, Scholars argued that it was expressively aligned with the prior exposure to entrepreneurial activity (Krueger, 1993; Yousaf et al., 2015). This may suggest that strong support is needed to trigger the incubator's perceived desirability in order for them to realize their EI. However, Izquierdo and Buelens (2011) mentioned that perceived desirability would be unprevailing without self-efficacy and self-motivation to strive entrepreneurial success.

In addition, Kristiansen and Indarti (2004) asserted that self-efficacy is one of the most prevalent variables that significantly affect EI. However, together with Schwarz et al. (2009), they criticized that age, gender and educational and environmental

support does not show positive statistical impacts. This contradicts with research conducted by Turker and Selcuk in 2009, they found that both self-efficacy and perceived level of education, opportunities, and support have a positive impact on the EI of university students. From these results, there are debates upon the current trends of the impact of EI for the students. As there are some variations observed in different regional nations' findings from the scholars mentioned above, this further implies that the respondent's cultural background can drive different intentions and motivation towards the perception of entrepreneurship.

The last variable of need for achievement concept was firstly proposed by McClelland (1961), he reveals that only individuals that perceive high levels of need for achievement would connote having a strong intention to become successful. Therefore, his findings indirectly relate to the positive relation between EI and need for achievement which was later proven by other scholars (Ferreira et al., 2012; Espiritu & Sastre, 2015). Nonetheless, Karabulut (2016) found that there was no obvious relation between the impact of need for achievement on EI.

From the past trend observed in the entrepreneurial research field, it is found that majority of studies concentrated to explore the influences of internship programs, pre-incubated stage, action-based entrepreneurial education and self-motivation on EIs (Zhao, Seibert & Hills, 2005; Rasmussen & Sørheim, 2006; Martínez, Fernández & Crespo, 2017; Zreen et al., 2019). However, there is a lack of research studies that focuses merely on the impact of incubated entrepreneurs on campus to students' entrepreneurial intention.

Although Erikson and Gjellan (2003) revealed that future incubated entrepreneurs could be positively influenced by the temporary incubation programmes such as the Silicon Valley, which merely suggests that programmes that create meaningful real-life experiences for future entrepreneur candidates can help to boost up the entrepreneurial intention. However, it still lacks the direct linkage towards on-campus incubators. Therefore, those prospective entrepreneurs are the rich resources for university students developing entrepreneurship. Consequently, the objective of this paper aims to reveal the crucial relationship between students of entrepreneurship intention and the on-campus incubators. The incubated entrepreneurs refer to the graduates who have already started up or been processing their own enterprises. Currently, the top 7 ranked universities in Hong Kong do provide several departments, such as Innohub of Institute for Entrepreneurship, Center for Entrepreneurship, iDendron and Entrepreneurship and Innovation Centre. They are official departments, offices and student societies from campus. It is expected to have professional validity and may create a positive influence to those on campus incubators. These programs aimed at providing university students with a practical sense of the real-life issues of setting up their own enterprise, increasing the chance of fresh graduate startups in Hong Kong.

In short, this paper aims at testing the possibility that university students (younger age personnel) could have stronger EI to start up their enterprises under the current trend in Hong Kong. Moreover, their need for attainment factor would be either considered when assessing the facilitation of EI for them to become future entrepreneurs.

#### **2.4. Hypothesis**

Several studies support the existence of university educational programs can prompt the desirability of university graduates to pursue entrepreneurship, and there is a genuine indirect positive relation (Wang, Wong & Lu, 2002; Peterman, & Kennedy, 2003; Byabashaija & Katono, 2011; Zhang, Duysters & Cloudt, 2014). In particular, McGowan et al., (2001) revealed that entrepreneurial intentions are partially dependent on the quality of human relationships within university entrepreneurial-related programs. However, the empirical studies are still limited to suggest the relationship between the graduated incubated entrepreneurs' effect on university students' desirability of entrepreneurship. Hence, this research aims to test for the positive relation between incubated entrepreneurs on campus and the desirability of entrepreneurship for university students shown by hypothesis 1:

H1: The existence of incubated entrepreneurs on the campus is positively related to the perceived desirability of entrepreneurship.

In addition, this paper expects that the need for attainment could moderate towards H1. Similar studies based on the need for achievement's effect on the desirability of entrepreneurship have shown positive correlations (Wu & Dagher, 2007; Ryan, Tipu, & Zeffane, 2011; Chen, Su & Wu, 2012). More importantly, the perception of achievement moderators from Wu and Dagher (2007) showed a positive indirect link to entrepreneurial desirability in relation to business goals. Taking their findings, this research aims to test whether the existence of incubated entrepreneurs can, to some extent, trigger the student's desirability to pursue their dreamed business goals which contribute to a great sense of attainability. However,

different from the need for achievement, this research aims to reveal the relation between need for attainment to H1 in line with improvements based on previous findings. Therefore, hypothesis 2 is proposed below:

H2: The perception of attainment to entrepreneurs moderates the relationship between the existence of incubated entrepreneurs on campus and perceived desirability of entrepreneurship.

Furthermore, in this paper, the perceived desirability of entrepreneurship was deliberately used as a mediating factor to test for the potential correlations between the existence of incubated entrepreneurs and the entrepreneurial intention. According to Khuong and An (2016), a positive indirect impact on entrepreneurship intention has been found when taking into consideration a student's degree of desirability towards entrepreneurship. They argued that desirability from individuals depends on the cost and benefit weighing between starting up an enterprise and other alternatives. Using this way of thought, this paper aims to test whether the existence of incubated entrepreneurs (senior graduated alumni) could positively induce more benefits than the cost to the university students when they make up their mind to create their own enterprise alongside with more entrepreneurial intentions. Hence, hypothesis 3 is proposed below:

H3: The perceived desirability of entrepreneurship mediates the relationship between the existence of incubated entrepreneurs on the campus and the entrepreneurial intention among university students.

**3. Methodology**

**3.1 Sample**

The population is based on the students from night universities located in Hong Kong where students of Z generation born in 1995 to 2005 are from different education levels subsuming HD/Associate students, undergraduates, post-graduates, and PhD students, as well as with various academic fields from business, engineering, computing, medicine, design, humanities, health and social science, construction and environment, hotel and tourism management. The data were mainly collected from the students at Hong Kong Polytechnic University from the online questionnaire platform Tencent Questionnaire so that students from different places and in time difference can respond to the questions conveniently and effectively, particularly during the Covid-19. Different from previous studies, this questionnaire was sent out by university students to their friends and schoolmates, believing that the respondents will pay more effort and time on answering the questionnaire because of peer pressure and group identity effects. Meanwhile, the response is deemed to have higher authenticity and validity. To strengthen the validity of the data, some responses finished within 30 seconds were filtered out. The investigation was conducted since September 2020. The respondents received an email and messages from social media platforms about the research objectives and the link and QR code to the questionnaire that was available online. There were 165 valid responses where 61.2% of the respondents were 20 - 21 years-old while the proportion of younger and older are both about 18%. There were more female respondents in this survey (about 54.5%), and most of the respondents are undergraduate (87.3%) and from business school (55.8%).

**3.2 Measures**

To measure the entrepreneurial intention, perceived desirability of entrepreneurship, perception of attainment to entrepreneurship, and the impact of the existence of university-incubated entrepreneurs on the campus, we referred to the measurement denoted by Giordano, Fernández-Laviada and Herrero in 2018. We weighted up all statements on a five-point Likert-scale from “strongly disagree” to “strongly agree” that all the items are listed in the following table.

<b><i>Entrepreneurship Intention</i></b>	
EI 1	I have a clear intention to create my own business in the future.
EI 2	My professional objective is to create my own business in the future.
EI 3	I am determined to create my own business in the future.
EI 4	I will do anything possible to create my own business in the future.
<b><i>Desirability of Entrepreneurship</i></b>	
DE 1	The idea of creating my own business is attractive to me.
DE 2	Creating my own business would be a huge satisfaction for me.
DE 3	I believe I can get more benefits than cost if create a business

DE 4	I think I can get unexpectable benefits if I create a business.
<b>Perception of Attainment to Entrepreneurship</b>	
PAE 1	Entrepreneurs on the campus seem to matter to me.
PAE 2	Entrepreneurs on the campus are important to me.
PAE 3	Entrepreneurs on the campus make me interested in creating a business in the future.
PAE 4	Entrepreneurs on the campus help me know more about creating a business.
<b>Existence of Incubated Entrepreneurs at campus</b>	
IEC 1	I think creating a business is a kind of attainment.
IEC 2	I would be proud if I create a business.
IEC 3	I think entrepreneurs are successful.
IEC 4	I will feel successful if I create a business.

Relatively commensurate with previous researches, we measured the entrepreneurship intention with four questions concerning different intention levels to entrepreneurship, such as the clarity of the goal, and the determination in this goal. The desirability of entrepreneurship was either measured by four items asking respondents their perceived attractiveness of the idea of entrepreneurship as well as the perceived satisfaction of creating a startup. The perception of the existence of university incubated entrepreneurs on the campus was measured from the perceived importance, galvanization, approaches and benefits to commence the business in the future. And the perception of attainment of entrepreneurship was measured from the perceived entrepreneurial success and the sense of pride for creating their own business. The reliability of the measures was tested by Cronbach Alpha taking the average responses among four items. The Cronbach Alpha value for the entrepreneurial intention was 0.922, for perceived desirability of entrepreneurship was 0.89, for the perception of attainment to entrepreneurship was 0.886, and for the impact of the existence of university-incubated entrepreneurs on the campus was 0.779.

	Cronbach's Alpha	N of Items
Entrepreneurship intention	0.922	4
Desirability to entrepreneurship	0.89	4
Existence of incubated entrepreneurs on the campus	0.886	4
Perception of attainment to entrepreneurship	0.779	4

The classical hierarchical regression analysis (Cohen & Cohen, 1975) was adopted for moderating analysis, containing the regression analysis of dependent variable on control variable, adding independent variable and moderating variable to the regression analysis respectively, and the interaction term added eventually.

The mediating effect analysis was followed by Baron and Kenny's (1986) instruction in which the regression on the dependent variable on the independent variable, the mediating variable on the independent variable, and mediating variable on the dependent variable will be analyzed first. After that, by controlling the mediating variable, the change of independent variable to a dependent variable from the original relationship to the mediated relationship will be blatant.

#### 4. Results and Discussion

**Table 2 Means, standard deviations, and correlations**

Variables	Mean	s.d.	1	2	3
1. Existence of incubated entrepreneurs on campus	3.14	0.83			
2. Desirability of entrepreneurship	3.27	0.89	0.42**		
3. Entrepreneurship Intention	2.93	0.96	0.44**	1.00	

4. Perception of attainment to entrepreneurship	3.80	0.67	0.38**	0.43**	1.00
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\* $p < .05$ ; \*\* $p < .05$ ; \*\*\* $p < .001$

\*\*Correlation is significant at the 0.01 level (2-tailed).

In table2, the existence of incubated entrepreneurs on campus was correlated with desirability of entrepreneurship ( $r = .42, p < .05$ ), entrepreneurship intention ( $r = .44, p < .05$ ), and perception of attainment to entrepreneurship ( $r = .38, p < .05$ ) respectively. Thus, hypothesis 1 was supported.

**Table 3 Results of hierarchical regression analysis of affective commitment**

Variables	Model 1	Model 2	Model 3	Model 4
Age	0.230	0.137	0.106	0.104
Existence of incubated entrepreneurs on campus		0.404***	0.298***	0.304***
Perception of attainment to entrepreneurship			0.294***	0.284***
Existence of incubated entrepreneurs and Perception of attainment (Mean-centered)				-0.028
R square	0.053	0.208	0.280	0.281
R square change	0.053	0.155	0.073	0.001
F	8.967	20.848***	20.525***	15.351***

\* $p < .05$ ; \*\* $p < .05$ ; \*\*\* $p < .001$

Dependent Variable: Entrepreneurship Intention

For moderating analysis, age and gender are chosen as the control variable and dummy variables respectively. Since the beta value is anomalous, the mean-centred data is used to minimize the distortion. Table3 presents the interaction effect of the existence of incubated entrepreneurship on campus and the perception of attainment to entrepreneurship. Mean-centred data were used to minimize the aberration and deviation because of the anomalous imbrication of interaction term and the component variable. There was no significant relationship between the product term and entrepreneurship intention ( $\beta = -0.028, p > .05$ ). Therefore, hypothesis 2, stating that the perception of attainment to entrepreneurs moderates the relationship between the existence of incubated entrepreneurs on campus and perceived desirability of entrepreneurship, was not supported.

**Table 4 Results of hierarchical regression analysis**

Variables	Entrepreneurship intention				Desirability of entrepreneurship	
	Model1	Model2	Model3	Model4	Model5	Model6
Age	0.230	0.137	0.116	0.097	0.148	0.055
Existence of incubated entrepreneurs on campus		0.404***		0.111*		0.403***
Desirability of entrepreneurship			0.771***	0.728***		
R square	0.053	0.208	0.634	0.644	0.022	0.176
R square change	0.053	0.155	0.581	0.436	0.022	0.154
F	8.967	20.848***	137.926***	95.331***	3.601	16.978***

\* $p < .05$ ; \*\* $p < .05$ ; \*\*\* $p < .001$

From table 4, regressing the dependent variable on independent variables showed that the existence of incubated entrepreneurs on campus was highly related to Entrepreneurship intention ( $\beta = .404$ ,  $p < .001$ , Model 2). Regressing the mediating variable on the independent variable either indicated a close relationship between the existence of incubated entrepreneurs on campus and desirability of entrepreneurship ( $\beta = .403$ ,  $p < .001$ , Model 6). Regressing the dependent variable on the mediating variable pointed out that desirability of entrepreneurship affected entrepreneurship intention ( $\beta = .771$ ,  $p < .001$ , Model 3). Controlling for the desirability of entrepreneurship, it showed that the effect of the existence of incubated entrepreneurs on campus to entrepreneurship intention became less significant ( $\beta = .404$ ,  $p < .001 \rightarrow \beta = .111$ ,  $p < .05$ ), implying that desirability of entrepreneurship partially mediated the relationship between the existence of incubated entrepreneurs on the campus and entrepreneurship intention (Model 4).

As for the first hypothesis, the existence of incubated entrepreneurs on the campus does positively relate to the perceived desirability of entrepreneurship. This suggests that the sharings and success path of previous senior students do motivate the current university students' desirability to begin their own enterprise path, and thus making entrepreneurial-related programs valid and helpful. Martínez, Fernández-Laviada and Crespo (2017) found that students' entrepreneurial desirability and intention are supported through the pre-incubation stage of startups. Hence, the result is consistent with previous research because the current students are partially going through a pre-incubation stage with innovative ideas but not yet started. Furthermore, as entrepreneurial desirability was negatively correlated with the increased level of uncertainty and risk (Giordano, Herrero & Fernández, 2017), it probably can explain H1 that the existence of incubator entrepreneurs does to some extent reduce the level of perceived uncertainties and risks of creating a business at the beginning for the university students so that they are interested in it.

As for the second hypothesis, the perception of attainment to entrepreneurs does not moderate the relationship between the existence of incubated entrepreneurs on campus and perceived desirability of entrepreneurship. This paper pointed out the difference of self-value between the need for achievement and need for attainment above. In particular, the attainment obtained is related to some targets valued by an individual who can acquire self-esteem and satisfaction once achieved whereas, the achievement of a certain skill which is world-widely valued rather than self-defined cannot trigger a sense of self-actualization. It seems that the existence of incubated entrepreneurs may only act as psychological and advisory support who cannot bring over a value and sense of attainment of starting up a business to the undergraduates. On the other hand, most universities in Hong Kong advocated the holistic and diversified development to students who, thus, do have different kinds of pursuance. Therefore, the effect perception of attainment to entrepreneurship acting as the moderator to entrepreneurship intention is contingent individually.

When it comes to the mediation effect of the desirability of entrepreneurship, surprisingly it can only partially mediate the relationship between the existence of incubated entrepreneurs on the campus and entrepreneurship intention. With the cost-benefit framework advocated by Khuong and An (2016), this finding can be interpreted that the incubated entrepreneurs (senior graduated alumni) do create a sense that starting up a business costs more than benefits to the university students. It is probably because those startups in the development stage are young and inexperienced and wanting more resources and time from the founders to develop, while have not yet been predictably able to generate profits and influence on the entrepreneurs at that moment. It is somewhat identical with the finding from Shane, Locke and Collins (2003) that people are more likely to be negative and undesired to entrepreneurship when the situation in operating the business is ambiguous, uncertain, and unpredictable. Meanwhile, the perceived cost of starting up a business is interdependent to the perceived facilitating conditions. For example, more supports provided by the university, such as the co-working area will reduce the perceived costs of creating and operating a business. Accordingly, it can influence the desirability of entrepreneurship and entrepreneurship intention, which is consistent with the finding from the research of Martínez, Fernández-Laviada and Crespo in 2007.

## **5. Conclusion**

Along with the gradual emphasis on the importance of entrepreneurship and the existence of UTBI (the university technology business incubator) in which university launched different entrepreneurial programs either in order to edify the entrepreneurial spirit among undergraduates and support the early-stage startups, this study aimed at exploring more possibilities of optimizing the current resources and more perspectives to better cultivate the entrepreneurship spirit in the university. From our literature reviews, it seems that previous researches more discussing the alternatives or reflecting the effect of university educational programs to students' entrepreneurship intention, but less talking about the effect of interaction between the university incubated entrepreneurs (startups founders with UTBI) and university students. Thus, this study aims to fill in this gap by investigating the relationship between the existence of incubated entrepreneurs at the



campus and the entrepreneurship intention among university students. The study has incorporated both mediating and moderating effect in the research framework with two factors: the desirability of entrepreneurship and the perception of attainment to entrepreneurship. The results indicated that the existence of incubated entrepreneurs at the campus is the motivation factor to the entrepreneurial spirit in the campus while the perception of attainment to entrepreneurship could not play a moderating role in the relationship between the existence of incubated entrepreneurs and entrepreneurship intention. And the desirability of entrepreneurship rather partly mediates this relationship.

This study has contributed to explore the more added value of the university-incubated entrepreneurs to entrepreneurial intention to undergraduates and discover more ways for the government and the university to maximize and fully-utilize the values of their support in terms of cultivating the entrepreneurial spirit to the Z generation. This study either contributed the value of distinguishing the difference of perception of achievement and perception of attainment to entrepreneurship, regarding the effect to the entrepreneurship intention. As mentioned, the state of attainment is to capture something valuable and important (the pride and self-affirmation of the milestone moment), whereas achievement is performing a feat that has been attained before. Attainment may come along with more pride in oneself than achievement since personnel is able to obtain something of the value they truthfully love. However, someone can achieve something that they do not always contribute to their interest. Therefore, it is recommended that the current university educational program can encourage students to explore the value of entrepreneurship and the intrinsic motivation to entrepreneurship. There is still work for institutions to generate the belief that entrepreneurship can either be one of the considerations for undergraduates in designing their career path, by enhancing the sense of attainment about starting up a business.

There are some limitations for this paper that should be considered when interpreting the results. First, this study was a pilot test which only collected about 165 valid data from 345 responses with a convenience random sampling method of an online questionnaire, in which the business students are about half and the responses probably can moderately represent the population. Further study will apply the stratified sampling to diversify the samples and the investigation across different universities to make sure the representativeness is recommended. Furthermore, this study only focused on students' general perception to the existence of incubated entrepreneurs on campus, the specific analysis on the effect of different particular programs where students have meet up and communicated with those incubated entrepreneurs is needed in further studies, such as the startup founder sharing, networking session, the mentorship program and the quotidian contact, so as to design a better program to attract more undergraduates and cultivate a stronger entrepreneurial norm and spirit in the campus.

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## Appendix 1

<b>Entrepreneurship Intention</b>	
EI 1	I have a clear intention to create my own business in the future.
EI 2	My professional objective is to create my own business in the future.
EI 3	I am determined to create my own business in the future.
EI 4	I will do anything possible to create my own business in the future.
<b>Desirability of Entrepreneurship</b>	
DE 1	The idea of creating my own business is attractive to me.
DE 2	Creating my own business would be a huge satisfaction for me.
DE 3	I believe I can get more benefits than cost if create a business
DE 4	I think I can get unexpected benefits if I create a business.
<b>Perception of Attainment to Entrepreneurship</b>	
PAE 1	Entrepreneurs on the campus seem to matter to me.
PAE 2	Entrepreneurs on the campus are important to me.
PAE 3	Entrepreneurs on the campus make me interested in creating a business in the future.
PAE 4	Entrepreneurs on the campus help me know more about creating a business.
<b>Existence of Incubated Entrepreneurs at campus</b>	
IEC 1	I think creating a business is a kind of attainment.
IEC 2	I would be proud if I create a business.
IEC 3	I think entrepreneurs are successful.
IEC 4	I will feel successful if I create a business.

Appendix 2

variable	mean	std	skewness	Kurtosis
<b><i>Entrepreneurship Intention</i></b>				
EI 1	3.01	1.048	0.282	-0.519
EI 2	2.94	1.09	0.24	-0.612
EI 3	2.87	1.07	0.108	-0.58
EI 4	3.47	1.016	-0.328	-0.56
<b><i>Desirability of Entrepreneurship</i></b>				
DE 1	3.28	1.017	-0.007	-0.559
DE 2	3.52	1.053	-0.406	-0.526
DE 3	2.81	1.019	0.322	-0.27
DE 4	3.03	0.902	0.196	-0.29
<b><i>Perception of Attainment to Entrepreneurship</i></b>				
PAE 1	3.02	0.971	0.197	-0.242
PAE 2	3.17	0.982	0.045	-0.506
PAE 3	3.32	1.007	-0.238	-0.156
PAE 4	2.91	1.068	0.28	-0.719
<b><i>Existence of Incubated Entrepreneurs at campus</i></b>				
IEC 1	3.67	0.856	-0.321	-0.168
IEC 2	4.03	0.881	-0.668	0.302
IEC 3	3.66	0.789	-0.466	0.694
IEC 4	3.86	0.932	-0.646	0.083