

The Role of Entrepreneur Education in Shaping Student's Views on Self-Employment: A Study of University Students in Thailand

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The prime objective of the current study is to examine the role of entrepreneur education in shaping Thai university student's views on self-employment. The purpose of this study is to examine the influence of entrepreneurship education on students' views on self-employment, by examining the variables of technical knowledge, innovation and communication skill, and then developing a model as linkage between them. This study demonstrates that policy makers and educators should prioritize technical knowledge and innovation for nascent entrepreneurs to perform optimally. The study has used a survey-based method and the data is collected from university graduates in Thailand. SEM-PLS is used to analyse the data. Consistent with previous studies on entrepreneurship education and views on self-employment, findings from this study show that technical knowledge and innovation have an influence on students' views on self-employment. This study contributes to prior research on the factors that can influence self-employment, which include technical knowledge and innovation. However, this study reveals the need for further clarification, or evidence, on the impact of communication skills on self-employment. This study equally finds support for the use of the knowledge spillover theory of entrepreneurship.

Key words: *Entrepreneurial education, Self-employment, Thailand.*

Introduction

Self-employment is currently on the increase globally, the right perception on this new trend will invariably lead to poverty reduction and reduced joblessness among university graduates (Goetz, Fleming, & Rupasingha, 2012; Chienwattanasook, & Jermittiparsert, 2019). This is in contrast to earlier perceptions that self-employment is a low paying career meant for retrenched workers or retirees and that the self-employed are largely poor (Goetz et al., 2012; Artha, & Mulyana, 2018). The decision to become self-employed hinges on a wide array of factors which include a graduate's unemployment, inability to get well paid jobs, job satisfaction, personality traits, independence etc. Therefore, becoming a nascent entrepreneur is viewed as the panacea (Stel, 2005).

A preference for self-employment could exist because of the inherent benefits of it, especially when these benefits are high (Meager, Martin, Carta, & Davison, 2011). The pursuit of self-employment, as postulated by earlier researchers, is an issue of individual differences and this depends to an extent on an individual's perspective (Singh, Saghafi, Ehrlich, & De Noble, 2010). The knowledge spillover theory supports the opinion that knowledge has the capacity to influence views on self-employment (Audretsch, Keilbach, & Lehmann, 2005; Nobanee, 2018).

On the contrary, Meager et al. (2011) reported that education has not always been the determinant of self-employment. Similarly, Parker (2004) shares the opinion that education can have both positive and negative effect on students views of self-employment. Their reasoning being that educated individuals can have access to information which can lead to opportunity to explore new ventures. Experience can add an impetus to potential entrepreneurs' desire for venture creation. These experiences can be acquired through training at different times, and can include internships, apprenticeships, mentoring etc., all of which a potential entrepreneur can build upon (Keat, Selvarajah, & Meyer, 2011). All of these experiences can be imbibed in education curriculums as enablers for venture creation.

Unfortunately, these experiences are missing in most universities in developing countries, and as such the will power to start a new business is lean. Singh and DeNoble (2003) noted that skills in social interaction are required for entrepreneurs to thrive, additionally, self-employment is the way out of unemployment (Singh et al., 2010). An inclination to become self-employed depends on an individual's views on self-employment. The issue now is whether graduates are willing to become self-employed.

Entrepreneurship has experienced tremendous growth, especially in developed nations (Atici, 2018; Kariv, Matlay, & Fayolle, 2019; Tripopsakul, 2018). It is a growing field due to the increasing awareness on the role it can play and on the level of contribution it has had to the

wealth of developed nations and to society at large. Study of entrepreneurship has become relevant and has been accorded much recognition among students, who now attend management or business schools to obtain the technical know-how as entrepreneurs, or be favourably positioned in the labour market (Finkle, Soper, Fox, Reece, & Messing, 2009; Mohammed, 2017). However, Elmuti, Khoury, and Omran (2012) submit that most universities rarely offer education on what become an entrepreneur entails. They found that only one out of nine randomly selected institutions of higher learning in the United States, England, France and Germany covered every point that is assumed as essential in entrepreneurship education. They postulate that required skills such as technical skills, management and personal entrepreneurial skills can be learned through effective entrepreneurial education.

Proper perceptions of self-employment, as developed through educators, stakeholders and potential entrepreneurs, can motivate or develop an innovative and creative spirit that is needed for growth and development in society (Ferrari, Cachia, & Punie, 2009; Singh et al., 2010). According to Idogho and Augustine (2011), all stakeholders, governments, non-governmental organizations and corporate bodies must be involved in promoting entrepreneurship education in order to stem the tide of unemployment and poverty.

Howbeit, there is no consensus as to whether entrepreneurs are born or made, and this has remained a subject of empirical debate. While some scholars argue that entrepreneurs are made (Raju, Kumar, & Ramgopal, 2015; Rosique-Blasco, Madrid-Guijarro, & García-Pérez-de-Lema, 2018), others disagree, and insist that entrepreneurs are born but certain skills can be taught. Some others are fence sitters in the arguments and are not definite or certain on whether they are born or made. For example, Raju et al. (2015) argues that, developed nations, like the US, have produced eminent entrepreneurs because of early exposure to entrepreneurship education. They uphold the view that entrepreneurship education serves as an eye opener, which has the capability to broaden and invigorate vision by motivating students' intention towards an entrepreneurial mind set. Earlier, they postulated that the view that some people are born entrepreneurs no longer holds, as there is a growing acceptance that entrepreneurship can be taught (Raju et al., 2015; Rosique-Blasco et al., 2018). In contrast, it was postulated that only certain skills can be taught and the inborn traits cannot be learned.

At this juncture, it is difficult to state categorically or infer that the problem of lack of effectiveness of entrepreneurship education is due to certain factors. However, if other fields of knowledge can make meaningful impact through education, then so to can entrepreneurship education, but, there may be underlying factors which might be inhibiting the expected effectiveness and efficiency of such. Entrepreneurs need deliberate efforts to explore and identify waiting opportunities and privileges. Audretsch et al. (2005) is of the

view that entrepreneurship education is important, because knowledge gained from university can be used to generate ideas which results in innovation and growth.

Literature Review

Views on Self-Employment

Entrepreneurship is widely recognized as a driving force in economic development, as such governments initiate entrepreneurial programmes to raise and support nascent entrepreneurs. For instance, the Obama Startup America initiative (US), UK's loan scheme for young entrepreneurs (UK), the India National Rural Employment Guarantee Act (India), and the Mexico Becate program (Mexico) etc. The existence of these programs show part of the effort being made in different countries to influence positive perceptions of self-employment.

The Asian tigers (Hong Kong, Singapore, Taiwan, and South Korea), the Asian cubs (Indonesia, Malaysia, Philippines and Thailand), China and Vietnam have gone beyond domestic markets and focus on economic growth by exporting to different parts of the world. The issue of self-employment cannot be overemphasized, individuals can become self-employed by choice, or because there is no other alternative or choice (Setamanit, 2018).

Views on self-employment can be based on three dimensions, as identified by Singh and DeNoble (2003), firstly, the intention to become self-employed. Dabale and Masese (2014) explained that the factors that influence an individual intention are important. Intention also depends on the level of tolerance for risk and independence. Secondly, perceived ability, which was explained as the recognition of opportunity and acting on it. Thirdly, personal investment, which is classified as one of the biggest investments in self-employment, and necessitates the commitment of resources from individuals and stakeholders.

Elmuti et al. (2012) present three major entrepreneurship education indicators, which they employed in their survey of entrepreneurs and potential entrepreneurs in United States. They report that, entrepreneurship education has the capability to impact graduate entrepreneurs' self-employment with sustainable ventures, as it provides the needed knowledge and skills to do. They itemized those indicators as managerial skills, social competence and basic entrepreneurial training, out of which, the subcategories of technical knowledge and interpersonal skills were statistically significant. It was agreed that entrepreneurship education has a significant impact on venture creation and that entrepreneurship education can be taught (Jabarullah and Hussain, 2019).

The problem of graduate unemployment is a global phenomenon. Unemployment has contributed to the rising rate of crime in some developing countries. Pauw et al. (2008) declared that prolonged periods of unemployment could worsen a person's mental health. At

the inception of every political era one of the foremost agendas is empowerment programmes for the youth.

In 1986 under the leadership of General Ibrahim Babangida, the National Directorate of Employment (NDE), Better Life for Rural Women, and Family Support Programme, were implemented. During the Yar'adua administration, all higher learning institutions were directed to commence entrepreneurship studies for all students, irrespective of their course, in a bid to reduce unemployment, unfortunately this was program was unable to produce the desired result.

Scholars have itemized some causes of unemployment: faulty education systems, hostile economic environments, underdeveloped small and medium industries, unstable government policies, neglect of agriculture and lack of access to finance. In the absence of the aforementioned, self-employment will thrive and there will be more venture creation. Some world leaders may be tacit or fickle, on enlivening entrepreneurial ideas in all stages of learning because of the view that unemployment is a global phenomenon. However, others are fervidly strategizing on how to be well-positioned in the world economy and be able to turn out fecund youths. China has devoted substantial resources to innovation and soon China may become the most innovative country in the world.

The researcher submits that only a fraction of Chinese university graduates start-up businesses after graduation. The government sees this exigency and offers strong support to entrepreneurial activity. As such, China is now developing a reputation for innovativeness. A desire to become self-employed can stem from different opinions. Verheul, Thurik, Grilo, and Van der Zwan (2012) note that, gender influences preference and actual involvement in self-employment. While perceived ability, risk attitude, self-employed parents etc, are drivers of self-employment. They conclude that women lack the willingness and have a low preference for self-employment.

Meager et al. (2011) report that there is a steady rise in self-employment in the UK, they postulate that individuals become self-employed based on different reasons, including: lifestyle (family consideration), cultural background, independence, job satisfaction, inability to secure a well-paid job etc. Meager et al. (2011) further note that push or pull factors may be responsible for the decision to become self-employed. The “push factor” is the necessity faced by entrepreneurs that may arise as a result of inability to get paid employment. Such individuals do not cherish self-employment, but the increasing unemployment rate and the desire to be financially independent has led them to start new businesses.

Although opportunity driven entrepreneurs may pursue venture creation by choice, Støren (2014) proposes that two third of entrepreneurship graduates would opt for something

different if the opportunity arises. Enterprise culture is an important issue when considering self-employment. Some individuals project themselves as deficient in entrepreneurial skills due to their cultural environment, where their identity is indisposed to self-employment or entrepreneurship.

Other individuals are identified as having a specific cultural origin and religious settings that provides a propensity for entrepreneurship (Awoonor-Aziaku, 2017; Malecki, 2018). Culture is linked with creativity in the sense that some cultural domains allow creativity to thrive and highly encourage it, while some others nib it (Ferrari et al., 2009). According to Singh and DeNoble (2003), self-employment has been suggested as a part of the panacea to the challenges facing emerging economies. Meager et al. (2011) submit that a sizable proportion of the workforce in the UK have an avid desire to start their own business but there seems to be cultural barriers that inhibit their aspirations. The author infers that a wider scope of entrepreneurship education will propel positive influence on innovative and entrepreneurial skills.

Researchers note that access to timely and accurate information through networking will empower graduate entrepreneurs to achieve significant entrepreneurial success. Adeniyi, Doherty, Oladipo, and Bolaji (2014) observed that finance management is a major impediment to venture creation for some graduates, although profitable management of finance requires a certain impetus which could be acquired through entrepreneurship education. Countless start-ups have led to bankruptcy due to the lack of financial management. They conclude that it is not sufficient to just have access to micro finance, but it is necessary to effectively and efficiently utilize such funds.

Entrepreneurship Education

Dickson, Solomon, and Weaver (2008) found that a positive relationship exists between education and entrepreneurial performance, according to the authors, this is agreeance with the general consensus of existing research. Scholars present that education is strongly correlated with success, but educated entrepreneurs can experience greater success and achievement based on other factors such as: access to finance, inherited wealth, and access to information etc. This research paper itemizes some variables that affect the desire to go into self-employment, including; technical knowledge, communication skills and innovation as the independent variables, while self-employment is the dependent variable. These variables were identified as important based on earlier researchers' opinions and theories.

The framework is derived from Elmuti et al. (2012) where three major entrepreneurship education indicators are presented; (1) entrepreneurship education and managerial skills, (2) social competence and interpersonal skills, and (3) basic entrepreneurial training skills. Each

of these three major indicators contained more than four variables which were used as independent variables to examine organizational effectiveness as the dependent variable.

Communication Skills

Improved knowledge of communication skills can lead to an effectiveness and efficiency in interacting in the business world. Yet, communication skills are perceived and portrayed as a lesser skill, that is more insignificant in entrepreneurial activities than other skills (Mwasalwiba, 2010). Mwasalwiba (2010) confirmed this in his article, whereby a total of 108 articles were identified, out of which 21 were reviewed to identify the most common subjects or course contents in specific entrepreneurship programmes. Out of the 18 subjects identified, communication skill was the second lowest in the rank and order of importance. Inyang and Enuoh (2009) acknowledged that certain entrepreneurial competencies (communication, knowledge, skills etc.) are lacking and this had rendered some graduates unemployable in the labor market. Similarly, Meager et al. (2011) notes that certain skills (generic skills, soft skills, social skills) and knowledge are relevant to self-employment, however, these skills require constant updates.

Pauw et al. (2008) submits that the absence of social skills or soft skills, such as communication and management skills can affect efficiency; to forestall this, those skills should be learnt. For maximum efficiency and to unravel current challenges, entrepreneurs require skills, knowledge and attitudes rooted in effective training. Meager et al. (2011) reported that the required skills vary, and are dependent on entrepreneurs aspirations, however, their communication skill rank is one of the needed skills (Mwasalwiba, 2010).

Entrepreneurship education should emphasize interpersonal communication to enhance better interaction within the business world and the entrepreneurs' immediate environment. It is equally submitted that interpersonal communication skills should be included in entrepreneurship curriculums as part of enablers in the entrepreneurial domain. The researcher indicates that entrepreneurial skills should be inculcated early on, so as to produce successful entrepreneurs and reduce the number of unemployed graduates in Malaysia. He concludes that entrepreneurship education should be included in the curricular from primary to tertiary institutions to prepare and equip youths with an entrepreneurial spirit.

Innovation

Innovation is the successful use of skills and resources to create new technologies or new goods and services. Innovation is core in meeting the challenges of this dynamic and information driven age. Innovation can be termed as the forerunner of the entrepreneurial process, which is ultimately so germane and inevitable for an entrepreneur's success.

Innovative minds and entrepreneurial abilities are required for self-employment to thrive, these can be annexed through entrepreneurship education. Dobni (2014) notes that leading innovation economies of the world are anchored by a strong focus on education at all levels. There must be a transfer from pure knowledge to innovation and entrepreneurship education within the university environment by creating models for a better understanding of entrepreneurship practice as a core to self-employment. This is to be done to ensure that innovation and entrepreneurship education is established, on which an entrepreneur can anchor their foundation and continuous growth (innovation), in order to build solid, stable and well-founded business ventures which can guarantee self-employment.

Dobni (2014) submits that an educational system that has an innovative culture should be supported, because sustainable growth and development will remain elusive without support for an educational system. Omerzel and Antončič (2008) noted that “organizations are becoming more knowledge intensive and they are hiring ‘minds’ more than ‘hands’.” The role and relevance of innovation is necessitated by the paradigm shift in the acquisition of knowledge and advancement in technology. Innovation is the hub in today’s business world (Dobni, 2014), any company that fails to change through innovation will soon fizzle out.

Huang and Ribeiro-Soriano (2014) identify that innovation is an indispensable tool which an entrepreneur wields to soar in the storm of inevitable changes and shortened life cycle of product and service that is prevalent in the business world today. Huang and Ribeiro-Soriano (2014) further observe that innovation is employed by governmental agencies around the world to improve public services as the only avenue through which citizens can be slaked. Raju et al. (2015) report that, 76% of their respondents would like to start new ventures or be self-employed, but only with innovative ideas as back-up. Innovation is an essential element required to meet the current trend in technological changes, which demand knowledge based research so as to develop appropriate innovative attitudes that can enhance individual wellbeing and organizational growth (Ferrari et al., 2009; Ayenew, 2016).

Advancement in media and technology provides opportunity for all to explore creative innovation, add value, discover new methods and develop new approaches or ideas. Since innovation can be fostered or inhibited, the right perception, obtained through educators, can motivate or develop the innovative spirit that is needed for self-employment.

The pathway to experience growth is found by creating new value through innovation and entrepreneurship that is suitable to economic development. An entrepreneur has the ability to exert a certain degree of control over factors that can influence the conversion of creative ideas into new innovations. On the other hand Balan and Metcalfe (2012) and Bosupeng (2018), argue that students’ engagement is very crucial and should be further by identifying teaching skills that could occupy entrepreneurship students. By doing so, it is expected to

influence students' views on self-employment through the development of cognitive skills for better performance and achievement.

Galindo and Méndez (2014) conclude that innovation and entrepreneurship are positively related with economic growth. This statement agrees with some earlier scholars, who provided that entrepreneurship leads to economic growth and this can only be achieved by self employment activities. Ferrari et al. (2009) suggest that, for creative learning and innovative teaching to be effective, both teachers and learners must be well equipped in the use of technologies. The use of state-of-the-art equipment, without enlivening the environment to combine both external and internal factors effectively and efficiently, will impede learning and act as clog on the wheel of innovation.

Dyer, Gregersen, and Christensen (2011) acknowledge five discovery skills: associating, questioning, observing, networking and experimenting. They also identify five practical tips: prioritize your time, navigate your skills, identify a specific idea and innovate with it, practice and demonstrate umpteen times and get a mentor. Although success does not originate from them, the combination of such will have a remarkable influence on the views of self-employment. Dyer et al. (2011) affirm that countries and communities are working assiduously in different fields to spark creative ideas.

Technical Knowledge

Advancement in the acquisition of knowledge has increased entrepreneurial activities, which had contributed to economic development at all levels (Mwasalwiba, 2010; Bachev, 2018). Matlay and Carey (2007) in their longitudinal case study research, which was conducted over a period of ten years of 40 established and new universities, found that there is a consensus among stakeholders (researchers, business observers etc.) in the United Kingdom that entrepreneurship education has the capability to impact the knowledge and skills of graduates which are needed to be able to become self-employed with sustainable ventures.

Matlay (2005) advocates that entrepreneurship education in developing countries should be explicit enough to be embraced at all levels of educational systems in order to pass along the necessary knowledge and skills for venture creation. He concludes that entrepreneurship education help students in the acquisition of knowledge, as it had a positive impact on the 64 respondents in the sample used, where none of them remained unemployed after graduation.

Menzies and Paradi (2003) document that 48% of engineering graduates that completed a course on entrepreneurship during their undergraduate studies started their own businesses. While only 25% of all engineering graduates started their own businesses. The implication to be drawn is that entrepreneurship education influenced the graduates' views on self-



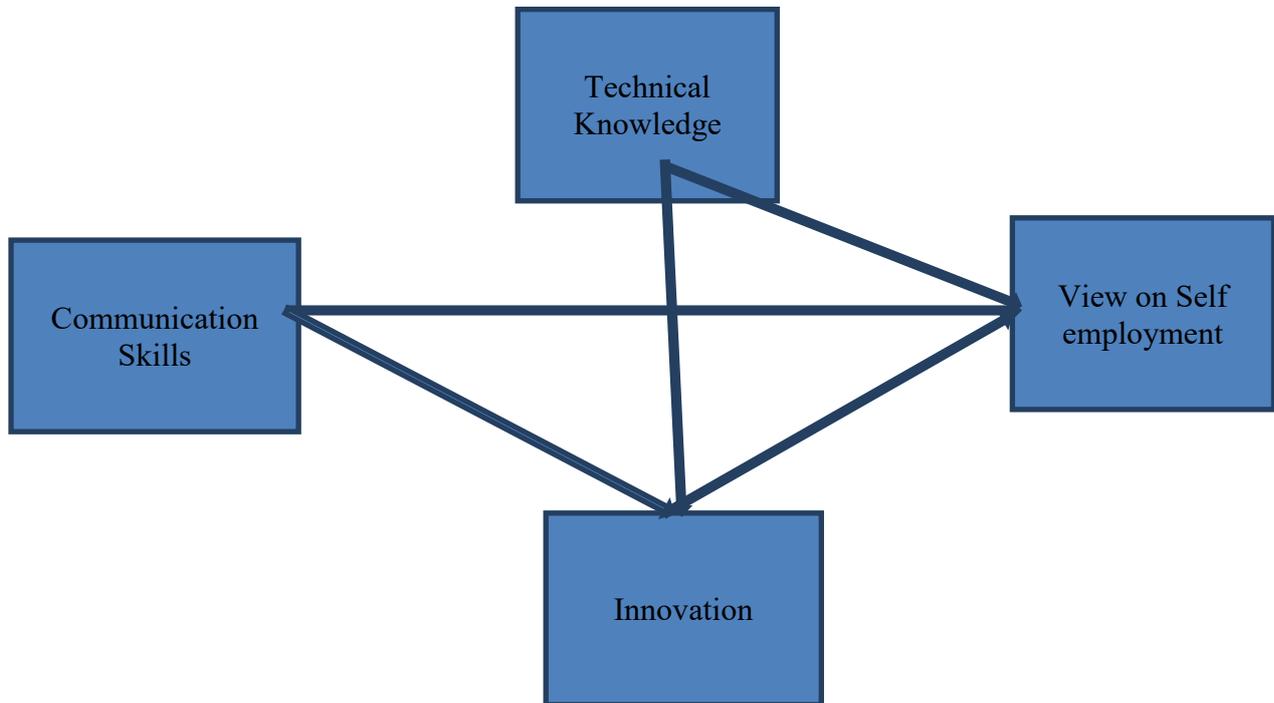
employment. This supports the contention that a general education does not have much influence on individual entrepreneurial attitudes (Boutayeba, 2017; Ho, Uy, Kang, & Chan, 2018). Therefore, entrepreneurship education could be the panacea to unemployment which has weakened some developing countries' economies. Although potential cannot be overlooked, entrepreneurship education is expected to continue to play a significant role in shaping and modelling an entrepreneurial mind set.

Rae (2010) identifies that the role of education in entrepreneurial capabilities is so germane that the overall success of the new era is dependent on the effectiveness of entrepreneurship education and learning. However, entrepreneurship learning is constrained by the inability of enterprise educators to meet the challenges of creating an enabling environment for productivity as a result of inadequate funding (Meager et al., 2011). Therefore, entrepreneurship is expected to play a pivotal role in economic development but most institutions of higher learning in the developing countries are yet to come on board with this global trend.

Entrepreneurship education in developed countries like USA, Germany, UK etc. is encouraged and financially supported to invigorate entrepreneurial mind-sets (Finkle et al., 2009). The consequential effects of inadequate funding will not only make economic growth stagnant but blurry, therefore, enabling an environment for self-employment should be a priority (Seelos & Mair, 2012). Education generally illuminates and influences mind-set in virtually every facet of human endeavour; it builds bridges, close gaps, electrifies the brain and changes perception by modifying the known to eject the unknown.

Conceptual model

The conceptual framework of the study is based on the resource-based view theory and has developed on the basis of literature reviewed



- H1:** Communication skill is in a significant relationship with the views on self-employment.
- H2:** Technical knowledge is in a significant relationship with the views on self-employment.
- H3:** Innovation is in a significant relationship with the views on self-employment.
- H4:** Communication skill is in a significant relationship with the views on innovation.
- H5:** Technical knowledge is in a significant relationship with the views on innovation.
- H6:** Innovation mediates the relationship between communication skills and views on self-employment.
- H7:** Innovation mediates the relationship between Technical knowledge and views on self-employment.

Methodology

The nature of current study is descriptive and correlational. The descriptive part of the study involves exporters profiles and ratings of the subject matter, whereas, the correlational part involves the relation among export performance and international marketing program. The present study is designed on the basis of a hypothetico-deductive method, which is comprised of seven steps: broad issue or problem identification, stating a problem definition,

formulation of hypotheses, data collection, measures determination, data analysis and its interpretation. A deductive approach is the main feature of the hypothetico-deductive method, in which a theoretical framework is generally developed and adopted for a practical case. However, the theoretical foundation is developed using relevant prior researches.

A quantitative survey approach is also adopted for the present research. This involves identification of the research objectives, developing research design, formulating a valid and reliable instrument of research, conducting the survey, data collection and analysis, data interpretation and reporting the findings of the research.

This is a cross-sectional study, i.e. the current research is executed at a specified time period, as this method can be suitable for the academic studies with time-constraints. An email questionnaire was designed to collect data for testing the formulated hypotheses. The purpose of choosing this method is that it can cover a wide geographical area, at low cost and in a short time frame. It is a field study which is conducted in a natural setting, however, in cases of correlational studies, the research is carried out under natural environment, with the occurrence of events being without the interference of any researcher. Therefore, the survey was conducted for the generalization of outcomes and has high validity because the questions from the questionnaires were addressing the items directly.

A sample size of 275 was selected; this is considered suitable and acceptable. A stratified random sampling design was used in the research. Proportionate random sampling was also used. The population is divided into subgroups or strata from where random samples are drawn from each of the created strata in proportion to the entire population. Questionnaires were distributed with the help of area stratified random sampling. The response rate is given in Table 1.

Table 1: Response Rate

| Response | Frequency/Rate |
|---|-----------------------|
| Total questionnaires distributed among students | 275 |
| Total questionnaires received as filled | 202 |
| Total questionnaires identified as true responses | 198 |
| Total questionnaires excluded due to errors | 35 |
| Total rate of response | 73.4% |
| Total rate of valid response | 72.0 % |

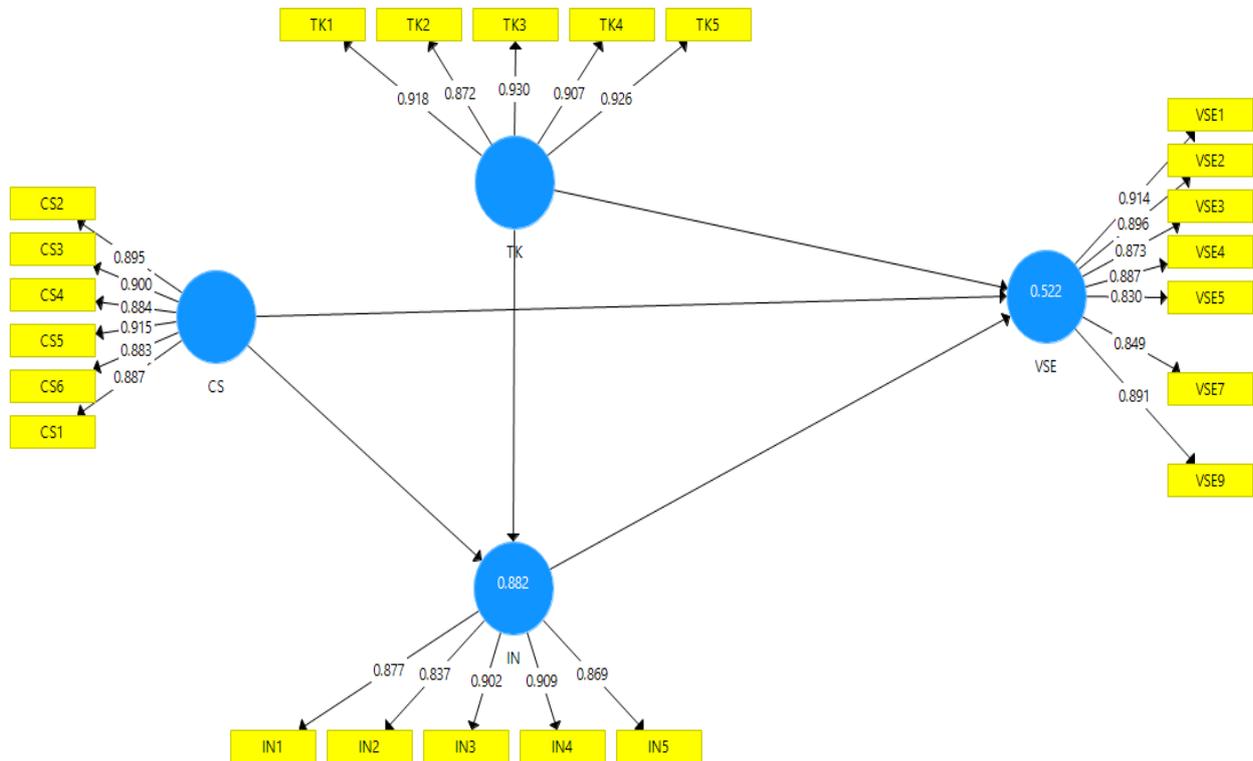
Results

Due to a number of reasons, the present study employed the Structural Equation Modelling (SEM) for the data analysis. SEM has an ability to simultaneously undertake linear and multiple regressions, assuming that the data evaluation is done without any errors. Although, SEM includes both factor analysis and multiple regression, it can also effectively and separately estimate the multiple regression equations concurrently.

For data collection, the study employed a cluster sampling technique and the sample size is calculated using Gay and Diehl's (1992) five-technique approach. Firstly, a total population and population sample size is estimated using Krejcie and Morgan's (1970) table. The estimated population size is 310. According to J. F. Hair, Hult, Ringle, and Sarstedt (2016), SEM is a common and powerful tool in social sciences, as it can simultaneously handle multiple relations at a time. Although, in the past, many researchers have stressed the use of AMOS, which is a co-variance based technique. However, in comparison to a CB-SEM approach, PLS-SEM has distinctive methodological features and is a better option.

As discussed above, SEM is the most appropriate technique among other methods, since it is a much advanced method that provides solutions for the research problems that could not be achieved through simple multiple regression. The PLS approach is also appropriate when the structural modelling is employed solely to make predictions and get explanations about the constructs. Thus, the present study employed a PLS-SEM technique for its flexibility, smaller sample size demand, and effective handling of the multiple structure modelling. Furthermore, the model includes reflective and formative constructs. The aim of this study is to consider prediction among the constructs. Therefore, SEM-PLS approach includes 1) the structural model or the outer model, and 2) the measurement model or the inner model. Outer model estimation involves consideration of different criteria: validity, reliability, and structural model variance. The items of the model were dynamic, therefore, it is assumed that there will be a strong correlation among the variables which were put together to form a construct. For validation of the measurement model, confirmatory factor analysis is used. During the measurement model estimation, each model element was observed separately using structural, formative, and reflective modelling.

Figure 2. Measurement Model



The internal consistency measures the result's consistency between the same test items. This determines whether the items that were employed for measuring the construct bring similar outcomes (Hair, Ringle, & Sarstedt, 2011). Thus, the present study assessed the internal consistency reliability through CR examination. The Cronbach alpha value assumes equal factor loading for the construct, but CR does not do the same. The range for CR is 0 to 1; however, according to Henseler, Ringle, and Sinkovics (2009) the value should not be below 0.60, whereas 0.70 and above are considered as desirable and suitable (Hair et al., 2011). Similarly, the value of CR between 0.6 and 0.7 is said to be an average consistency, and the value which lies between 0.7 and 0.9 are considered to be more adequate and reasonable (Nunnally & Bernstein, 1994).

Table 2: Reliability

| | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|-----|------------------|-------|-----------------------|----------------------------------|
| CS | 0.950 | 0.950 | 0.960 | 0.799 |
| IN | 0.926 | 0.928 | 0.944 | 0.773 |
| TK | 0.948 | 0.950 | 0.960 | 0.829 |
| VSE | 0.950 | 0.952 | 0.959 | 0.770 |

According to Henseler et al. (2009) convergent validity is defined as the extent that measures of the same constructs having theoretical correlation are actually correlated. Thus, convergent validity explains the correlation level between the measures of the same construct. With respect to convergent element identification during construct measurement, the average variance extracted is usually employed and its' value must not be below 0.5 (Henseler et al., 2009). The 0.5 value for the AVE denotes convergent validity. To put it differently, the latent construct shows convergent validity of an adequate level and also explains its' indicators variance.

Table 3: Discriminant Validity

| | CS | IN | TK | VSE |
|-----|-------|-------|-------|-------|
| CS | 0.924 | | | |
| IN | 0.910 | 0.979 | | |
| TK | 0.892 | 0.916 | 0.911 | |
| VSE | 0.698 | 0.713 | 0.666 | 0.877 |

The reliability index must have a value equal or above 0.70. The outer and cross-loadings for the present study came out as the same. However, the existence of correlation between the items of the constructs is observed through the cross loadings. In addition, the discriminant validity existing among the constructs and variables are presented in the table below 4.

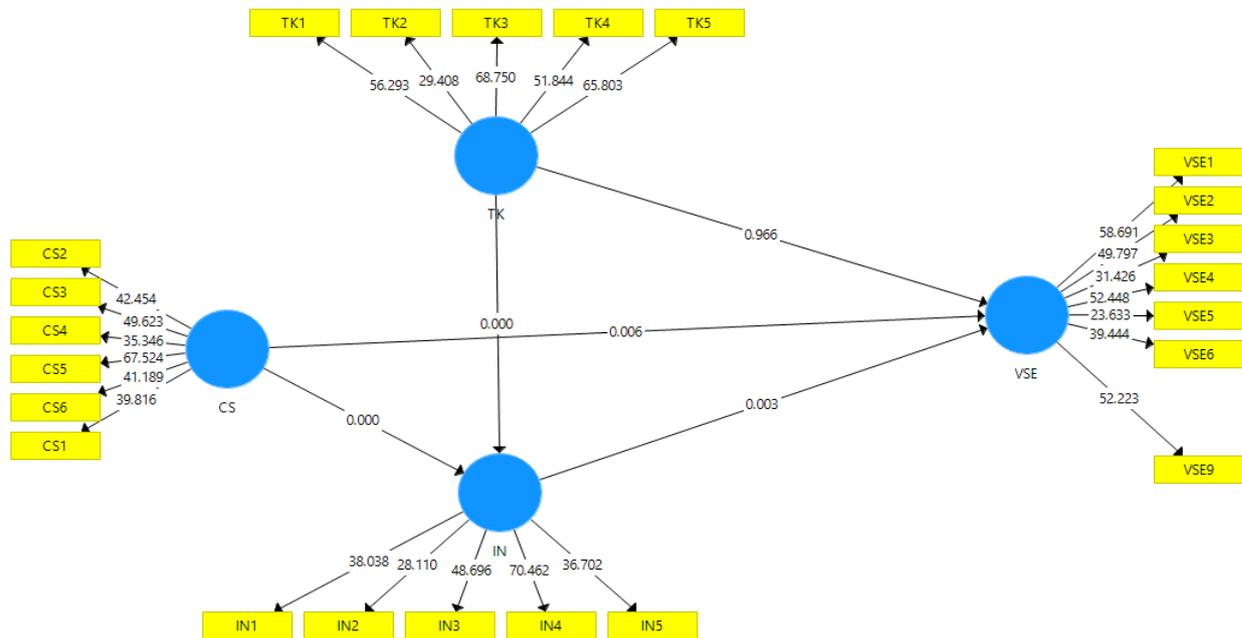
Table 4: Outer loadings

| | CS | IN | TK | VSE |
|-----|-------|-------|----|-----|
| CS2 | 0.895 | | | |
| CS3 | 0.900 | | | |
| CS4 | 0.884 | | | |
| CS5 | 0.915 | | | |
| CS6 | 0.883 | | | |
| IN1 | | 0.877 | | |

| | | | | |
|------|--------------|--------------|--------------|--------------|
| IN2 | | 0.837 | | |
| IN3 | | 0.902 | | |
| IN4 | | 0.909 | | |
| IN5 | | 0.869 | | |
| TK1 | | | 0.918 | |
| TK2 | | | 0.872 | |
| TK3 | | | 0.930 | |
| TK4 | | | 0.907 | |
| TK5 | | | 0.926 | |
| VSE1 | | | | 0.914 |
| VSE2 | | | | 0.896 |
| VSE3 | | | | 0.873 |
| VSE4 | | | | 0.887 |
| VSE5 | | | | 0.830 |
| VSE7 | | | | 0.849 |
| VSE9 | | | | 0.891 |
| CS1 | 0.887 | | | |

Furthermore, the measurement model for the study is estimated by examining the validity, reliability, and structural model estimation through the structural paths among the dependent, moderating, and independent variables. The structural model of SEM-PLS assesses the direct and indirect effects caused by the variables. The structural model of the study is stated below:

Figure 3. Structural model



To assess the indirect impact of a moderator, the level of moderation is calculated. Furthermore, bootstrap analysis was also used to identify the strength of association. For this purpose, 1000 bootstrap samples were taken. The p-value was found to be significant at 5%. All hypotheses have shown p-values of less than 0.05, thus indicating the acceptance of the formulated hypotheses. The outcomes of the effects of moderation for both hypotheses have shown significant values for p and t. The t values came out to be higher than 1.96 and p values were above the threshold level of 0.05. Thus, H6 and H7 hypotheses are accepted.

Table 5: Direct relationships

| | (O) | (M) | (STDEV) | T Statistics | P Values |
|-----------|-------|-------|---------|--------------|--------------|
| CS -> IN | 0.456 | 0.448 | 0.093 | 4.901 | 0.000 |
| CS -> VSE | 0.507 | 0.500 | 0.105 | 4.812 | 0.000 |
| IN -> VSE | 0.467 | 0.458 | 0.148 | 3.162 | 0.002 |
| TK -> IN | 0.509 | 0.517 | 0.091 | 5.578 | 0.000 |
| TK -> VSE | 0.214 | 0.225 | 0.102 | 2.106 | 0.035 |

Table 6: Mediation

| | (O) | (M) | (STDEV) | T Statistics | P Values |
|-----------------|-------|-------|---------|--------------|--------------|
| CS -> IN -> VSE | 0.213 | 0.208 | 0.086 | 2.481 | 0.013 |
| TK -> IN -> VSE | 0.238 | 0.234 | 0.080 | 0.958 | 0.966 |

In structural modelling, the predictive power for the endogenous variable is explained by the R^2 . The path coefficient is said to be insignificant if its value turns out to be 0. The R^2 ranges are between 0-1, where 0 indicates the level of zero accuracy in prediction and 1 shows greater predictive accuracy. The R^2 values of 0.75, 0.50, & 0.25 signify substantial, moderate, and weak predictive power, respectively. For current study, the R^2 value is 0.882 and 0.522, as shown in Table 7.

Table 7: R-square

| | R Square |
|-----|----------|
| IN | 0.882 |
| VSE | 0.522 |

Figure 4. Predictive relevance (Q^2)

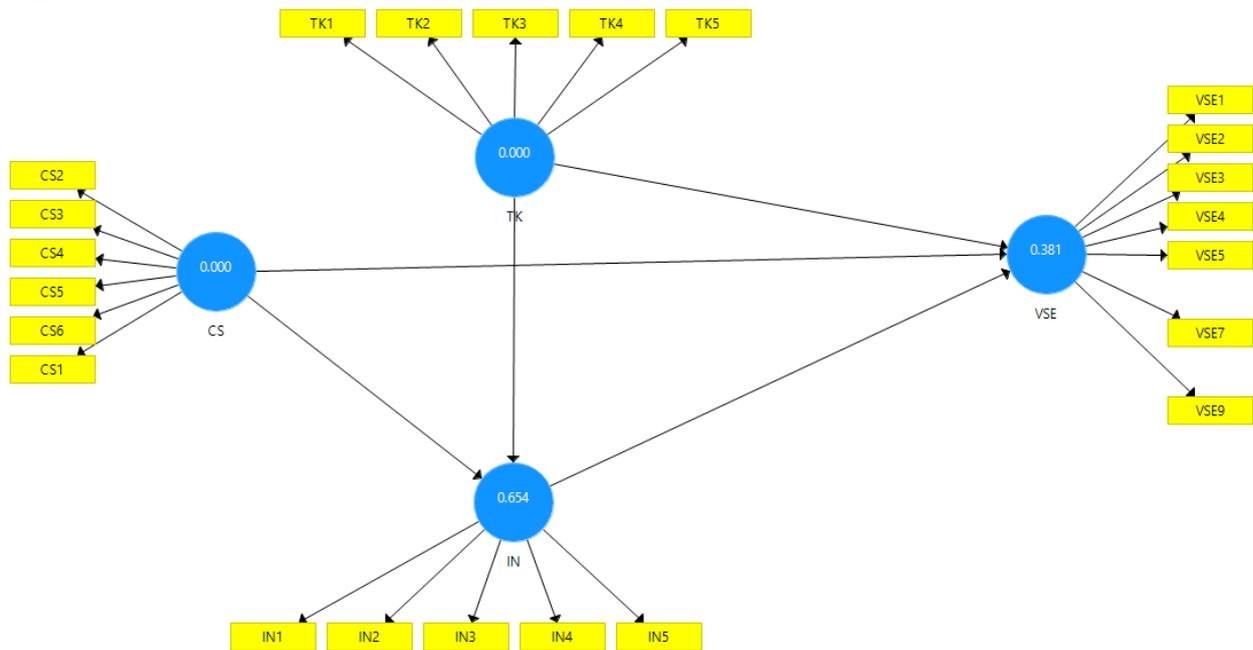


Table 8: Predictive relevance (Q^2)

| | $Q^2 (=1-SSE/SSO)$ |
|-----|--------------------|
| IN | 0.654 |
| VSE | 0.381 |

Discussion and Conclusion

Discussion

The findings in the study show a complete contrast of the hypotheses, there is an insignificant relationship between the two variables of communication skills and views on self-employment. Communication skills do not influence students' views on self-employment. Generally, issues of communication in the entrepreneurship domain seems very scanty. A report from one of the papers reviewed by the scholars revealed that students desire for interpersonal communication skills to be included in entrepreneurship curriculums. Mwasalwiba (2010) confirmed this in his article, where a total of 108 articles were identified, out of which 21 were reviewed to identify the most common subjects or course content in specific entrepreneurship programmes. The findings of such provide support for the hypothesis.

Innovation is found to have an influence on students' views on self-employment. Hypothesis 2 is therefore supported. This is in agreement with earlier researchers, who suggested that innovation is germane and without which venture creation may be impracticable. Galindo and Méndez (2014) affirm that entrepreneurship and innovation are positively related in terms of enhancing economic growth. This hypothesis supports Dobni (2014), who provided that innovation should be enhanced through educational systems in other to build an innovative community.

The findings indicate that technical knowledge has an influence on students' views on self-employment; there is support for hypothesis 3. This is consistent with previous research that found that entrepreneurship education made impact on self-employment or venture effectiveness. Innovation appeared as a mediator in the relationship between technical knowledge and views on self-employment, and between communication skill and views on self-employment.

Conclusion

The prime objective of the current study is to examine the role of entrepreneur education in shaping Thai university student's views on self-employment. The purpose of this study is to examine the influence of entrepreneurship education on students' views on self-employment, by examining the variables of technical knowledge, innovation and communication skill, and then developing a model as linkage between them. This study demonstrates that policy makers and educators should prioritize technical knowledge and innovation for nascent entrepreneurs to perform optimally. The study has used a survey-based method and the data is collected from university graduates in Thailand. SEM-PLS is used to analyse the data. Consistent with previous studies on entrepreneurship education and views on self-

employment, findings from this study show that technical knowledge and innovation have an influence on students' views on self-employment. This study contributes to prior research on the factors that can influence self-employment, which include technical knowledge and innovation. However, this study reveals the need for further clarification, or evidence, on the impact of communication skills on self-employment. This study equally finds support for the use of the knowledge spillover theory of entrepreneurship.

REFERENCES

- Adeniyi, J., Doherty, P., Oladipo, O., & Bolaji, O. (2014). Magnetic storm effects on the variation of TEC over Ilorin an equatorial station. *Radio Science*, 49(12), 1245-1253.
- Artha, I. W. B., & Mulyana, B. (2018). The Effect of Internal and External Factors of Companies on Profitability and its Implications on Stock Price Index of State-Owned Banks. *The Economics and Finance Letters*, 5(2), 58-71.
- Atici, G. (2018). Islamic (Participation) Banking and Economic Growth: Empirical Focus on Turkey. *Asian Economic and Financial Review*, 8(11), 1354-1364.
- Audretsch, D. B., Keilbach, M., & Lehmann, E. (2005). The knowledge spillover theory of entrepreneurship and technological diffusion *University entrepreneurship and technology transfer* (pp. 69-91): Emerald Group Publishing Limited.
- Ayenew, W. (2016). Determinants of tax revenue in Ethiopia (Johansen co-integration approach). *International Journal of Business, Economics and Management*, 3(6), 69-84.
- Awoonor-Aziaku, L. (2017). Gender as a Social Construct in the Use of Dental Fricatives/θ/and/d/in Ghanaian English. *International Journal of English Language and Literature Studies*, 6(3), 69-77.
- Bachev, H. (2018). Management and Agrarian Sustainability-Impact of Institutions in Bulgaria. *International Journal of Management and Sustainability*, 7(2), 113-142.
- Balan, P., & Metcalfe, M. (2012). Identifying teaching methods that engage entrepreneurship students. *Education+ Training*, 54(5), 368-384.
- Bosupeng, M. (2018). Leading Indicators and Financial Crisis: A Multi-Sectoral Approach Using Signal Extraction. *Journal of Empirical Studies*, 5(1), 20-44.
- Boutayeba, F. (2017). Estimating the Returns to Education in Algeria. *Asian Journal of Economic Modelling*, 5(2), 147-153.

- Chienwattanasook, K. & Jernsittiparsert, K. (2019). Impact of Entrepreneur Education on Entrepreneurial Self-Employment: A Case Study from Thailand. *Polish Journal of Management Studies* 19(1), 106-116.
- Dabale, W. P., & Masese, T. (2014). The influence of entrepreneurship education on beliefs, attitudes and intentions: a cross-sectional study of Africa university graduates. *European Journal of Business and Social Sciences*, 3(9), 1-13.
- Dickson, P. H., Solomon, G. T., & Weaver, K. M. (2008). Entrepreneurial selection and success: does education matter? *Journal of Small Business and Enterprise Development*, 15(2), 239-258.
- Dobni, C. B. (2014). Achieving Growth through Innovation: The Role of Arts Education in Supporting Economic Sustainability.
- Dyer, J., Gregersen, H., & Christensen, C. M. (2011). *The innovator's DNA: Mastering the five skills of disruptive innovators*: Harvard Business Press.
- Elmuti, D., Khoury, G., & Omran, O. (2012). DOES ENTREPRENEURSHIP EDUCATION HAVE A ROLE IN DEVELOPING ENTREPRENEURIAL SKILLS AND VENTURES'EFFECTIVENESS? *Journal of Entrepreneurship Education*, 15, 83.
- Ferrari, A., Cachia, R., & Punie, Y. (2009). Innovation and creativity in education and training in the EU member states: Fostering creative learning and supporting innovative teaching. *JRC Technical Note*, 52374, 64.
- Finkle, T. A., Soper, J. C., Fox, D., Reece, J., & Messing, J. (2009). CONSTRUCTING AN INNOVATIVE MODEL OF ENTREPRENEURSHIP EDUCATION THROUGH REGIONAL COLLABORATION. *Journal of Entrepreneurship Education*, 12.
- Galindo, M.-Á., & Méndez, M. T. (2014). Entrepreneurship, economic growth, and innovation: Are feedback effects at work? *Journal of Business Research*, 67(5), 825-829.
- Gay, L., & Diehl, P. (1992). *Research methods for business and management*: Macmillan Coll Div.
- Goetz, S. J., Fleming, D. A., & Rupasingha, A. (2012). The economic impacts of self-employment. *Journal of Agricultural and Applied Economics*, 44(3), 315-321.
- Hair, Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152.
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*: Sage publications.

- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing *New challenges to international marketing* (pp. 277-319): Emerald Group Publishing Limited.
- Ho, M.-H. R., Uy, M. A., Kang, B. N., & Chan, K.-Y. (2018). *Impact of entrepreneurship training on entrepreneurial efficacy and alertness among adolescent youth*. Paper presented at the Frontiers in Education.
- Huarng, K.-H., & Ribeiro-Soriano, D. E. (2014). Developmental management: Theories, methods, and applications in entrepreneurship, innovation, and sensemaking. *Journal of Business Research*, 67(5), 657-662.
- Idogho, P., & Augustine, B. A. E. (2011). Entrepreneurship education and small-scale business management skill development among students of Auchi Polytechnic Auchi, Edo State, Nigeria. *International Journal of Business and Management*, 6(3), 284.
- Inyang, B. J., & Enuoh, R. O. (2009). Entrepreneurial competencies: The missing links to successful entrepreneurship in Nigeria. *International business research*, 2(2), 62-71.
- Jabarullah, N.H. and Hussain, H.I. (2019) The Effectiveness of Problem-Based Learning in Technical and Vocational Education in Malaysia, *Education + Training*, 61 (5), 552-567.
- Kariv, D., Matlay, H., & Fayolle, A. (2019). Introduction: entrepreneurial trends meet entrepreneurial education *The Role and Impact of Entrepreneurship Education*: Edward Elgar Publishing.
- Keat, O. Y., Selvarajah, C., & Meyer, D. (2011). Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students. *International Journal of Business and Social Science*, 2(4).
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Malecki, E. J. (2018). Entrepreneurs, Networks, and Economic Development Revisited *Reflections and Extensions on Key Papers of the First Twenty-Five Years of Advances* (pp. 117-126): Emerald Publishing Limited.
- Matlay, H. (2005). Entrepreneurship education in UK business schools: conceptual, contextual and policy considerations. *Journal of Small Business and Enterprise Development*, 12(4), 627-643.
- Matlay, H., & Carey, C. (2007). Entrepreneurship education in the UK: a longitudinal perspective. *Journal of Small Business and Enterprise Development*, 14(2), 252-263.
- Meager, N., Martin, R., Carta, E., & Davison, S. (2011). Skills for self employment.



- Menzies, T. V., & Paradi, J. C. (2003). Entrepreneurship education and engineering students: Career path and business performance. *The International Journal of Entrepreneurship and Innovation*, 4(2), 121-132.
- Mwasalwiba, E. (2010). Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators. *Education+ Training*, 52(1), 20-47.
- Mohammed, Z. (2017). Impact of Sexual Lifestyle on Hormone-Related Health Decline Case Married Teachers. *International Journal of Social Sciences Perspectives*, 1(1), 1-5.
- Nobanee, H. (2018). Efficiency of working capital management and profitability of UAE construction companies: size and crisis effects. *Polish Journal of Management Studies*, 18 (2), 209-215.
- Nunnally, J. C., & Bernstein, I. H. (1994). Psychological theory. *New York, NY: MacGraw-Hill*, 131-147.
- Omerzel, D., & Antončič, B. (2008). Critical entrepreneur knowledge dimensions for the SME performance. *Industrial Management & Data Systems*, 108(9), 1182-1199.
- Parker, S. C. (2004). *The economics of self-employment and entrepreneurship*: Cambridge University Press.
- Pauw, B., Walsh, T. J., Donnelly, J. P., Stevens, D. A., Edwards, J. E., Calandra, T., . . . Kauffman, C. A. (2008). Revised definitions of invasive fungal disease from the European organization for research and treatment of cancer/invasive fungal infections cooperative group and the national institute of allergy and infectious diseases mycoses study group (EORTC/MSG) consensus group. *Clinical infectious diseases*, 46(12), 1813-1821.
- Rae, D. (2010). Universities and enterprise education: responding to the challenges of the new era. *Journal of Small Business and Enterprise Development*, 17(4), 591-606.
- Raju, G. S., Kumar, N. S., & Ramgopal, N. C. (2015). Entrepreneurship and Innovation: A Study on Factors Affecting Engineering Graduates towards Entrepreneurship and Innovation. *Journal of Engineering Education Transformations*, 170-174.
- Rosique-Blasco, M., Madrid-Guijarro, A., & García-Pérez-de-Lema, D. (2018). The effects of personal abilities and self-efficacy on entrepreneurial intentions. *International Entrepreneurship and Management Journal*, 14(4), 1025-1052.
- Seelos, C., & Mair, J. (2012). Innovation is not the Holy Grail. *Stanf Soc Innov Rev*, 10(4), 44-49.
- Setamanit, S. (2018). Evaluation of outsourcing transportation contract using simulation and design of experiment. *Polish Journal of Management Studies*, 18 (2), 300-310.



- Singh, G., & DeNoble, A. (2003). Early retirees as the next generation of entrepreneurs. *Entrepreneurship Theory and practice*, 27(3), 207-226.
- Singh, G., Saghafi, M., Ehrlich, S., & De Noble, A. (2010). Perceptions of self-employment among mid-career executives in the people's Republic of China. *Journal of Career Assessment*, 18(4), 393-408.
- Stel, A. (2005). COMPENDIA: Harmonizing business ownership data across countries and over time. *The International Entrepreneurship and Management Journal*, 1(1), 105-123.
- Støren, L. A. (2014). Entrepreneurship in higher education-impacts on graduates' entrepreneurial intentions, activity and learning outcome.
- Tripopsakul, S. (2018). Social media adoption as a business platform: an integrated TAM-TOE framework. *Polish Journal of Management Studies*, 18(2), 350-362.
- Verheul, I., Thurik, R., Grilo, I., & Van der Zwan, P. (2012). Explaining preferences and actual involvement in self-employment: Gender and the entrepreneurial personality. *Journal of economic psychology*, 33(2), 325-341.